



Completion Report

Project Number: 33432
Loan Number: 1834-LAO (SF)
June 2008

Lao People's Democratic Republic: Vientiane Urban Infrastructure and Services Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit	–	kip (KN)
		At Appraisal At Project Completion 01 May 2001 31 August 2007
\$1.00	=	KN8,830 KN9,560
KN1.00	=	\$0.0001132 \$0.0001046

ABBREVIATIONS

ADB	–	Asian Development Bank
AFD	–	Agence Française de Développement
CIE	–	citywide infrastructure and environmental improvements
EIRR	–	economic internal rate of return
FIRR	–	financial internal rate of return
ICB	–	international competitive bidding
JFPR	–	Japan Fund for Poverty Reduction
JICA	–	Japan International Cooperation Agency
km	–	kilometer
Lao PDR	–	Lao People’s Democratic Republic
LLA	–	Law on Local Administration
LCB	–	local competitive bidding
LWU	–	Lao Women’s Union
MCTPC	–	Ministry of Communication, Transport, Posts, and Construction
MOF	–	Ministry of Finance
O&M	–	operation and maintenance
PMU	–	project management unit
SDR	–	special drawing rights
VAI	–	village area improvements
VUDAA	–	Vientiane Urban Development Administration Authority
VUISP	–	Vientiane Urban Infrastructure and Services Project

NOTES

- (i) The fiscal year (FY) of the Government ends on 30 September.
- (ii) In this report, “\$” refers to US dollars.

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BASIC DATA

A. Loan Identification

1.	Country	Lao People's Democratic Republic
2.	Loan Number	1834-LAO (SF)
3.	Project Title	Vientiane Urban Infrastructure and Services
4.	Borrower	Lao People's Democratic Republic
5.	Executing Agency	Vientiane Prefecture
6.	Amount of Loan	SDR20,023,000 (original loan amount) SDR19,696,641 (net loan amount)
7.	Project Completion Report Number	LAO PCR 1035

B. Loan Data

1.	Appraisal	
	– Date Started	19 April 2001
	– Date Completed	01 May 2001
2.	Loan Negotiations	
	– Date Started	25 July 2001
	– Date Completed	27 July 2001
3.	Date of Board Approval	23 August 2001
4.	Date of Loan Agreement	28 September 2001
5.	Date of Loan Effectiveness	
	– In Loan Agreement	28 December 2001
	– Actual	18 January 2002
	– Number of Extensions	None
6.	Closing Date	
	– In Loan Agreement	28 February 2007
	– Actual	31 August 2007
	– Number of Extensions	1
7.	Terms of Loan	
	– Interest Rate	1.0% per year (grace period); 1.5% per year thereafter
	– Maturity (number of years)	32 years
	– Grace Period (number of years)	8 years
8.	Disbursements	
a.	Dates	

Initial Disbursement	Final Disbursement	Time Interval
18 March 2002	02 April 2008	73 months
Effective Date	Original Closing Date	Time Interval
18 January 2002	28 February 2007	68 months

b. Amount (\$)

Category or Subloan	Original Allocation	Last Revised Allocation	Amount Canceled	Amount Disbursed	Undisbursed Balance
A. Civil Works					
1. Part A: CIE	13,709,234	20,343,364	0	20,243,782	99,582
2. Part B: VAI	2,371,023	2,586,478	0	2,550,695	35,783
B. Equipment					
1. Solid Waste Management	339,609	269,222	0	269,450	(228)
2. Maintenance	199,770	998,955	0	998,440	515
C. Others					
1. Consulting Services	3,230,035	3,941,871	0	3,917,187	24,684
2. Awareness Training	199,770	213,317	0	134,751	78,566
3. Incremental Administration	359,586	292,514	0	270,281	22,233
4. Interest Charge	580,582	711,970	0	475,477	236,493
5. Unallocated	4,010,388	32,882	0	0	32,882
Total	13,709,234	20,343,364	0	20,243,782	99,582

CIE = citywide infrastructure and environmental improvements; VAI = village area improvements.

9. Local Cost Financing	Appraisal Estimate	Actual
- Amount (\$ million)	8.49	8.01
- Percentage of Local Costs	50%	43%
- Percentage of Total Costs	23%	18%

C. Project Data

1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	20.03	25.21
Local Currency Cost	16.97	18.46
Total	37.00	43.67

2. Financing Plan (\$ million)

Cost	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
Implementation Costs						
Asian Development Bank	15.93	8.49	24.42	20.37	8.01	28.38
Agence Française de Développement	3.52	0.88	4.40	4.36	0.99	5.35
Government of Lao PDR	0.00	7.60	7.60	0.00	9.46	9.46
Subtotal	19.45	16.97	36.42	24.73	18.46	43.19
IDC Costs/ADB Service Charge	0.58	0.00	0.58	0.48	0.00	0.48
TOTAL	20.03	16.97	37.00	25.21	18.46	43.67

ADB = Asian Development Bank, IDC = interest during construction, Lao PDR = Lao People's Democratic Republic.

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

Component	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Base Cost						
1. Part A: Citywide Infrastructure and Environmental Improvements						
a. Roads	6.49	5.43	11.92	10.22	8.23	18.45
b. Drainage	3.70	3.04	6.74	4.87	4.28	9.15
c. Solid Waste Management	0.31	0.05	0.36	0.27	0.00	0.27
d. Maintenance Equipment	0.15	0.10	0.25	0.50	0.00	0.50
e. Traffic Management/Road Safety	1.01	0.49	1.50	1.43	0.70	2.13
f. Office Building	0.12	0.18	0.30	0.29	0.31	0.60
Subtotal (B)	11.78	9.29	21.07	17.58	13.52	31.10
2. Part B: Village Area Improvements						
a. Community Infrastructure	0.77	3.08	3.85	1.76	3.05	4.81
b. Community Awareness	0.01	0.19	0.20	0.35	0.24	0.59
Subtotal (B)	0.78	3.27	4.05	2.10	3.29	5.39
3. Part C: Implementation Support						
a. PMU Support	1.94	0.81	2.75	2.36	1.06	3.42
b. Engineering Support	0.05	0.72	0.77	0.00	0.00	0.00
c. Capacity Building	1.80	0.20	2.00	2.63	0.29	2.92
d. Incremental Administration	0.18	0.24	0.42	0.06	0.30	0.36
Subtotal (B)	3.97	1.97	5.94	5.05	1.65	6.70
Total Base Cost	16.53	14.53	31.06	24.73	18.46	43.19
B. Contingencies						
a. Physical	1.09	0.88	1.97	0.00	0.00	0.00
b. Price	1.84	1.56	3.40	0.00	0.00	0.00
Cost (including Contingencies)	19.45	16.97	36.43	24.73	18.46	43.19
C. Interest during Construction	0.58	0.00	0.58	0.48	0.00	0.48
Total	20.03	16.97	37.00	25.21	18.46	43.67

PMU = project management unit.

4. Project Schedule

Item	Appraisal Estimate	Actual
Date of Contract with Project Management Consultants	December 2001	December 2001
Completion of Engineering Designs	June 2003	August 2004
Civil Works, Roads Contract		
Date of Award	December 2002	December 2003
Completion of Work	June 2006	August 2007
Civil Works, Drainage Contract		
Date of Award	January 2003	March 2005
Completion of Work	June 2006	August 2007
Civil Works, VAI Contracts		
Date of Award	December 2002	December 2003
Completion of Work	June 2006	June 2006
Civil Works, VUDAA Building		
Date of Award	January 2003	December 2004
Completion of Work	December 2003	December 2005
Equipment and Supplies		
First Procurement	January 2003	October 2004
Last Procurement	December 2004	June 2006

Other Milestones

18 August 2005: 1st loan extension up to August 2007

VAI = village area improvements, VUDAA = Vientiane Urban Development Administration Authority.

5. Project Performance Report Ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 31 August 2001 to 31 March 2004	Satisfactory	Satisfactory
From 01 April 2004 to 31 August 2004	Satisfactory	Partly Satisfactory
From 1 September 2004 to 31 May 2005	Satisfactory	Satisfactory
From 1 June 2005 to 31 January 2006	Satisfactory	Highly Satisfactory
From 1 February 2006 to 31 January 2008	Satisfactory	Satisfactory

D. Data on Asian Development Bank Missions

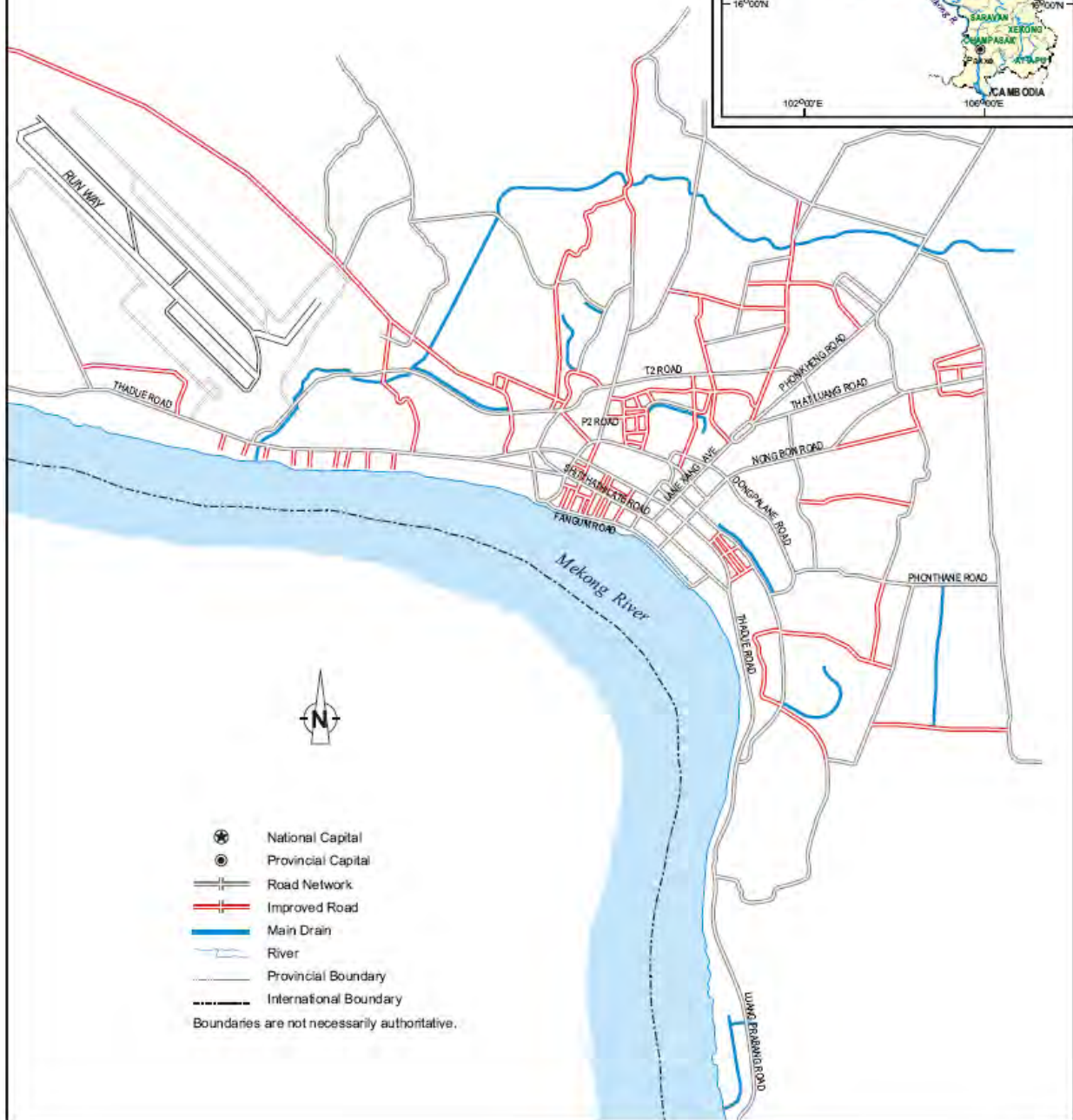
Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
Fact-Finding Mission	29 Jan–16 Feb 2001	6	69	a, b, c, d, e, f
Appraisal Mission	18 Apr–1 May 2001	4	32	a, b, e, g
Inception Mission	18–22 Feb 2002	2	10	a, h
Review Mission 1	12–16 Aug 2002	2	10	a, h
Review Mission 2	17–22 Feb 2003	2	18	a, b, h
Consultative Mission ^b	8–10 Sep 2003	1	3	a
Review Mission 3	20–29 Oct 2003	2	20	a, h
Resettlement Review Mission	8–12 Dec 2003	3	15	c, h
Resettlement Review Mission	25–26 Feb 2004	1	2	c, i
Review Mission 4	3–13 May 2004	2	22	b, h,
Resettlement Review Mission	21–27 Jul 2004	1	8	i
Review Mission 5	28 Oct–4 Nov 2004	1	8	b
Review Mission 6	28 Feb–10 Mar 2005	2	22	b, h
Review Mission 7	9–18 Nov 2005	1	10	a
Environmental Safeguard Review	14–21 Dec 2005	1	7	j
Review Mission 8	16–24 Mar 2006	2	18	a, h
Review Mission 9	4–13 Dec 2006	2	14	a, h
Final Review Mission 10	9–18 May 2007	2	20	a, h
Project Completion Review ^c	9–20 Mar 2008	2	24	a, h

^a a – urban development; b – engineering; c – social development; d – municipal engineering; e – urban economics/finance; f – governance; g – legal; h – project analysis; i – resettlement; j – environmental specialist.

