



Completion Report

Project Number: 34207-01
Loan Number: 1862
July 2009

Cambodia: Northwestern Rural Development Project

CURRENCY EQUIVALENTS

Currency Unit – riel (KR)

		At Appraisal	At Project Completion
		8 September 2001	30 June 2008
KR1.00	=	\$0.0002529	\$0.0002441
\$1.00	=	KR3,953	KR4,096

ABBREVIATIONS

ADB	--	Asian Development Bank
BME	–	benefit monitoring and evaluation
CBLE	–	Community-Based Livelihood Enhancement (project)
CBO	–	community-based organization
GIS	–	geographic information system
ILO	–	International Labor Organization
IRAP	–	integrated rural accessibility planning
JFPR	–	Japan Fund for Poverty Reduction
LBAT	–	labor-based appropriate technology
M&E	–	monitoring and evaluation
MEF	–	Ministry of Economy and Finance
MRD	–	Ministry of Rural Development
MOWRAM	--	Ministry of Water Resource and Meteorology
NGO	–	Non-government organization
NRDP	–	Northwestern Rural Development Project
O&M	–	operation and maintenance
PADEK	–	Partnership for Development in Kampuchea.
PDRD	–	provincial department of rural development
PIU	–	project implementation unit
PMU	–	project management unit
SOP	--	Standard Operating Procedures
SSI	–	small-scale infrastructure
VDC	–	village development committee

NOTE

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

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BASIC DATA

A. Loan Identification

1.	Country	Cambodia
2.	Loan Number	1862-CAM(SF)
3.	Project Title	Northwestern Rural Development Project
4.	Borrower	Kingdom of Cambodia
5.	Executing Agency	Ministry of Rural Development
6.	Amount of Loan	SDR21,292,000 (\$27.2 million equivalent)
7.	Net Loan Amount	SDR20,449,668 (\$30.5 million equivalent)
8.	Project Completion Report Number	PCR:CAM 1106

B. Loan Data

1.	Appraisal	
	– Date Started	21 August 2001
	– Date Completed	08 September 2001
2.	Loan Negotiations	
	– Date Started	25 October 2001
	– Date Completed	26 October 2001
3.	Date of Board Approval	27 November 2001
4.	Date of Loan Agreement	27 February 2002
5.	Date of Loan Effectiveness	
	– In Loan Agreement	27 May 2002
	– Actual	3 September 2002
	– Number of Extensions	1
6.	Closing Date	
	– In Loan Agreement	31 December 2007
	– Actual	30 June 2008
	– Number of Extensions	1
7.	Terms of Loan	
	– Interest Rate	1% during grace period and 1.5% thereafter
	– Maturity (number of years)	32
	– Grace Period (number of years)	8
8.	Terms of Relending (if any)	Not Applicable
	– Interest Rate	
	– Maturity (number of years)	
	– Grace Period (number of years)	
	– Second-Step Borrower	

9. Disbursements

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
13 November 2002	21 January 2009	74 months
Effective Date	Original Closing Date	Time Interval
3 September 2002	31 December 2007	65 months

b. Amount SDR21,292,000 \$27,200,000 equivalent

Category	Original Allocation ^a	Last Revised Allocation	Net Amount Available	Amount Disbursed	Undisbursed Balance ^b
01. Civil Works (Excluding de-mining)	9.76	12.13	12.13	11.94	0.19
02. Equipment	0.10	0.20	0.20	0.20	0.00
03. Vehicles	0.30	0.24	0.24	0.23	0.00
04. Training	1.23	0.31	0.31	0.35	(0.04)
05. Consulting Services	3.35	3.99	3.99	3.74	0.24
06. Service Contracts	2.11	1.88	1.88	1.68	0.20
07. Incremental Staff	0.17	0.60	0.60	0.58	0.02
08. O&M of Rural Infrastructure	0.35	0.56	0.56	0.53	0.04
09. Operating Cost	0.89	0.71	0.71	0.77	(0.05)
10. Interest Charge	0.72	0.67	0.67	0.43	0.24
11. Unallocated	2.31				
Total (SDR million)	21.29	21.29	21.29	20.45	0.84
Total (\$ million equivalent)	27.20	31.78	31.78	30.50	1.28

O&M = operation and maintenance

^a The difference between the original amount and the revised total amount was due to the exchange rate variation between SDR and the US dollar.