^b Consultative mission on draft Law on Local Administration.

^c The project completion report was prepared by Januar Hakim, urban development specialist, and Ludovina Balicanot, assistant project analyst.

LAO PEOPLE'S DEMOCRATIC REPUBLIC VIENTIANE URBAN INFRASTRUCTURE AND SERVICES PROJECT



- National Capital
 - Provincial Capital
 - Road Network
 - Improved Road
 - Main Drain
 - River
 - Provincial Boundary
 - International Boundary
- Boundaries are not necessarily authoritative.

I. PROJECT DESCRIPTION

1. In 2001, the Government of the Lao People's Democratic Republic (Lao PDR) requested the Asian Development Bank (ADB) for assistance in preparing a project that would improve the quality of life of the urban residents of Vientiane, particularly the poor and disadvantaged, and enhance urban productivity and economic growth. The Board approved a loan of SDR20,023,000 (\$25.0 million at appraisal) for the Vientiane Urban Infrastructure and Services Project (VUISP) on 23 August 2001. The Loan Agreement between ADB and the Government was signed on 28 September 2001, and the loan took effect on 28 December 2001. In addition, the Agence Française de Développement (AFD) provided a parallel grant of €4.7 million (\$4.4 million at appraisal) for a component of the Project. The total project cost, including government contributions, was \$37.0 million.

2. The overall goal of the Project, as mentioned above, was to improve the quality of life and to enhance productivity and economic growth in the Vientiane urban area.¹ The objectives were to: (i) support decentralization and urban governance reforms and thus help develop an autonomous, well-functioning, and self-sufficient urban local government that could plan, manage, and finance urban development and provide sustainable services; and (ii) pursue investments in infrastructure and services, and complete secondary and tertiary infrastructure to benefit a greater part of the population, especially the poor. The Project was implemented from March 2002 to 31 August 2007.²

3. The project area covered the four urban districts of Saysetha, Sisathanak, Chanthabouly, and Sikhottabong, including 50 of a total of 100 villages. The Project had three components:

- (i) Part A: Citywide Infrastructure and Environmental Improvements,
- (ii) Part B: Village Area Improvements, and
- (ii) Part C: Capacity Building and Project Implementation Support.

4. Part A was to provide critical missing links in the primary and secondary road and drainage networks, along with improvements in solid waste and traffic management; part B was to undertake improvements in community infrastructure, capacity, and environmental awareness; and part C comprised the capacity-building subcomponent, financed by AFD, and the project implementation support subcomponent, which provided resource inputs to the project management unit (PMU).

5. The Executing Agency for the Project was the Vientiane Prefecture. A project steering committee, chaired by the president of the Vientiane Urban Development Administration Authority (VUDAA),³ was formed to oversee project implementation, ensure the cooperation of the concerned agencies, and implement the institutional reform agenda. VUDAA was the Implementing Agency for the Project; through the PMU, it was responsible for the planning and implementation of the urban infrastructure and services improvements, capacity building, and overall project administration.

¹ ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan for the Vientiane Urban Infrastructure and Services Project*. Manila.

² The Project was the second ADB intervention in the Vientiane urban area after the \$20.0 million Loan 1362-LAO: Vientiane Integrated Urban Development Project, which was approved in August 1995 and implemented in 1997–2003.

³ With representatives from VUDAA; the Ministry of Finance; the Ministry of Communication, Transport, Posts, and Construction; the Ministry of Justice; the Committee for Planning and Cooperation; and the Office of the Prime Minister.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

6. The project design was relevant to the Government's investment program, which emphasized the importance of urban infrastructure in national development planning, decentralized government, and poverty reduction.⁴ In accordance with the country operational strategy, ADB's assistance to the urban sector centered on the provision of basic urban services and a better quality of life for the urban residents, particularly the poor. While the urban infrastructure and services in Vientiane had benefited from previous public investment in primary road and drainage networks, the infrastructure networks still had to be expanded and their utility maximized, environmental degradation caused by rapid urbanization had to be controlled, and tertiary and community networks linked to citywide infrastructure systems had to be developed.

7. The urban institutional and policy reform agenda proposed during appraisal was relevant, given the need to decentralize urban governance, support local government, and enable adequate cost recovery for infrastructure investments and operation and maintenance (O&M). However, the project design did not fully take into account: (i) VUDAA management capacity; (ii) the local government structure, particularly the role of the four urban districts of Saysetha, Sisathanak, Chanthabouly, and Sikhottabong; and (iii) the reasonable phasing and timing of the reforms as required in the loan covenants. This agenda met difficulties in implementation, particularly with respect to ownership and support from heads of districts. However, the Project did facilitate the passage of the Law on Local Administration in 2003 and several ministerial decrees, and enabled further dialogue regarding the need to improve the management of urban services in Vientiane. The design and monitoring framework, reconstructed from the report and recommendation of the President, is in Appendix 1.

B. Project Outputs

1. Improved Urban Infrastructure and Environment

a. Citywide Infrastructure and Environmental Improvements

8. Road and drainage improvements, solid waste management, traffic management and road safety, and a new office building for VUDAA—the core outputs of the citywide infrastructure and environmental improvements (CIE) component—were timely in both design and implementation. The road and drainage works in general exceeded the original project targets. Additional civil works totaling about \$6.6 million were made possible by exchange-rate gains from the depreciation of the US dollar against the SDR, and project management efficiencies.⁵ Delays due to the PMU's unfamiliarity with ADB guidelines and procedures, particularly those relating to disbursement (see para. 21), procurement (see para. 26), and resettlement (see paras. 22 and 41), held back the early stages of the Project. Road widths, construction materials, and rights-of-way underwent design changes during implementation

⁴ It remained consistent with the Government's Socio-Economic Development Plan 2006–2010 and its three strategic pillars—(i) economic growth with equity, (ii) sociocultural development, and (iii) sustainable environmental preservation—as well as with ADB's Lao Country Strategy and Program 2007–2011, which emphasizes (i) pro-poor, sustainable growth; (ii) inclusive social development; and (iii) good governance.

⁵ These entailed the replacement of the PMU project director and the project team leader, and the improvement of PMU staff capacity.

upon review by the Ministry of Communication, Transport, Posts, and Construction (MCTPC) and the bidding committee, to conform to national standards and requirements.

9. **Improved Roads.** The Project covered 13 road improvement subprojects in Vientiane, with 35.8 kilometers (km) of roads to be resurfaced and upgraded (12.7 km of primary and 21 km of secondary road alignments, and 2.1 km of new secondary roads). These investments were to be supported with a capacity-building program and maintenance equipment to ensure sustainability. At project completion, 17 road subprojects had been completed: 35.2 km of roads (12.7 km of primary and 22.5 km of secondary roads) had been resurfaced and upgraded with asphalt concrete or double bituminous surface treatment, and 9.3 km of new roads had been built. The overall total of 44.5 km exceeded the original target by 8.7 km, or 24.3%. The improved infrastructure contributed to smoother traffic flow, better access to lots and new development sites in the urban and peripheral areas, and an increase in residential and commercial property development along the roads built or upgraded under the Project.

10. **Improved Drainage.** The drainage subcomponent was to comprise four subprojects involving the improvement of 5.8 km of primary and 8.2 km of secondary drainage channels, for a total drainage length of 14.0 km. These improvements were to be complemented with essential maintenance equipment and capacity-building equipment. At completion, 16.1 km of new drains (6.6 km of primary and 9.5 km of secondary channels) had been built, 10% more than the appraisal target. During implementation, several changes were made in the original design, including the following: (i) box drain dimensions were enlarged to enable increased flow around the Wattay airport area; (ii) the enlarged drains called for more excavation and backfill material; (iii) temporary drains were installed to collect water from the Samsenthai and Sethathirat drainage areas while awaiting the completion of another drainage and road project funded by the Japan International Cooperation Agency (JICA); and (iv) damaged Nam Papa pipes in the Heritage Area were repaired (see para. 20). The drainage improvements, together with the eventual link with the JICA project, greatly mitigated perennial flooding, bringing about improvements in environmental sanitation and community health.

11. **Improved Solid Waste Management.** The solid waste management subcomponent was designed to widen the coverage of waste collection services in the VUDAA area. At appraisal, solid waste collection covered about 15,000 households. At project completion, coverage had increased to almost 70,000 households (an increase of 466%) in 204 villages, 117 of these covered by VUDAA and the remaining 87 by five private sector companies. The increase in coverage was possible because of the public awareness campaigns undertaken and the six compactor trucks procured for the Project, and the road improvements, which greatly expanded access and collection capacity. The Project was further aided by the solid waste management project funded by the Japan Fund for Poverty Reduction (JFPR),⁶ which promoted garbage collection contracts between households and village communities, and between village communities and the municipality.

12. **Improved Traffic Management and Road Safety.** The AFD grant supported the establishment of a traffic operation center at the new VUDAA office building, along with the installation of traffic lights at 26 programmed intersections. Operators were trained to handle the equipment and software. In addition, a training course for all stakeholders, including the Vientiane traffic police, was held in 2006. The AFD budget for this component was underestimated, however, as it did not take into account the street-lighting requirements in the Heritage Area of the city. VUDAA later requested ADB to provide and install 116 streetlights

⁶ JFPR 9035-LAO: Solid Waste Management for Vientiane's Poor, a \$1.0 million grant for the improvement of environmental conditions and solid waste management in Vientiane, and for income generation for the poor through waste recycling. Implemented at the same time as the VUISP in 15 of the 50 villages covered by the Project, this solid waste management project led to the improvement of the municipal dumpsite at Km. 18.

under an amendment to the VUISP contract, LCB-R-211(2). The traffic management subcomponent greatly improved the flow of traffic and the streetlights had a discernibly positive effect on the aesthetics and visual surroundings of the area.

13. **Construction of VUDAA Building.** The construction of the VUDAA building, originally planned for the Vientiane Integrated Urban Development Project but not carried out because of site ownership issues, began in December 2004 under a separate contract.⁷ The building was satisfactorily completed in December 2005.

b. Village Area Improvements

14. The village area improvements (VAI) component, which covered 50 villages, comprised the upgrading of surface drainage, tertiary access roads, and primary waste collection. Village selection was rigorous, and was based on measurable indicators such as poverty level, infrastructure conditions and needs, and expressed willingness to participate in the Project. Design and implementation decisions were participatory and involved consultations with community stakeholders. The first phase covered six pilot villages over 9 months. Public awareness campaigns, on such matters as environmental sanitation and the importance of community participation in providing and maintaining community infrastructure, were successfully facilitated by the Lao Women's Union (LWU). Training in participatory management and urban poverty for VUDAA staff was conducted and enabled effective outreach in 50 villages. The first phase was met with skepticism, if not reluctance, from beneficiary communities, as no project of this nature had ever been implemented in the area and the collection of community contributions was slow. However, community responses in the second group of 20 villages were more forthcoming and the contribution targets were easily achieved. In the remaining 24 villages, implementation proceeded either on or ahead of schedule except in one village.⁸ Overall, implementation was highly successful, and even after the completion of the Project VUDAA continued to receive requests from other communities to be included in the VAI program.

2. Established Legal Framework for Decentralized Governance

15. As originally envisioned, a law on local administration, defining the structure and roles of the various levels of government, would be put into effect within 18 months of loan effectiveness. The law would also circumscribe the administrative and functional jurisdiction of the municipality. The Project successfully contributed to the passage of the Law on Local Administration (LLA) by the National Assembly in October 2003 and to its being declared effective by Prime Minister's Decree in November 2003. Operational guidelines for the implementation of the decree were drafted by the Public Administration and Civil Service Administration, and various revenue sources were identified and revenue projections for urban services were carried out under the Project. However, the law does not explicitly mention the role of urban development administration authorities in the local government structure, and operational guidelines for its implementation have yet to be approved. The dialogue continues, and the Government has

⁷ VUDAA provided a new site in the city center for the proposed building, which was not available during implementation of the 1362-LAO: Vientiane Integrated Urban Development Project. The VUDAA building was eventually included in the current project. Due to site conditions, several adjustments were made in the foundation structure, e.g., the pile foundation was replaced with a concrete slab, with the attendant increase in the volume of excavation materials.

⁸ The only village that met construction delays was Hong Wattay, where the large citywide drainage improvements took 8 months to complete. In addition, four villages opted out of the VAI program because they were already receiving benefits from the CIE component. However, they were replaced by four other villages at their request and upon satisfactory fulfillment of the selection criteria set by the PMU.

proposed a new timetable for the operational guidelines to be finalized.⁹

3. Competent and Autonomous Urban Entity Yet To Be Developed

16. The Project envisioned a technically competent and financially autonomous VUDAA, able to generate its own revenues. The target was for VUDAA to meet 50% of the cost of services and adequate O&M by October 2003, and 100% by October 2006. Given the reality of local politics, VUDAA capacity, and a local government structure that would be made up of four central districts merged into a municipality, the requirement was rather ambitious in timing and scope. Furthermore, many of VUDAA's mandated tasks overlapped with those of other government ministries and line agencies. VUDAA managed, however, to meet 30% of its O&M revenue requirements. Its revenue-generating capacity is evolving and VUDAA is now able to collect parking fees, building permits, and gasoline surcharges.

17. Financial management capacity was significantly improved through skills training programs funded by ADB and AFD. However, several of the organizational development workshops had limited impact, as they were attended by part-time employees and the consultants were available only for short-term inputs. The capacity-building subcomponent, financed jointly by ADB and AFD, was aimed at supporting VUDAA in urban management and organizational development. An asset register was developed with AFD funding, but staff ability to develop a capital works and O&M plan has yet to materialize. There is a shortage of VUDAA staff to update and implement municipal plans.

18. The participation of VUDAA and government staff in participatory planning workshops, their involvement in partnering in the VAI program, and good cooperation with field workers managed by LWU have made VUDAA more responsive to the needs of beneficiary communities and Vientiane residents in general. Information systems and grievance mechanisms for resettlement are also in place.

C. Project Costs

19. The original project cost was estimated at \$37.0 million, comprising an ADB loan of \$25.0 million (67% of the total project cost), an AFD grant of \$4.4 million (12%), and government and beneficiary contributions of \$7.6 million (20%). The foreign exchange costs were estimated at \$20.0 million (54% of the total project cost), including \$0.6 million in interest during construction, and the local currency costs at \$17.0 million equivalent (46%). At completion, the project cost was \$43.7 million, comprising foreign exchange costs of \$25.2 million (57% of total project cost), including interest of \$0.5 million, and local costs of \$18.5 million (43%). The major project expenditures, by component, were: (i) citywide urban infrastructure improvements (\$31.0 million), (ii) village area improvements (\$5.4 million), and (iii) implementation support and capacity building (\$6.7 million). The actual ADB loan amount was \$28.9 million (including interest during construction), the AFD grant was valued at \$5.4 million at completion, and the government contributions amounted to \$9.5 million (including community contributions of around \$0.4 million). VUDAA contributed \$2.9 million through a subloan by the Government using ADB proceeds. Appendix 2 gives a breakdown of costs, by project component.

20. There were no cost overruns during implementation; instead, the depreciation of the US dollar against the SDR generated savings of about \$4.0 million, which financed four additional international competitive bidding (ICB) contracts. The original project costs were

⁹ The guidelines are scheduled to be submitted to the National Assembly in October 2008.

reallocated as follows: (i) a \$6.6 million increase in the civil works budget, (ii) a \$0.7 million increase in consultants' fees necessitated by additional design and supervision works, (iii) an increase in the equipment and maintenance budget item to cover needed repairs in damaged Nam Papa pipes in the Heritage Area during construction and the procurement of additional road maintenance equipment, and (iv) an increased amount for the VAI program to accommodate additional works. The additional funding came from currency gains, loan savings, and contingencies, and therefore the changes in project costs were considered minor.

D. Disbursements

21. Loan proceeds were disbursed according to ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). An imprest fund¹⁰ was set up for the PMU with an initial deposit of \$500,000. The first disbursement in March 2002, 3 months after loan effectiveness, went almost exclusively to consulting fees—hence, the slow disbursement. Once the detailed engineering design was finalized in August 2004, however, construction proceeded quickly, along with the associated disbursements. In general, the imprest account and statement-of-expenditures procedures were used, and were effective in speeding up disbursements. As of the closing date of 6 May 2008, \$28,860,063 of the loan amount had been disbursed. The undisbursed portion was SDR326,358 (\$530,510, or 1.1% of the loan). AFD disbursed \$5.4 million equivalent, and the Government, \$9.46 million. Disbursements were generally on track but were delayed at inception and toward midterm by lack of familiarity with resettlement procedures and lack of capacity, leading to the Project being classified “at risk” by ADB. At project completion, government disbursement records indicated that a total of KN47,001,743,795, or about \$4.95 million,¹¹ was owed to civil works contractors. A breakdown of total and yearly disbursements is in Appendix 3.

E. Project Schedule

22. The loan was approved on 23 August 2001 and took effect on 18 January 2002, with a scheduled project completion date of 31 August 2006 and a loan closing date of 28 February 2007. The AFD capacity-building subcomponent was completed on 31 December 2006. Loan effectiveness was slightly delayed because the Executing Agency did not take advantage of the advance action approved by ADB for the recruitment of consultants.¹² Moreover, ADB procurement and disbursement procedures were not fully understood by PMU and VUDAA. Once the procedures were understood, the Project progressed quickly and, from the midterm review onward, proceeded ahead of schedule. The Project was suspended from April 2004 to the end of August 2004 because of VUDAA's unfamiliarity with ADB resettlement procedures and incapacity to resolve resettlement issues as they arose. With guidance from two resettlement missions, the PMU was able to put project implementation back on track with no major changes in the original design. On 18 August 2005, ADB approved a request for an extension of the loan until 31 August 2007 from the Ministry of Finance (MOF), hoping to take advantage of exchange-rate gains to fund four infrastructure packages not included in the original program of works. The project implementation schedule is in Appendix 4.

¹⁰ The imprest account for \$500,000 was established and managed according to ADB's *Guidelines on Imprest Fund and Statement of Expenditure Procedures* (1986, as amended from time to time).

¹¹ \$1.00 = KN9,500 as of August 2007.

¹² The consultants began work on-site on 11 March 2002.

F. Implementation Arrangements

23. The Executing Agency for the Project, the Vientiane Prefecture, was responsible for guiding, supervising, and carrying out the Project. The project steering committee, chaired by the vice governor and VUDAA president, had as its members representatives from VUDAA, MCTPC, MOF, the Ministry of Justice, the Committee for Planning and Cooperation, and the Office of the Prime Minister. The committee was established to oversee project implementation, and ensure the cooperation of the concerned agencies and the accomplishment of the institutional reform agenda. VUDAA, the Implementing Agency, was made responsible for the planning and implementation of urban infrastructure and village area improvements and capacity building, through the PMU. The PMU project director was assisted by two deputies for infrastructure improvements and capacity building. In addition, VAI committees established in each village became the focal organizations for planning, implementation, and O&M for the VAI component. The implementation arrangements were considered satisfactory and remained unchanged throughout project implementation.

G. Conditions and Covenants

24. The loan conditions and covenants were generally complied with, unchanged. Of 31 loan covenants, 27 were found to have been satisfactorily complied with; compliance with the four others was deemed partially satisfactory. The four loan covenants that were only partially complied with are discussed briefly below, and in detail with all the other loan covenants in Appendix 5.

- (i) **Urban policy and institutional reform agenda (Loan Agreement Schedule 6, para. 5).** The institutional and policy reforms required for the development of the municipality and the financial independence of VUDAA proved difficult for the Executing Agency to achieve because the assumptions regarding the adequacy of local government structure and capacity, as well as the level of support from the districts, turned out to be incorrect. Nevertheless, the agenda provided the impetus for, and helped facilitate, the passage of the LLA and a number of supporting ministerial decrees. It also led to the identification of the boundaries of the future municipality, along with continued internal dialogue on the importance of urban service delivery and cost recovery.
- (ii) **Generation of urban revenues (Loan Agreement Schedule 6, para. 5b).** VUDAA was unable to generate enough revenues from its own sources to meet at least 50% of costs 2 years after loan effectiveness and 100% by project completion. The Project met with implementation difficulties because of inadequacies in the VUDAA organizational structure and capacity, an unrealistic implementation timetable, and urban service rates that were too low. Furthermore, Provincial Government Decree 1804/2000 on urban revenues did not suffice; a higher approving authority (e.g., MOF) was required. Despite slow progress, however, VUDAA has begun to collect user charges and fees from parking, entertainment, building permits, and gasoline surcharges.
- (iii) **Urban taxes and fees (Loan Agreement Schedule 6, para. 5c).** Although the National Assembly passed the LLA, VUDAA lacked the operational guidelines to obtain the legislative, administrative, and staffing support it needed to raise revenue and increase urban taxes and fees for cost recovery. The covenant was therefore unattainable.

- (iv) **Provisions for local autonomy (Loan Agreement Schedule 6, para. 5g).** The LLA was inconsistent with principles of autonomous urban local authorities, It also did not give urban development administration authorities financial autonomy and the requisite revenue-raising powers to levy and collect direct and indirect user charges and fees, and property-related taxes, to recover the cost of urban infrastructure and services. However, VUDAA has made some progress in capacity building, particularly in financial management, engineering design and supervision, and responsive urban governance.

H. Consultant Recruitment and Procurement

25. **Consultant Selection.** The consultants were selected and hired in a fair and transparent manner according to ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time).¹³ PCI Asia was awarded the \$2.49 million contract as lead supervising consulting firm in February 2002. At appraisal, the total consultants' input was estimated at 270 person-months (76 international and 194 national) over 60 calendar months. The actual consultants' input was 426 person-months (109 international and 317 national). The consulting inputs increased because of the design and supervision requirements of the additional civil works. An amendment to PCI Asia's contract in December 2005 resulted in a \$0.47 million increase in consulting costs. Against the 191 person-months of consulting inputs (70 international and 121 national) initially proposed by AFD,¹⁴ the actual inputs totaled 197 person-months (57 international and 140 national). The international consulting inputs were reduced because the objectives were considered met. No major changes were made in the consultant selection procedures. In addition, the Project also recruited the LWU to monitor and evaluate the VAI component, and an independent resettlement monitor to assess the Project's conformity with Lao PDR and ADB resettlement policies, and to recommend remedial actions.

26. **Procurement.** Procurement was implemented according to ADB's *Procurement Guidelines* (2007, as amended from time to time). Major civil works contracts in excess of \$1.0 million used ICB procedures, while smaller civil works contracts (including the VUDAA building subcomponent) used local competitive bidding (LCB) procedures. At appraisal, it was estimated that there would be 18 civil works contracts comprising 4 drainage contracts (2 ICB and 2 LCB contracts), 13 road contracts (2 ICB and 11 LCB contracts), and the VUDAA building. By project completion, 4 additional ICB road contracts had been submitted by VUDAA and approved, for a total of 22 civil works contracts.¹⁵ Procurement and civil works implementation were expedient and were completed either on schedule or ahead of time, and no major changes were made in procurement procedures. During implementation, several contracts were amended to conform to actual conditions such as the following: (i) the need for additional excavation works and backfill material, because of the change in drain sizes; (ii) the repair of damaged pipes owned by Nam Papa, the state-owned water utility company; and (iii) the construction of additional civil works (four new contracts) made possible by loan savings, to maximize project benefits. The supply contracts for maintenance and solid waste management were awarded through international shopping procedures. All VAI civil works contracts used simplified LCB procedures,

¹³ PCI Asia began its services in March 2002. The scope of its consulting services covered overall project management, the preparation of detailed designs and bidding documents, construction supervision, the development of a legal framework for decentralized government, and capacity building and training.

¹⁴ The capacity-building and traffic management and safety consultants were recruited under separate packages according to AFD's procedures.

¹⁵ Loan savings from exchange-rate gains and project implementation efficiencies allowed PCU to implement four additional subprojects. To accomplish the civil works construction the Project was extended for 6 months from the original completion date of 28 February 2007, to 31 August 2007.

which were better suited to circumstances at the village level. The ADB-financed contracts are summarized in Appendix 6.

I. Performance of Consultants, Contractors, and Suppliers

27. The consultant team leader was mobilized in March 2002, but was replaced in December 2002 when he fell ill. With the improved project management that followed, the international consultants were able to transfer know-how and provide the necessary guidance to the national consultants. The inputs of the international community development and gender specialist, urban revenue specialist, and urban legal specialist were reduced, but that of the national community development and gender specialist increased, and this increase proved to be a major factor in the successful implementation of the VAI program. LWU worked well with the national community development and gender specialist, reaching out to and mobilizing communities with excellent results. The team leader proved his ability to develop good working relationships with the PMU and other stakeholders. The changes in the consultant team structure did not change the value of the consultant contract. However, the four additional civil works contracts approved in August 2005 led to a project time extension and a corresponding increase in person-months for both international and local consultants. Overall, the performance of the consultants was satisfactory.

28. The initial CIE contracts, except for road contract ICB-R-203, were all won by foreign contractors. The PMU noted at that time the poorly prepared prequalification and bidding documents of the Lao contractors, which showed a lack of understanding of prequalification and bidding procedures. The Lao contractors failed to prequalify as a result. The PMU therefore organized a series of workshops for Lao contractors to familiarize them with the prequalification and bidding procedures, including planning, project management, financial management, and bank guarantees. The Lao contracting industry became more competitive after that. Of the four subsequent ICB contracts, three were won by Lao contractors. Overall, the performance of contractors was satisfactory.

J. Performance of the Borrower and the Executing Agency

29. Vientiane Prefecture, in its capacity as the Executing Agency, provided the critical leadership and support required for the successful completion of the Project. In particular, the vice governor and VUDAA president were active in providing project guidance and oversight as well as support to VUDAA and PMU management in resolving issues and administering the day-to-day activities. Staff capacity and performance, particularly the pace of civil works in the CIE and VAI components, greatly improved after the original project director was replaced in August 2004. Although both Vientiane Prefecture and IA VUDAA had taken part in the implementation of a previous loan project, the more consultative style of management under the VUISP enabled the learning of valuable lessons from the resolution of resettlement, capacity-building, and community participation issues. Ownership of the VUDAA tasks by the staff improved, as did service delivery by VUDAA to the Vientiane community. Vientiane Prefecture was also proactive in disseminating project experiences, collaborating with ADB missions, assisting field trips for ADB Management, and working with target communities. Overall, the performance of the executing and implementing agencies was satisfactory.

K. Performance of the Asian Development Bank

30. The ADB undertook 21 missions, as follows: (i) fact-finding, appraisal, inception, and

project completion missions; (ii) six special missions;¹⁶ and (iii) 11 regular missions. The review missions closely monitored progress and provided valuable assistance to VUDAA; discussed project and procedural issues with officials from Vientiane Prefecture, MCTPC, MOF, and the Prime Minister's Office; and gave suggestions and advice for improved implementation. The ADB missions in general identified and discussed various issues and their resolution with the relevant stakeholders and produced timely aide-mémoire and back-to-office reports. ADB's active involvement was evident in its efforts to assist the PMU in speeding up approvals, particularly for disbursements and procurement. However, it was also noted that up to four project officers handled the implementation of the Project over the loan period. For more effective monitoring of similar projects in the future, ADB should try to avoid such frequent staff turnovers. ADB's performance was satisfactory.

III. EVALUATION OF PERFORMANCE

A. Relevance

31. The Project was relevant to the Government's priorities at the time of appraisal and remains consistent with the Government's current priorities of providing urban infrastructure. It was formulated in accordance with the national development policy of decentralizing and strengthening local government, with the following objectives: delegating the authority for providing urban services, strengthening local governments, improving the access of the poor to urban services, and addressing environmental concerns. The Project also supported ADB's strategy of reducing poverty, which emphasizes support for economic growth through investments in infrastructure, the environment, and human resources development. The urban policy and institutional reform agenda was relevant, but the scope and timetable for achieving the targets as indicated in the project design were too ambitious, given the low capacity of local government staff and the limited budgetary resources available. At project completion, it was clear that VUDAA was not ready to become fully autonomous. However, the Project was able to build capacity in several areas of expertise such as financial management along with technical expertise in engineering and supervision for O&M. Various revenue sources were identified and analyzed, and documents that would provide the legal basis for fee collection and redistribution were drafted. The future status of VUDAA is also now under government review. The discourse on the decentralization and strengthening of local government has led to the approval of the Luang Prabang Urban Development Administration Authority as a pilot municipality.

B. Effectiveness in Achieving Outcome

32. The Project was effective, as it achieved the intended outcome of improving the quality of life of urban residents and enhancing economic growth in Vientiane through urban infrastructure development. The length of infrastructure built and upgraded exceeded the targets set at appraisal—roads by 24.3% and drainage works by 10%. The VAI component addressed poverty reduction through improved community infrastructure and environmental sanitation. In particular, the elimination of most, if not all, incessant flooding has had a positive impact on public health.¹⁷ Improved drainage, combined with aesthetically constructed brick walkways, street lighting, and road improvements, has resulted in significant improvements in Vientiane's

¹⁶ The special missions were: a consultative mission on the draft Local Administration Law, a special loan administration mission, an environmental safeguard mission, and three resettlement review missions.

¹⁷ The Department of Health and Vientiane Prefecture have noted a decrease in the number of dengue cases since the VAI eradicated flooding in the 50 villages involved in the program.

economic growth and livability. The Project identified potential sources of urban revenues, methods of collection, and estimated rates and tariffs. It was also active in supporting decentralization and governance reforms and the development of a functioning municipal government and institutional capacity to the extent permitted by the resources (through consulting inputs, facilitation of legislation, workshops, and dialogue). Although the outcome of such support was effective, the roles and responsibilities of key stakeholders were less clear in the eventual transformation of VUDAA into a municipality.

C. Efficiency in Achieving Outcome and Outputs

33. The Project was efficient in achieving its outputs and purpose and substantially exceeded the infrastructure targets. The improved road infrastructure has made public areas, private and commercial property, and village communities more accessible, and reduced travel time through smoother flow of goods and people. Agricultural land and paddies along the new roads have been opened up to residential development, and new residential areas have become available, causing a rapid growth in property development. This effect is evident in the reestimated economic analysis, which yielded higher economic internal rates of return (EIRRs) for all subprojects compared with the appraisal estimates. The reestimated EIRRs for the four road subprojects are: 42.2% for the new construction and upgrading of Road P3 (27.9% at appraisal); 40.1% for Road Thon Sang Nang (26.5%); 54.9% for the upgrading of Roads 1 and 1A (36.6%); and 27.45% for the upgrading of Road Dong Na Sok (17.3%).

34. The base-case EIRR for the drainage and riverbank protection subproject was reestimated at 33.8%, slightly higher than the 31.1% assessed before the Project. The lengthening of primary and secondary channels (by about 15%), the replacement of inefficient open drains, and the construction of underground drainage have drastically reduced the areas of the city where prolonged flooding occurs. In particular, the Heritage Area is well drained and free from flooding. Improved drainage in the 50 urban villages supported by the VAI program will lead to improved community health. The base-case financial internal rate of return for the solid waste management subproject was reestimated at 31.6%, versus the 28.5% assessed before the Project. The subproject increased the coverage of waste collection services in project areas under the VUDAA from about 15,000 households at appraisal to about 70,000 households, or by 466%.

35. Community contributions, particularly for the VAI, exceeded project expectations and reflected the overall support by beneficiary communities. However, the process of urban reform and the problem of urban revenue collection have yet to be resolved. Urban revenue sources must be reviewed, to establish a level of income that would allow the new municipalities to provide an acceptable level of service to the community. The responsibilities of local government agencies for providing services must be clearly defined, and service fees must generate enough income to fund sustainable municipal services. The Project was extended not because of inefficiency but to maximize the benefits.

D. Preliminary Assessment of Sustainability

36. The project outcomes are sustainable. The facilities built under the CIE component were completed as designed. Provided normal routine maintenance is undertaken, the Project will continue to achieve the planned benefits over its economic life. There are guidelines for assessing and maintaining municipal assets and mechanisms for assigning tasks and responsibilities, but budget appropriation mechanisms and review procedures for identifying the costs of maintaining municipal assets to protect current and future investments need to be

improved. Further training will also be needed to carry out the plans as envisaged. For VAI, the outcomes are more sustainable. The VAI program facilities were built to specifications and will continue to achieve the expected project benefits throughout their economic life. Participatory processes are in place to ensure that the contract agreements have been drawn up between households and village environmental units and between these units and VUDAA or the districts. The maintenance contracts for community infrastructure works between village committees and households have proved successful and are to be sustained.

37. The future of VUDAA is less clear. The eventual development of the municipality may entail the amalgamation of the Vientiane Department of Communication, Transport, Posts, and Construction and VUDAA, as well as the merger of the four central districts. This move will, however, require a rationalization of the responsibilities and tasks of all organizations providing services to the Vientiane community. VUDAA is now functioning as the engineering department of the proposed Vientiane Municipality, although the services it provides—solid waste management, street cleaning, and the issuing of building permits for small buildings—do not constitute the entire functions of such an organization.

E. Impact

38. **Urban Infrastructure and Environmental Improvements.** The Project had a major impact on the road network. It built and upgraded 82.8 km of roads, or 29% of Vientiane's 279 km total, thereby increasing accessibility and reducing travel time. In general, vehicle and pedestrian flows have improved. Visual and aesthetic improvements, such as lighting, traffic lights, and signs, have been associated with an increase in tourist arrivals and a sense of civic pride. The drainage improvements, together with the eventual link with the JICA project, have greatly mitigated perennial flooding and led to better environmental sanitation and community health. Although no surveys have been done to establish a direct causal link between improved drainage and improved public health, the Department of Health has noted drastic reductions in cases of intestinal worms as well as waterborne diseases like typhoid, dysentery, diarrhea, and dengue.¹⁸ The new access roads to relatively isolated villages have increased solid waste collection. The infrastructure improvements are therefore not only a functional and technical success, but also serve to improve the visual surroundings.

39. **Institutional Development.** Although the Project met difficulties in facilitating the urban policy and institutional reform agenda, the issues pertained to design, not implementation. The assumptions that VUDAA would have the necessary mandate, and the Government the capacity, to undertake the reforms were unfounded. However, the Project played a significant part in the passage of the LLA as well as various decrees as a result of policy dialogue. The urban infrastructure and environmental improvements, particularly the VAI, contributed to good governance through transparent, accountable, and participatory design and implementation. There is now more discussion on how the Government can capitalize on its new investments through improved cost recovery. Increasing land prices resulting from infrastructure investments have also prompted the Government to speed up its land titling efforts. Furthermore, the inventory of municipal assets is continuously being updated, in what will be an important step toward more functional urban planning. Overall, the Project has made a moderate achievement in institutional development.

¹⁸ According to Department of Health statistics, the yearly incidence of dengue in Vientiane from 2003 to 2007 was as follows: 2,700 cases in 2003, 423 in 2004, 476 in 2005, 248 in 2006, and 95 in 2007. Although these are correlation figures and causality will need to be established further, there is a strong indication that the reduction of standing water through flood elimination has substantially decreased the breeding grounds of the vectors.

40. **Environmental Impact.** There was no adverse environmental impact. ADB conducted an environmental safeguard review mission to ensure compliance and found that in general all the environmental covenants of the loan were complied with and no environmentally sensitive areas or large-scale changes in the physical, biological, or social environment had occurred. There was a concern, however, with the possibility that conditions in the That Luang Marsh could deteriorate as a result of uncontrolled commercial and residential development. Since the major drainage systems built under the Project were directed toward the marsh, periodic monitoring of water quality, along with the institutionalization and enforcement of the proposed planning regulations, was requested.

41. **Resettlement.** At appraisal, it was estimated that the Project would affect (i) 126 parcels of land with an area of 12.9 hectares, (ii) 48 buildings (30 permanent and 18 temporary), and (iii) 89 households. The estimated costs of resettlement were \$1,374,418 for land compensation and \$310,000 for building compensation, for a total of \$1,684,418. At project completion, the number of affected households was 157, of which 44 had acceded to compensation payments and the rest had agreed to make voluntary contributions.¹⁹ The following compensation items were satisfied: (i) 142 parcels of land 2.15 hectares in area, excluding government land; and (ii) 63 buildings (21 permanent and 42 temporary). The actual cost of resettlement was \$638,358—\$458,254 for land and \$180,103 for building compensation. The large number of voluntary contributions reduced the compensation figures to well below the appraisal estimates. Resettlement expertise should have been sought early in the design stage so as not to delay implementation. See Appendix 8 for a summary of original estimates and actual resettlement requirements at project completion.

42. **Impact on Indigenous Peoples.** The Project did not encounter any indigenous people's issues during implementation. Specific mechanisms were implemented to mitigate the risk and baseline information on ethnicity was monitored.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

43. The Project is considered relevant, effective, efficient, and sustainable. Overall, it was a success.

B. Lessons Learned

44. Valuable lessons can be derived from the Project to help the executing and implementing agencies, the project team, and ADB in designing and implementing future projects.

- (i) **Several factors converged to make the Project a success.** These factors were: (i) a strong, supportive executing agency; (ii) a champion in the person of the project director, who was willing to take responsibility and risks in moving the Project forward; (iii) a professional consulting team, headed by a dedicated project team leader; (iv) the LWU and community field workers; and (v) community participation.

¹⁹ In most cases compensation for impact arising on-site during construction was expedited soon after the impact occurred.

- (ii) **Civic participation positively affects urban governance.** The transparency and accountability of transactions throughout project implementation ingrained in the communities a level of trust in their dealings with the Government and project staff. The interaction and sharing of responsibilities, reinforced by the presence of LWU and community development field-workers, eventually evolved into effective partnerships and improved governance.
- (iii) **Capacity building requires long-term support.** Despite not making much progress in capacity building early in the Project, VUDAA has gradually built capacity for financial management, engineering design and supervision, and responsive governance through skills training and guided application. The momentum created must, however, be sustained through additional, long-term support from ADB and other donors.
- (iv) **The Project could have been more effective in its urban institutional reform efforts:** (i) if the VUDAA concept had been designed as an outcome of a thorough, participatory process involving key stakeholders and not something imposed by ADB; (ii) if local politics, particularly the historical role of the four districts, had been more thoroughly understood and taken into account; (iii) if the phasing and timing of institutional and policy reforms had been more realistic, given the allocated resources and the expectations of the stakeholders involved; and (iv) if cofinancing arrangements had been better integrated throughout implementation.

C. Recommendations

1. Project-Related

- (i) **Allocate more resources for critical upstream project preparation.** The Project could have done better during project preparation to ensure better project design, ownership, and support through: (i) wider consultation with stakeholders; (ii) a better understanding of the local government structure and local politics, institutional capacities, and constraints; (iii) a more thorough assessment of urban service provision models, taking into account local capacity, political will, and recurring costs; and (iv) a careful assessment of environmental, social, and resettlement impact.
- (ii) **Capacity building requires proper planning and up-front implementation.** The Project could have undertaken a more thorough assessment of resources, current capacity, and local conditions as a part of Project preparation. Capacity building not only involves training, but should be preceded by proper planning and incorporate best practices derived from previous project experiences.
- (iii) **Assess the timing, resource requirements, and political will for institutional and policy reform realistically.** Although the Project's intent to provide accessible, affordable, and reliable urban services was supported by all stakeholders involved, the institutional and policy reforms needed to achieve this goal, along with the implied transformation of VUDAA into a municipality, were not fully supported. The institutional agenda could have been more effective if the timing, resource constraints, and political will of stakeholders had been realistically addressed.

2. General

- (i) **Consider replicating and expanding participatory and demand-driven development activities.** The experience gained from the VAI component indicates the importance of having communities actively involved in project design, implementation, and maintenance. These activities could be replicated and expanded with the use of similar principles but for a larger number of beneficiaries.
- (ii) **Continue support for institutional reforms and improved service delivery.** Although the urban reforms were not carried out as planned, the Project was able to spark meaningful dialogue with the Government on the importance of cost recovery for urban services and keep the importance of a functioning municipality. Urban reforms need time, continued dialogue, and long-term capacity building. Therefore, urban governments must continue to be supported until they are able to function as sustainable urban service providers.
- (iii) **Capitalize on the momentum generated by the infrastructure improvements.** The infrastructure improvements have largely met the development objectives. However, the Vientiane Prefecture (or VUDAA) could not maximize these investments, particularly in recovering costs for O&M through user charges, fees, and retributions for long-term sustainability. Future urban infrastructure investments should be maximized through appropriate measures to recover costs of services.

DESIGN AND MONITORING FRAMEWORK

Project Summary	Performance Targets	Project Achievements	Key Issues and Recommendations
1. Impact			
Better quality of life for urban residents; enhanced urban productivity; sustained economic growth			
2. Outcome			
2.1 Improved quality of urban infrastructure and delivery of services, particularly to the poor	Improved roads and drainage, and public health; increased access by the poor to basic services	Construction and upgrading of 28% of Vientiane's present road network and 38% of drainage network; increased accessibility of citywide and village infrastructure, particularly for the poor	Further monitoring is required to ensure continued access in the future.
2.2 Support for decentralized urban governance reforms for autonomous, well-functioning, and financially self-sufficient urban administration in Vientiane	Necessary government and legislative support gained for the functioning of VUDAA, along with implementation guidelines for revenue collection, and capacity building for the functioning of VUDAA	Increased responsibility for VUDAA to provide infrastructure; Law on Local Administration passed by National Assembly in 2003; implementing guidelines for law drafted but not approved at project completion	The status of VUDAA as an arm of local government was less than that assumed at project appraisal. VUDAA was not able to press the Government to institute the needed urban reforms.
3. Outputs			
3.1 Further development of the legal and institutional framework for decentralized urban governance	Law on Local Administration finalized and issued by the National Assembly within 18 months of loan effectiveness; administrative and functional jurisdiction of VUDAA defined within 18 months of loan effectiveness	Law on Local Administration passed in October 2003, and made effective by PM Decree in November 2003; administrative and functional jurisdiction of VUDAA restricted to environmental services and solid waste collection	In future projects supporting the development of a municipal government, the budget and tasks should be clearly defined and agreed on.
3.2 Technically competent and financially autonomous urban authority		Improved technical competence of VUDAA staff, but VUDAA still financially dependent	Requirement was too ambitious and did not take into account the realities of local politics.
(a) Improved resource mobilization capacity	Revenue generation from VUDAA's own sources to meet 50% of the cost of services and adequate O&M by October 2003, and 100% by 1 October 2006	Given the difficulties and the lack of VUDAA capacity and government support, the target of 100% cost recovery was extended to 2010; actual achievement was about 30%	Given the status of VUDAA as a department within the Vientiane Prefecture the original concept and target were unrealistic.
(b) Improved financial management by VUDAA	Budgeting and accounting systems and procedures established and upgraded within 2 years of loan effectiveness	VUDAA accounting capacity improved as a result of both the ADB- and the AFD-funded capacity-building components	As the local government organization develops further, additional training and qualified staff will be required.

Project Summary	Performance Targets	Project Achievements	Key Issues and Recommendations
(c) Effective O&M of infrastructure and services	Development and continual updating of (i) an asset register, (ii) an operations plan, (iii) a maintenance plan, and (iii) a capital works plan within 30 months of loan effectiveness; sufficient skilled staff available to formulate, implement, and update capital, O&M, and budget plans	Asset register developed under the capacity-building subcomponent funded by AFD; O&M and capital works plans not implemented; VUDAA had limited trained staff to implement and update municipal plans as well as undertake O&M budgeting	The VUDAA functions as an engineering department of a local government agency with limited responsibilities and capacity, so it has little leverage to push for the needed decrees.
(d) Responsive urban governance	Participatory management and urban poverty reduction for VUDAA staff; strengthening of Social Action Unit	Trained VUDAA and Social Action Unit staff	
	Participatory planning and training for village within 1 year of loan effectiveness	Trained village residents in 50 villages	
	Information dissemination and grievance systems in VUDAA developed within 2 years of loan effectiveness	Information dissemination and grievance systems developed	
(e) Effective planning and development and building control	Wetlands designated as protection zones in the master plan by December 2002	VUDAA authority to enforce development and planning controls and revenues from building permit fees remain inadequate	Lack of coordination among the various agencies tasked with issuing building permits (VUDAA, DCTPC, and MCTPC) continues to create environmental, town planning, traffic, parking, and building issues.
3.3 Improved citywide infrastructure and environment	(a) Citywide urban infrastructure improvements (drainage, roads, traffic management and road safety, solid waste management, and institutional infrastructure)	Construction of 28% of Vientiane's road networks; improved road efficiency, reduced travel costs and fatalities; AFD-funded road safety program was canceled	
	Improved drainage; reduction in waterborne diseases; reduced yearly incidence of flooding from 10 to 5 times, and flooded area from 50% to 30% of city	Flooding in the 50 villages involved in the VAI program has been eliminated and the Heritage Area in the city center is free from flooding; output has substantially exceeded the target	The Ministry of Health noted a marked reduction in the incidence of dengue fever in 2005, 2006, and 2007.

Project Summary	Performance Targets	Project Achievements	Key Issues and Recommendations
(b) Village area improvements	Improved public health conditions and community awareness of the importance of environmental improvement and sanitation for public health; improved, demand-driven village infrastructure and access to services by the urban poor	Training for village groups resulted in improved cleanliness and environmental management, particularly solid waste, in 50 villages; improved village infrastructure; expanded VUDAA solid waste management services	The program has been an outstanding success and should be replicated wherever and whenever possible. VAI success has many villages requesting project support for future development.
4. Activities			
4.1 Citywide infrastructure improvements			
(a) Road improvements	Resurfacing and upgrading of 12.7 km of primary and 21 km of secondary roads and construction of 2.1 km of new roads, totaling 35.8 km of roads, between May 2002 and August 2006	33.5 km of roads resurfaced and upgraded between August 2003 and July 2006 and an additional 9.3 km of new roads, funded by loan savings, completed between February 2006 and July 2007, totaling 44.5 km of roads (increase of 10.8 km, or 24.3%, over target)	
(b) Drainage improvements	Construction and upgrading of 5.8 km of primary and 8.2 km of secondary drainage, totaling 14 km of drainage, between May 2002 and August 2006	6.6 km of primary drainage and 9.5 km of secondary drainage built and upgraded between August 2003 and July 2006, and an additional 2.6 km of drainage works, funded by loan savings, completed between February 2006 and July 2007, for a total of 18.7 km (increase of 4.7 km, or 33.6%, over target)	
(c) Improved solid waste collection and disposal services	Provision of three new solid waste collection vehicles and 50 containers between January 2003 and December 2004; fleet use efficiency improvements and increased village contracts for SWM	The Executing Agency, Vientiane Prefecture, purchased six solid waste collection vehicles to improve service delivery; substantial increase in village contracts due to increased coverage and improved infrastructure developed by VAI program	
(d) Traffic management and road safety improvements financed by AFD	Provision of street lighting along 18 km of roads between January 2003 and June 2006; installation of traffic signals at six intersections in 2004, and street signs and other traffic control systems between January 2003 and June 2006		

Project Summary	Performance Targets	Project Achievements	Key Issues and Recommendations
(e) Maintenance equipment and office building for VUDAA	Procurement of equipment for routine maintenance of roads and drainage, and construction of an office building	Procurement of three water tankers, one dump truck, one excavator, and road cleaning equipment by June 2006	
4.2 Village area improvements	(a) Community infrastructure	38.5 km of road and drainage works completed between June 2004 and December 2006 in 50 urban villages, with corresponding environmental , community health, and solid waste collection improvements	VUDAA management and Social Action Unit played a major role in the implementation of the VAI program.
(b) Community preparation and awareness	Strengthened capacity of VUDAA and villages for community-based project implementation; environmental awareness program implemented; VAI committees formed and playing active role in project decision making and implementation	Establishment of village committees facilitated exchange of ideas between village committees and enhanced implementation of VAI program	Environmental program and understanding of environmental issues were greatly enhanced by the JFPR project.
4.3 Implementation support and capacity building	(a) Support for project implementation and management unit	Consultant design and management support for infrastructure and community-based implementation	Consultant support enabled on-time project completion and additional works as a result of cost savings.
	Consultant support for legal reform	Consultant team facilitated passage of draft Law on Local Administration by the National Assembly	
	Consultant support for revenue mobilization	Consultants identified and urban revenue workshops prepared in 2002–2003	The resources identified in the workshops will form the basis for urban revenue collection for the new municipality.
b) Capacity building	Support for systems implementation to allow VUDAA to undertake its mandated functions sustainably	Manuals in Lao, English, and French prepared by AFD program consultants for each of the mandated functions of VUDAA	Functions consist of organizational, financial, and asset management; private sector participation; urban planning and governance; and human resources development.
(c) Incremental administration	Incremental administration by the Government	Expanded project management role and capacity of VUDAA	

Project Summary	Performance Targets	Project Achievements	Key Issues and Recommendations
5. Inputs			
5.1 Project Cost			
(a) Part A: CIE			
• Road improvement	\$11.90 million base cost	\$18.45 million	
• Drainage improvement	\$6.70 million base cost	\$9.15 million	
• Improved SWM	\$0.40 million base cost	\$0.27 million	
• Traffic management and road safety	\$1.50 million base cost	\$2.13 million	
• Maintenance equipment	\$0.30 million base cost	\$0.50 million (including additional water pipes for Nam Papa)	
• Office building	\$0.30 million base cost	\$0.60 million	
Subtotal	\$21.0 million base cost	\$31.10 million	
(b) Part B: VAI			
• Community infrastructure	\$3.9 million base cost	\$4.81 million	
• Community awareness and participation	\$0.2 million base cost	\$0.59 million	
Subtotal	\$4.1 million base cost	\$5.39 million	
(c) Part C: PICB			
• PMU support	\$3.6 million base cost	\$3.42 million	
• Capacity building	\$2.0 million base cost	\$2.92 million	
• Incremental administration	\$0.4 million base cost	\$0.36 million	
Subtotal	\$5.9 million base cost	\$6.70 million	
(d) Contingencies			
• Physical contingencies	\$2.0 million	\$0.00 million	
• Price contingencies	\$3.4 million	\$0.00 million	
• IDC	\$0.6 million	\$0.48 million	
Total Cost	\$37.0 million	\$43.67 million	
5.2 Project Financing			
(a) ADB loan	\$25.0 million	\$28.86 million ^a	
(b) Grant from AFD	\$4.4 million	\$5.35 million	
(c) Government	\$7.2 million	\$9.06 million	
(d) Community	\$0.4 million	\$0.40 million	
Total	\$37.0 million	\$43.67 million	
On-lending to VUDAA	\$2.9 million	\$2.9 million	

ADB = Asian Development Bank; AFD = Agence Française de Développement; CIE = citywide infrastructure and environmental improvements; DCTPC = department of communication, transport, post and construction; IDC = interest during construction; MCTPC = ministry of communication, transport, post and construction; O&M = operation and maintenance; PICB = project implementation and capacity building; SWM = solid waste management; VAI = village area improvement; VUDAA = Vientiane Urban Development Administration Authority

Source: ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan for the Vientiane Urban Infrastructure and Services Project*. Manila.

^a Includes interest during construction.

COST BREAKDOWN, BY PROJECT COMPONENT
(\$ million)

Component	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Base Cost						
1. Citywide Urban Services						
a. Roads	6.49	5.43	11.92	10.22	8.23	18.45
b. Drainage	3.70	3.04	6.74	4.87	4.28	9.15
c. Solid Waste Management	0.31	0.05	0.36	0.27	0.00	0.27
d. Maintenance Equipment	0.15	0.10	0.25	0.50	0.00	0.50
e. Traffic Management/ Road Safety	1.01	0.49	1.50	1.43	0.70	2.13
f. Office Building	0.12	0.18	0.30	0.29	0.31	0.60
Subtotal (Part A)	11.78	9.29	21.07	17.58	13.52	31.10
2. Village Area Improvements						
a. Community Infrastructure	0.77	3.08	3.85	1.76	3.05	4.81
b. Community Awareness	0.01	0.19	0.20	0.35	0.24	0.59
Subtotal (Part B)	0.78	3.27	4.05	2.10	3.29	5.39
3. Implementation Support						
a. PMU Support	1.94	0.81	2.75	2.36	1.06	3.42
b. Engineering Support	0.05	0.72	0.77	0.00	0.00	0.00
c. Capacity Building	1.80	0.20	2.00	2.63	0.29	2.92
d. Incremental Administration	0.18	0.24	0.42	0.06	0.30	0.36
Subtotal (Part C)	3.97	1.97	5.94	5.05	1.65	6.70
Total Base Cost	16.53	14.53	31.06	24.73	18.46	43.19
B. Contingencies						
a. Physical	1.09	0.88	1.97	0.00	0.00	0.00
b. Price	1.84	1.56	3.40	0.00	0.00	0.00
Cost (including Contingencies)	19.45	16.97	36.43	24.73	18.46	43.19
C. Interest during Construction	0.58	0.00	0.58	0.48	0.00	0.48
Total	20.03	16.97	37.00	25.21	18.46	43.67

PMU = project management unit

Note: Figures may not add up to the totals given because of rounding.

Source: Asian Development Bank estimates.

BREAKDOWN OF ANNUAL DISBURSEMENTS, 2001–2007

Year	Quarter	ADB Fund		Counterpart Fund		Total
		Amount	Cumulative	Amount	Cumulative	
2002	I	0	0	0	0	0
	II	0.3378	0.3378	0	0	0.3378
	III	0.2981	0.6359	0	0	0.2981
	IV	0.2573	0.8932	0	0	0.2573
2003	I	0.1442	1.0374	0.0200	0.0200	0.1642
	II	0.1372	1.1746	0.0060	0.0260	0.1432
	III	0.2518	1.4264	0.0080	0.0340	0.2598
	IV	0.1680	1.5944	0.0030	0.0370	0.1710
2004	I	0.5949	2.1893	0.8390	0.8760	1.4339
	II	0.3422	2.5315	0.1820	1.0580	0.5242
	III	1.1916	3.7231	0.0900	1.1480	1.2816
	IV	0.6502	4.3733	0.0340	1.1820	0.6842
2005	I	1.9943	6.3676	2.0770	3.2590	4.0713
	II	2.8921	9.2597	0.7630	4.0220	3.6551
	III	1.9764	11.2361	0.0750	4.0970	2.0514
	IV	2.5871	13.8232	0.5360	4.6330	3.1231
2006	I	2.5006	16.3238	1.3280	5.9610	3.8286
	II	3.9752	20.2990	1.4450	7.4060	5.4202
	III	2.4409	22.7399	0.0770	7.4830	2.5179
	IV	2.3838	25.1237	0.8870	8.3700	3.2708
2007	I	1.0904	26.2141	0.7990	9.1690	1.8894
	II	0.5494	26.7635	0.2590	9.4280	0.8084
	III	1.9788	28.7423	0.0080	9.4360	1.9868
	IV	0.0757	28.8180	0.0200	9.4560	0.0957
2008	I	0	28.8180	0.0000	9.4560	0.0000
	II	0.0418	28.8598	0.0000	9.4560	0.0418
	III	0	28.8598	0.0000	9.4560	0.0000
	IV	0	28.8598	0.0000	9.4560	0.0000
Total			28.8598		9.4560	38.3158

ADB = Asian Development Bank.

Source: Asian Development Bank loan financial system.

PROJECT IMPLEMENTATION SCHEDULE, 2001–2007

Activity	2001	2002	2003	2004	2005	2006	2007
Establishment of PIMU							
Hiring of Consultants							
Fieldwork of Consultants							
Survey and Investigation							
Land Acquisition							
Roads							
Drainage							
Detailed Design/Bidding Documents Additional Works							
Bidding and Contract Awards							
Maintenance Equipment							
Community Participation and Awareness							
Civil Works							
Roads							
Drainage							
Solid Waste Management							
VUDAA Office Building							
Village Area Improvements							
AFD Cofinancing							
Traffic Management and Road Safety							
Capacity Building							

Legend: Appraisal
 Actual

AFD = Agence Française de Développement; PIMU = project implementation and management unit; VUDAA = Vientiane Urban Development Administration Authority.

Source: Asian Development Bank.

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference in Loan Agreement	Status of Compliance
Sector		
1. Review and update the Urban Policy and Institutional Reform Agenda (UPIRA) annually, in consultation with ADB, and implement the measures outlined in the UPIRA within the time periods agreed upon.	Schedule 6, para. 5	Partly complied with. After the Prime Minister's instruction, the draft decree to establish the municipalities was prepared and the Government set October 2007 as the target date for the pilot municipalities to start operating. The Vientiane municipal boundary and a new boundary around 192 villages have been identified. This is considered a positive development toward the target of setting up a local government unit to manage Vientiane.
Environmental		
1. An Initial Environmental Examination (IEE) shall be prepared and submitted to ADB prior to any construction-related activity proceeding.	Schedule 6, para. 14a	Complied with. After the Oct–Nov 2004 review mission for all projects submitted to ADB, project impact was identified as follows: temporary material disposal, increased discharge from drains. PMU continues to monitor the impact yearly.
2. Project facilities are operated and maintained, in accordance with existing laws, regulations and standards of the Borrower concerning environmental protection, and ADB's environmental guidelines.	Schedule 6, para. 14b	Complied with. Mitigation measures were included in each contract entered into by VUDAA to ensure strict adherence to good environmental practice.
3. Environmental mitigation measures set forth in IEEs are undertaken during project implementation.	Schedule 6, para. 14c	Complied with. Mitigation measures identified in the IEE were included in the contracts. The MOU between VUDAA and the contractor indicates the need for strict adherence to good environmental practice. Supervision ensures compliance.
4. Vientiane Urban Development Administration Authority (VUDAA) provides ADB with an annual report containing copies of all safety and environmental quality monitoring reports.	Schedule 6, para. 14d	Complied with. As indicated during the review mission, beginning January 2005 QPRs were to include assessments of water quality.
Social		
1. Implementation of the Resettlement Action Plan, the village area improvement (VAI) Implementation Framework and Social Strategy shall secure the interests of the poor and disadvantaged groups.	Schedule 6, para. 15	Complied with. A social and poverty reduction strategy was prepared for VAI. Resettlement plans were prepared, reviewed, and approved by ADB. There are no outstanding resettlement issues.
2. The Borrower and VUDAA shall ensure that prior to construction work commencing, relocation, resettlement and compensation of all persons who are adversely affected by the Project shall be promptly and efficiently carried out in accordance with the Resettlement Plan.	Schedule 6, para. 16	Complied with. Modifications in the approach to ROW alignments have resolved resettlement issues and reduced the need for monetary compensation. RPs and compensation of APs have been completed.
3. The Borrower and VUDAA shall ensure that all land, properties, and rights in land and water required for the Project are made available in a timely manner.	Schedule 6, para. 16	Complied with. VUDAA has kept ADB informed of the progress of site availability, contractor access, and the development of the resettlement action plan.
4. The Borrower and the EA shall ensure that (a) adequate budgetary allocation is made on a timely basis, to cover the cost of land acquisition, including compensation, and (b) VUDAA shall	Schedule 6, para. 16	Complied with. Modifications in the approach to ROW alignments have resolved resettlement issues and reduced the need for monetary compensation. MOF has released VUDAA's

Covenant	Reference in Loan Agreement	Status of Compliance
shall keep the Bank informed of progress of the implementation of the Resettlement Action Plan on a semi-annual basis.		requested budgetary requirements for land acquisition and resettlement.
5. The PMU shall submit Village Area Improvement (VAI) programs that meet all criteria set out in para. 9, Schedule 6, and the English translation of the VAI proposals for the first-year batch villages to ADB for review. VUDAA will ensure a financial or in-kind community contribution of at least 10 percent of the cost of VAI. VAI implementation will follow the participatory approach set out in paras. 10 and 11, Schedule 6.	Schedule 6, paras. 8, 9, 10, and 11	Complied with. All 50 VAI contracts have been completed. The village contribution of 10% was included in the VAI agreement. Village contributions were open to public review. A participatory approach was developed and followed.
Financial		
1. Within 6 months of the Loan Effective Date, VUDAA shall make an assessment of the charges described in Decision No. 1804 issued by the Governor of VP on 25 Dec 2000 (hereinafter called Decision No. 1804) in terms of cost effectiveness and social equity and prepare a plan, acceptable to the Bank, to implement the charges.	Schedule 6, para. 5a	Partly complied with. Consultations on amendments to Decision No. 1804 have begun. The amendments cover a wide range of issues. VUDAA reviewed and rationalized the charges to better reflect current conditions.
2. VUDAA shall generate sufficient revenues from its own sources to meet at least 50% of its costs incurred in providing services and undertaking O&M of the existing infrastructure and project facilities by 1 Oct 2003, and 100% of these costs by 1 Oct 2006.	Schedule 6, para. 5b	Partly complied with. Aside from increases in capital investments and maintenance requirements, there is no capacity within VUDAA to plan and implement revenue collection. VUDAA has not been able to achieve 40% of its recurrent costs, let alone 100% as required.
3. Within 9 months of the Loan Effective Date, VUDAA shall have the legislative, administrative, and staffing support necessary to (i) implement the revenue raising powers notified in Decision 1804, and (ii) increase the level of urban related taxes, user charges, and fees to meet cost recovery objectives as agreed between the Borrower and the Bank.	Schedule 6, para. 5c	Partly complied with. LLA, approved by NA in October 2003, provided the authority to collect revenues. However, it is not implementable because no mechanisms exist to operationalize the law. Operational guidelines have been drafted but have not been endorsed by stakeholders.
4. Within 6 months of the Loan Effective Date, the special levies for wastewater and sewerage and public lighting as stipulated in Decision 1804 shall have been reexamined and revised on a consumption basis to ensure social equity.	Schedule 6, para. 5d	Urban Revenue Progress Report (Aug 2002) identified sources. These potential sources were discussed in detail during the Urban Revenue Workshop held in June 2007.
5. Within one year of the Loan Effective Date, implementation of the surcharges on the water and electricity bills to recover cost of services on account of wastewater, sewerage, and public lighting shall have commenced. Until such implementation, the provisions of Decision No. 21/PM dated 27 April 2001 shall apply.	Schedule 6, para. 5d (ii)	Complied with. The surcharge on the water and electricity bills is being levied.
6. Within 18 months of the Loan Effectiveness Date, a mechanism shall have been	Schedule 6, para. 5e	Complied with. The RMF transferred to VUDAA is KN700 million a year. However, this amount is too low to meet O&M

Covenant	Reference in Loan Agreement	Status of Compliance
developed and implemented to annually allocate, on a permanent basis, a portion of the funds accrued in the Borrower's Road Maintenance Fund (RMF) to finance road maintenance in the Vientiane urban area.		costs. An increase in fuel charges is planned to cover recurrent costs.
7. Within one year of the Loan Effective Date, a concept plan, acceptable to the ADB, shall have been prepared, on procedures and practices to assess, impose and collect the urban obligation fee related to the value of buildings as specified in Decision 1804, and implementation of the plan shall have commenced within 18 months of the Loan Effective Date	Schedule 6, para. 5f	Complied with. A broad concept has been prepared by VUDAA for land tax enhancement.
8. The content of the Local Administration Bill, which is to be submitted to the National Assembly for enactment, shall be consistent with principles of autonomous urban local authorities, and shall include provisions for the financial autonomy of urban development administration authorities and requisite revenue raising powers for levying and collecting direct and indirect user charges and fees, and property related taxes for recovering the cost of urban infrastructure and services for which VUDAA is responsible.	Schedule 6, para. 5g	Partly complied with. Although the municipal government is recognized in the law, municipalities will not be autonomous but empowered to raise local revenues for the provision of urban services. The implementation instruction for the LLA has been drafted and is awaiting the approval of the Prime Minister.
9. The Government will provide sufficient funds on an annual basis to VUDAA to meet any shortfall between total expenditure incurred by VUDAA in fulfilling its obligations (including its administration and service provision costs as well as O&M costs of the existing infrastructure and Project facilities) and VUDAA's own revenues.	Schedule 6, para. 5h	Complied with. The budget expenditures for 2004/2005 amounted to KN22 billion against revenues of KN24 billion. However, the revenue figure included inputs from donor-assisted projects and excluded requirements for other urban services.
10. VUDAA, in consultation with ADB, shall develop and submit a proposal to implement a property-related tax upon completion of land title registration for Vientiane urban area, by no later than 31 August 2004, for consideration by the Borrower.	Schedule 6, para. 5i	Ongoing. Given the lack of any secondary real estate market in Vientiane, VUDAA proposed to use the existing land tax system to collect urban obligation fees. VUDAA prepared a proposal for land tax enhancement for review by the Dept. of Lands on 30 September 2006.
11. The Borrower shall have obtained, by 31 March 2002, a grant offer of Euro 4.9 million (about \$4.4 million equivalent) from Agence Française de Développement (AFD) or shall have made other arrangements, satisfactory to the Bank, to commit the provision of funds intended to be provided by the AFD for Part A (Component 4) and Part C (capacity building component) of the Project.	Schedule 6, para. 6	Complied with. The AFD board approved a financial grant of €4.7 million on 13 June 2002. The agreement between the Government and AFD was signed on 3 July 2002, and the contract for part B, on 12 September 2002. Contracts for lots A and C were also signed.
Economic		
1. BME exercise shall be undertaken for each component of the Project to ensure that the Project facilities are managed efficiently and that the benefits are maximized.	Schedule 6, para. 17a	Complied with. PMU submitted a BME report to ADB in November 2004 containing indicators for the evaluation of project impact and outcomes. Data were collected and updated yearly.

Covenant	Reference in Loan Agreement	Status of Compliance
2. PMU develops a comprehensive BME system which shall provide a mechanism to involve beneficiary community along with the Project performance monitoring system.	Schedule 6, para. 17b	Complied with. Baseline data were collected in October 2003. Additional data were collected by the Lao Women's Union in February 2005. The second tranche of data collection for 2006 was undertaken, and the national BME specialist has completed his assignment.
3. Actual carrying out of BME activities, including the establishment of benchmarks through baseline physical and socioeconomic surveys, and initial data collection and analysis shall be the responsibility of VUDAA and shall be undertaken by the PIMU.	Schedule 6, para. 17c	Complied with. The baseline survey was completed and two sets of data were collected in the first 46 villages. Data have been collected from all villages identified in the VAI program. Data were compiled by community development field workers. A second survey was undertaken in February 2005 and data sheets were collected. For the third survey, questionnaires were distributed in July 2006 and data collected in September 2006. PMU was to submit the final BME report on 31 August 2007.
4. The surveys are repeated at intervals to determine changes in key indicators of increased community participation, public accountability, transparency, better provision and coverage of services (especially for the poor, women and minority groups), opportunities generated and direct employment generation.	Schedule 6, para. 17d	Complied with. Two rounds of data collection were undertaken in 46 villages identified in the VAI program. The reports have been completed.
5. The PMU shall submit a detailed implementation plan for monitoring benefits and shall prepare benchmark information for ADB's review and concurrence within 6 months of the Loan Effective Date, and nine annual BME reports are furnished to the Bank throughout the implementation of the Project.	Schedule 6, para. 17e.	Complied with. Programmed for late each year.
5. Annual BME reports are furnished to the Bank throughout the implementation of the Project.	Schedule 6, para. 17f.	BME reports were to be included in the quarterly progress reports as indicated in the MKSS back-to-office reports of October 2004 and March 2005).
Others		
1. Established, staffed, and operating PMU/PIU.	Schedule 6, paras. 3-4	Complied with. A project implementation and management unit (PIMU) (now called the project management unit, or PMU) was established within VUDAA. It was headed by a project director. Additional staff were assigned to implement the resettlement during the third quarter of 2003. A review of progress indicated further need for skilled staff. More staff were added to the Project in 2004, including a new project director, who was assigned to the Project in August. VUDAA agreed to the mission's request for a full-time accountant.
2. Fielding of consultants	Schedule 6, para. 4	Complied with. Consultant services began on 10 March 2002 and ended on 31 August 2007.
3. VUDAA shall (i) establish detailed O&M functions and procedures, including annual O&M programs (staff, equipment and finance), (ii) submit them for ADB review, and (iii) implement them in a timely manner after taking the ADB's views into account, during the Project and post-Project period.	Schedule 6, para. 7a	Complied with. Capacity-building consultants assessed O&M needs and appropriate standards. A report was submitted to ADB in November 2006.

Covenant	Reference in Loan Agreement	Status of Compliance
4. Under Part B of the Project, village communities shall have the major responsibility for periodic maintenance of infrastructure. Upon completion of each village subproject, the village communities shall undertake responsibility for O&M of community facilities provided under the Project.	Schedule 6, para. 8b	Complied with. Agreed to as an integral part of subproject agreement. VAI reports from each village were collected monthly and forwarded to VUDAA and ADB.
5. A Project Steering Committee (PSC) shall oversee the Project and shall meet at least quarterly to oversee and coordinate Project implementation including undertaking relevant policy review, and ensuring timely implementation of the Urban Policy and Institutional Reform Agenda (UPIRA) and the cooperation of concerned government agencies.	Schedule 6, para. 2	The PSC met regularly.

ADB = Asian Development Bank; AFD = Agence Française de Développement; AP = affected persons; BME = benefit monitoring and evaluation; EA = executing agency; IEE = initial environment examination; LLA = Law on Local Administration; MKSS = Mekong Social Services Division; MOF = ministry of finance; MOU = memorandum of understanding; NA = National Assembly; O&M = operation and maintenance; PIMU = project implementation and management unit; PMU = project management unit; PSC = project steering committee; QPR = quarterly progress report; RMF = road maintenance fund; ROW = right-of-way ; RP = resettlement plan ; UPIRA = Urban Policy and Institutional Reform Agenda; VAI = village area improvement; VP = Vientiane Prefecture; VUDAA = Vientiane Urban Development Administration Authority.

SUMMARY OF ADB-FINANCED CIVIL WORKS CONTRACTS

A. Drainage Contracts					
Contract	Length (m)	Contract Amount (\$)	Construction Period (months)	Signing Date	Completion Date
LCB-D101	972	218,446	8	August 03	April 04
LCB-D102	3,728	1,049,057	18	July 04	June 06
LCB-D103	1,001	457,187	8	January 04	August 04
ICB-D104	7,135	6,225,943	18	January 05	July 06
ICB-D106	2,584	1,439,987	18	February 06	June 07
Total	15,420	9,390,620			
B. Road Contracts					
LCB-R201	2,290	723,511	12	September 03	July 04
LCB-R202	2,284	811,910	12	September 03	April 05
ICB-R203	4,579	2,045,789	18	March 04	August 06
LCB-R204	1,607	479,741	12	January 04	July 05
ICB-R205	8,247	3,440,094	18	January 05	July 06
LCB-R206 (1)	2,002	631,921	12	October 04	January 06
LCB-R206 (2)	1,394	519,128	12	October 04	January 06
LCB-R208	2,613	732,492	12	December 04	July 05
LCB-R209	2,232	774,246	12	December 04	January 06
LCB-R210 (1)	1,400	517,524	12	December 04	March 06
LCB-R210 (2)	1,124	642,576	12	December 04	January 06
LCB-R211 (1)	2,184	739,123	12	December 04	January 06
LCB-R211 (2)	1,547	1,048,358	12	December 04	April 06
ICB-R212	3,748	1,495,624	17	February 06	July 07
ICB-R213	2,379	1,060,224	17	February 06	June 07
ICB-R214	3,165	1,622,790	17	February 06	July 07
C. VUDAA Building (Area, m²)					
LCB-D101	972	218,446	8	August 03	April 04

ICB = international competitive bidding; LCB = local competitive bidding; m = meter; m² = square meter; VUDAA = Vientiane Urban Development Administration Authority.

FINANCIAL AND ECONOMIC REEVALUATION

A. General

1. A financial and economic analysis was conducted for each project component, as planned at appraisal. The methodology employed in the reevaluation was similar to that used at appraisal and followed the Asian Development Bank's (ADB's) *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank* (2001), *Guidelines for the Economic Analysis of Projects* (1997), and *Framework for the Economic and Financial Appraisal of Urban Development Sector Projects* (1994). The reevaluation involved recalculating the financial internal rate of return (FIRR) and the economic internal rate of return (EIRR) for each project component.

2. The methodology and assumptions adopted for the financial and economic reevaluation of the project components generally followed those adopted at appraisal. The financial and economic benefits were quantified through a comparison of the subproject conditions with and without the Project for the two new road construction and upgrading subprojects (Road P3 and Thong Sang Nang Road), two road upgrading subprojects (Roads 1 and 1A, and Dong Na Sok Road), one drainage and bank protection subproject, and one solid waste management subproject. The costs and benefits were measured at border-price equivalent values, with the use of the world price numeraire, and expressed in 2004 constant prices in Lao People's Democratic Republic (Lao PDR) kips (KN). The manufacturing unit value index (MUV), published by the International Monetary Fund, was used for converting costs and benefits into 2004 prices. The costs and benefits of the non-traded components were converted into the world price numeraire with the use of a standard conversion factor of 0.9, as at appraisal, expressed in 2004 constant prices. The project life of each component was assumed to be 30 years, with no salvage value at the end of the project life, as at appraisal.

B. Costs

3. The costs of construction were derived from the actual costs incurred, excluding interest and other charges during construction. The economic costs were derived from their financial costs, with taxes and duties excluded and the non-traded components converted into the world price numeraire. The costs were expressed in 2006 constant prices. The annual operation and maintenance (O&M) costs were based on information collected by the Project Completion Review (PCR) Mission.

C. Benefits

1. Financial Benefits

4. The financial benefits from the Project were measured for solid waste management (SWM) as the only direct revenue-generating project component.

5. The number of households benefiting from SWM was estimated at 68,000. The charges for solid waste collection vary by type of consumer. The current monthly user charges are KN5,000 for residential properties, KN15,000 for commercial properties, and KN200,000 for hospitals, hotels, and other institutional establishments. Discussions with Vientiane Urban Development Administration Authority officials indicated that average user charges for the collection of solid waste are expected to increase by 5% per year in real terms.

2. Economic Benefits

6. The analysis of project benefits used assumptions similar to those used at appraisal, updated with the most recent available data and prices. The economic reevaluation consisted of an economic analysis of the drainage and road components of the Project, as at appraisal, and the calculation of the EIRR for each secondary town.

a. Road Construction and Upgrading

7. The economic benefits considered in evaluating the roads and bridges component were (i) vehicle operating cost savings, and (ii) travel-time savings for passengers. The values for vehicle operating costs were based on recent feasibility studies on regional roads in the Lao PDR. The travel-time savings were estimated from data on median monthly household incomes, as reported in the benefit monitoring and evaluation survey conducted in 2003. The traffic volume data and estimated reduction in travel times for Vientiane were based on the Japan International Cooperation Agency report. Aside from an overall EIRR, separate EIRRs were calculated for each of the two new road construction and upgrading subprojects as well as the two road upgrading projects.

b. Drainage and Flood Protection

8. Drainage and flood protection has these benefits (i) residential property damage avoided, and (ii) increase in land values. Property damage from flooding was estimated with the use of the values for economic losses to movable and immovable household property, as at appraisal. The value of savings resulting from reduced damage to buildings and property was estimated at \$1,500 per hectare. This estimate was based on a recent ADB study in Vientiane. This value was multiplied by the catchment area in each of the secondary towns to estimate the overall savings.

9. The increase in property values related to the Project was also estimated. As at appraisal, it was assumed that the proposed drainage improvement and flood protection works would reduce flooding by 75%. The amount of affected land was estimated and multiplied by the average land value to determine total cost savings. Land in Vientiane was estimated at about KN644,500 per square meter. Because land values rose by about 200% between 2001, when the appraisal took place, and 2006, future increases in land values are expected to be smaller. At appraisal, it was conservatively assumed that the increase in land values would be 2% per year. For the economic reevaluation, it was conservatively assumed that land prices would remain constant.

D. Comparison between With- and Without-Project Schemes

1. With-Project Scheme

10. The reassessment of the Project showed better incremental benefits and revenue than the project appraisal, particularly for the road subprojects, which have yielded higher benefits from the recent growth in traffic. Although the yields have not been as high, the drainage and solid waste management subprojects have nevertheless performed better than the project appraisal estimates indicate. The EIRR for the drainage and riverbank protection subproject increased from 31.1% to 33.78% and the net present value (NPV) from \$13.236 to \$16.992 after project completion. The solid waste management subproject also has better indicators, with an increase in EIRR from 29.54% to 31.63% and in NPV from KN3,048 million to KN4,093 million. For the EIRRs for the other subprojects, see Table A7.1.

Table A7.1 Economic and Financial Assessment—With and Without Project

Subproject	With Project				Without Project
	Appraisal		Reassessment		NPV Benefits Lost ^b
	EIRR or FIRR ^a	NPV (million)	EIRR or FIRR ^a	NPV (million)	(million)
Construction and Upgrading of Road P3	27.9%	\$1.537	42.21%	\$4.624	(\$7.970)
Construction and Upgrading of Road Thon Sang Nang	26.5%	\$ 0.749	40.13%	\$2.262	(\$3.955)
Upgrading of Roads 1 and 1A	36.6%	\$2.140	54.98%	\$5.657	(\$9.144)
Upgrading of Road Dong Na Sok	17.3%	\$0.699	27.42%	\$3.159	(\$6.741)
Drainage and Riverbank Protection	31.1%	\$13.236	33.78%	\$16.992	(\$35.599)
Solid Waste Management	28.50%	KN2,947	31.63%	KN4,093	(KN25,452)

EIRR = economic internal rate of return, FIRR = financial internal rate of return, NPV = net present value.

^a FIRR for solid waste management.

^b Opportunity losses from projects not implemented. NPV during the first year of benefit would have been gained if the Project were implemented, based on 12% interest rate as applied at project appraisal.

2. Without-Project Scheme

11. Without the Project, no investment or O&M costs would be incurred. This option would increase the social costs because of conditions arising from storm impact and traffic problems as well as the lack of revenues from solid waste services. No benefits would be gained. The NPV of the opportunity losses varies from 163% to 635% when compared with the NPV based on the reassessment results. The comparison would show better results if the calculation were based on the project appraisal estimates. The above table shows the EIRR, FIRR, and NPV for the subprojects, assuming an interest rate of 12%, as applied at appraisal.

E. Sensitivity Analysis

12. The sensitivity analysis was based on methods used at project appraisal. Most subprojects were found to be less sensitive to O&M cost increases (0.003 to 1.498), with lower sensitivity indicators for road and drainage subprojects (0.003 to 0.047). Only the solid waste management subproject is more sensitive to O&M costs (1.489), but less than a decrease in its benefits (2.384).

13. Sensitivities to decreases in incremental benefits are relatively higher, from 0.727 to 0.882 for road and drainage subprojects, and highest for the solid waste management subproject (2.384). Only the solid waste management subproject would need additional investments; however, its sensitivity (0.146) is lower than that to O&M costs and benefits.

14. Regarding the sensitivity of all subprojects to a simultaneous 30% increase in O&M costs, a 30% decrease in benefits, and a 10% increase in capital (see Table A7.2) (for the solid waste management subproject only, a simultaneous 10% increase in O&M costs and a 10% decrease in revenue, and a 10% increase in capital; see Table A7.3), the prediction is robust. All the road subprojects show better EIRRs during project completion than at appraisal. The drainage and riverbank protection subproject has an EIRR of 24.33%, lower than the appraisal estimate of 31.1%; however it is still an acceptable measure of feasibility. The solid waste management subproject needs more careful costing and budgeting, with prudent project and operation management. With sensitivity more than four times that of other subprojects, the solid waste management subproject has the worst sensitivity indicator.

Table A7.2: Sensitivity of EIRR and FIRR Estimates—Road and Drainage Subprojects

Subproject	EIRR		EIRR and SI					
	Appraisal	Reassessment	O&M +30%		Benefit -30%		O&M +30% Benefit -30%	
			EIRR	SI	EIRR	SI	EIRR	SI
Construction and Upgrading of Road P3	27.9%	42.21%	42.16%	0.003	32.92%	0.733	32.87%	0.737
Construction and Upgrading of Road Thon Sang Nang	26.5%	40.13%	40.04%	0.007	31.37%	0.727	31.27%	0.735
Upgrading of Roads 1 and 1A	36.6%	54.98%	54.92%	0.003	42.88%	0.733	42.82%	0.737
Upgrading of Road Dong Na Sok	17.3%	27.42%	27.34%	0.010	21.23%	0.751	21.14%	0.762
Drainage and Riverbank Protection	31.1%	33.78%	33.30%	0.047	24.84%	0.882	24.33%	0.932

EIRR = economic internal rate of return, O&M = operation and maintenance, SI = sensitivity indicator.

15. Maximizing incremental benefits is a strategic choice to maintain the project outcomes. The quality and appropriateness of O&M of the Project will be an important prerequisite for good infrastructure performance. Given the low sensitivity to O&M costs, the infrastructure management should consider maintaining the continuity and appropriateness of O&M programs over the long term, and look into the sufficiency of its O&M costs.

Table A7.3: Sensitivity of EIRR and FIRR Estimates—Solid Waste Management Subproject

FIRR		FIRR and SI							
Appraisal	Reassessment	Additional Capital +10%		O&M +10%		Benefit -10%		Additional Capital +10% O&M +10% Benefit -10%	
		FIRR	SI	FIRR	SI	FIRR	SI	FIRR	SI
29.54%	31.63%	31.17%	0.146	26.89%	1.498	24.09%	2.384	18.94%	4.011

FIRR = financial internal rate of return, O&M = operation and maintenance, SI = sensitivity indicator.

F. Qualitative Assessment

16. The village area improvements (VAI) component reduced the area prone to flooding, and hence reduced property and livelihood damage, loss of income, and spread of sewage and garbage, with positive implications for the health, well-being, and quality of life of residents. The VAI component also (i) improved sanitation and solid waste collection, with resulting benefits to public health and the local environment; (ii) afforded better access to vital urban facilities, especially for the poor, through road improvements; (iii) significantly reduced dust, through the sealing of local roads; (iv) created synergies and maximized benefits from improved community infrastructure and services; (v) increased community awareness of the links between health, the environment, and participation in project planning, implementation, and O&M; and (vi) improved governance, i.e., transparency, accountability, and trust in government from the community and other stakeholders.

17. Street lighting is a public good with substantial benefits to the community, contributing to a decline in the number and severity of road vehicle accidents at night, especially those involving pedestrians; shorter travel time and lower vehicle operating costs for motorists; fewer accidents,

greater convenience, and enhanced personal security for pedestrians using footpaths; and increased opportunity for social and business activity. The marginal benefit from street lighting is greater than it would have been if the street lighting were already in place.

18. The installation of traffic signals, the improvement of road signs, better traffic enforcement, and traffic safety education have significantly responded to the problems of traffic growth, poor traffic management, and deteriorating road safety in Vientiane. The number of fatalities and injuries, which had increased at more than double the rate of growth in the number of vehicles over the last decade, have decreased significantly since the project implementation. The benefits from the traffic management and safety component are evident in fewer and less severe road accidents, reduced vehicle operating costs resulting from improved traffic flow, and increased effective capacity of the road system.

G. Overall Conclusion

19. The Project is considered an effective investment, as the quantifiable benefits and revenues exceed the opportunity cost of capital for most subprojects assessed. As long as O&M is sufficient, the value of assets will be maintained and benefits will be preserved into the future. The proportion of overall benefits accruing to the community cannot be estimated on the basis of the limited data available, but the community is likely to share the benefits. The members will not only enjoy a better environment and productivity gains, but will also benefit from the opportunities created through increased land value and better quality of environment along rehabilitated areas; through rehabilitated road, drainage, and other facilities; and through solid waste management within the service areas.

20. Overall, the Project is considered an effective investment in terms of its appropriate and robust quantitative benefits and revenues. Qualitatively, the Project also generates substantial benefits for the community, both directly and indirectly, with diverse positive impact.

SUMMARY OF RESETTLEMENT

Table A8.1: Number of Households Affected

Subproject	Affected Households			Total
	Resettled at Site	Relocated Elsewhere	Marginally Affected	
D101 Hong Xeng Drain	—	—	9	9
D102 Hong Wattay Drain along T2-I	—	—	21	21
D202 Hong Khoua Luang Drain	—	—	—	—
D203 Hong Souanmone Drain	—	—	14	14
D204 Hong Phonpapao Drain	—	1	18	19
D206 Hong Ouaylouay	—	—	2	2
D207 Hong Sisavath Khang	—	—	—	—
D208 Hong Kha Tai	—	—	2	2
R101 Upgrading and Construction of Road P3 ^a	—	1	—	6
R102 Construction of Road T2-II	—	—	2	2
R201 Saphanthong Road	—	—	6	6
R207 Upgrading and Construction of Thongs ^a	—	—	2	14
R208 Construction of Dongpalane Road ^a	—	—	13	13
R210 Chanthabouli	—	—	—	—
R213A Thongkhankham Road	—	—	24	24
Total	—	2	120	122

^a Privately owned land. Others are a mix of government and privately owned land.

Source: Resettlement Post Evaluation Survey, 2006.

Table A8.2: Comparison of Estimated and Actual Land and Resettlement Requirements

Subproject	Original Estimates ^a		Actual ^b	
	Land (m ²)	Building	Land (m ²)	Building
D101 Hong Xeng Drain	—	—	120	2
D102 Hong Wattay Drain along T2-I	19,800	4	1,515	8
D202 Hong Khoua Luang Drain	1,304	1	0	0
D203 Hong Souanmone Drain	—	—	23	3
D204 Hong Phonpapao Drain	19,600	3	1,350	9
D206 Hong Ouaylouay	9,850	2	936	3
D207 Hong Sisavath Khang	8,196	2	1,122	2
D208 Hong Kha Tai	4,680	13	1,601	17
R101 Upgrading and Construction of Road P3 ^c	17,750	2	2,869	6
R102 Construction of Road T2-II	7,500	2	1,451	14
R201 Saphanthong Road	—	—	135	6
R207 Upgrading and Construction of Thongs ^c	19,674	0	97	7
R208 Construction of Dongpalane Road ^c	20,700	1	9,577	11
R210 Chanthabouli	—	—	608	9
R213A Thongkhankham Road	—	—	125	8
Total	129,054	30	21,529	63

m² = square meter.

^a Taken from: ADB. 2002. *Report and Recommendation of the President on a Proposed Loan to the Lao People's Democratic Republic for the Vientiane Urban Infrastructure Services Project*. Manila.

^b ADB. 2007. Resettlement Post Evaluation Survey. Actual land includes privately owned land and does not include government land.

^c Privately owned land. Others are a mix of government and privately owned land.