^b The undisbursed loan amount of SDR0.84 million (equivalent \$1.28 million) was canceled on 21 January 2009 from the loan proceeds.

10. Local Costs (Financed)	
- Amount (\$ million)	22.78
- Local Costs (%)	66
- Total Cost (%)	100

C. Project Data

1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	11.85	14.26
Local Currency Cost	22.78	18.27
Total	34.73	32.53

ADB = Asian Development Bank, IDC = interest during construction.

2. Financing Plan (\$ million)

Cost	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
Implementation Costs						
Asian Development Bank	10.90	15.30	26.30	13.61	16.24	29.85
Government of Cambodia		7.40	7.40		2.03	2.03
Beneficiaries	0.05	0.08	0.13			
Subtotal	10.95	22.78	33.83			
IDC Costs						
Asian Development Bank	0.90		0.90	0.65		0.65
Government of Cambodia						
Beneficiaries						
Subtotal						
Total	11.85	22.78	34.73	14.26	18.27	32.53

IDC = interest during construction.

Note: Figures may not add up to totals due to rounding.

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

Cost	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Base Cost						
1. Rural Infrastructure Development	4.8	13.4	18.2			
Civil Works (Excluding De-mining)				6.01	12.95	18.96
Equipment				0.28		0.28
Vehicles				0.32		0.32
2. Capacity Building	0.8	1.6	2.4			
Training				0.42	0.08	0.50
Consulting Services				4.32	1.19	5.51
3. Rural Livelihood Enhancement						
Village Infrastructure	0.9	1.5	2.4			
Other Livelihood Initiatives	1.1	2.2	3.3			
4. Project Management	2.0	1.8	3.8			
Service Contracts				1.43	1.10	2.53
Subtotal (A)	9.6	20.5	30.1			
Incremental Staff				0.05	0.78	0.83
O&M of Rural Infrastructure					1.70	1.70
Operating Cost				0.78	0.47	1.25
B. Contingencies						
1. Physical Contingencies ^a	0.8	1.4	2.2			
2. Price Contingencies ^b	0.5	1.1	1.6			
Subtotal (B)	1.3	2.5	3.8			
Interest Charge	0.9		0.9	0.65		0.65
Unallocated						
Grand Total	11.8	23.0^c	34.8	14.26	18.27	32.53

^a Based on 5% of base cost for civil works and 10% of base cost for other expenditures.

^b Based on annual inflation of 2% (foreign) and 4% (local) for goods, and 1.5% (foreign) and 2% (local) for services over the project period.

^c Includes duties and taxes estimated at \$4.2 million equivalent.

4. Project Schedule

Item	Appraisal Estimate	Actual
Date of Contract with Consultants	2002	24 December 2002
Completion of Engineering Designs	2002	April 2003
Civil Works Contract		
Date of Award	2002	5 May 2003
Completion of Work	2007	30 June 2008
Equipment and Supplies		
Dates		
First Procurement	2002	19 April 2003
Last Procurement	2003	19 July 2004
Completion of Equipment Installation		
Start of Operations	2002	2 February 2003
Completion of Tests and Commissioning	2002	30 August 2003
Beginning of Start-Up		
Other Milestones		

Other Milestones:

- 25 May 2006: Approval for 1st reallocation of loan proceeds [done]
- 13 July 2007: Approval of 1st extension of loan closing date from 31 December 2007 to 30 June 2008 [done]
- 23 May 2008: Approval for 2nd reallocation of loan proceeds [done]
- 30 June 2008: Closing of loan accounts [done]

5. Project Performance Report Ratings

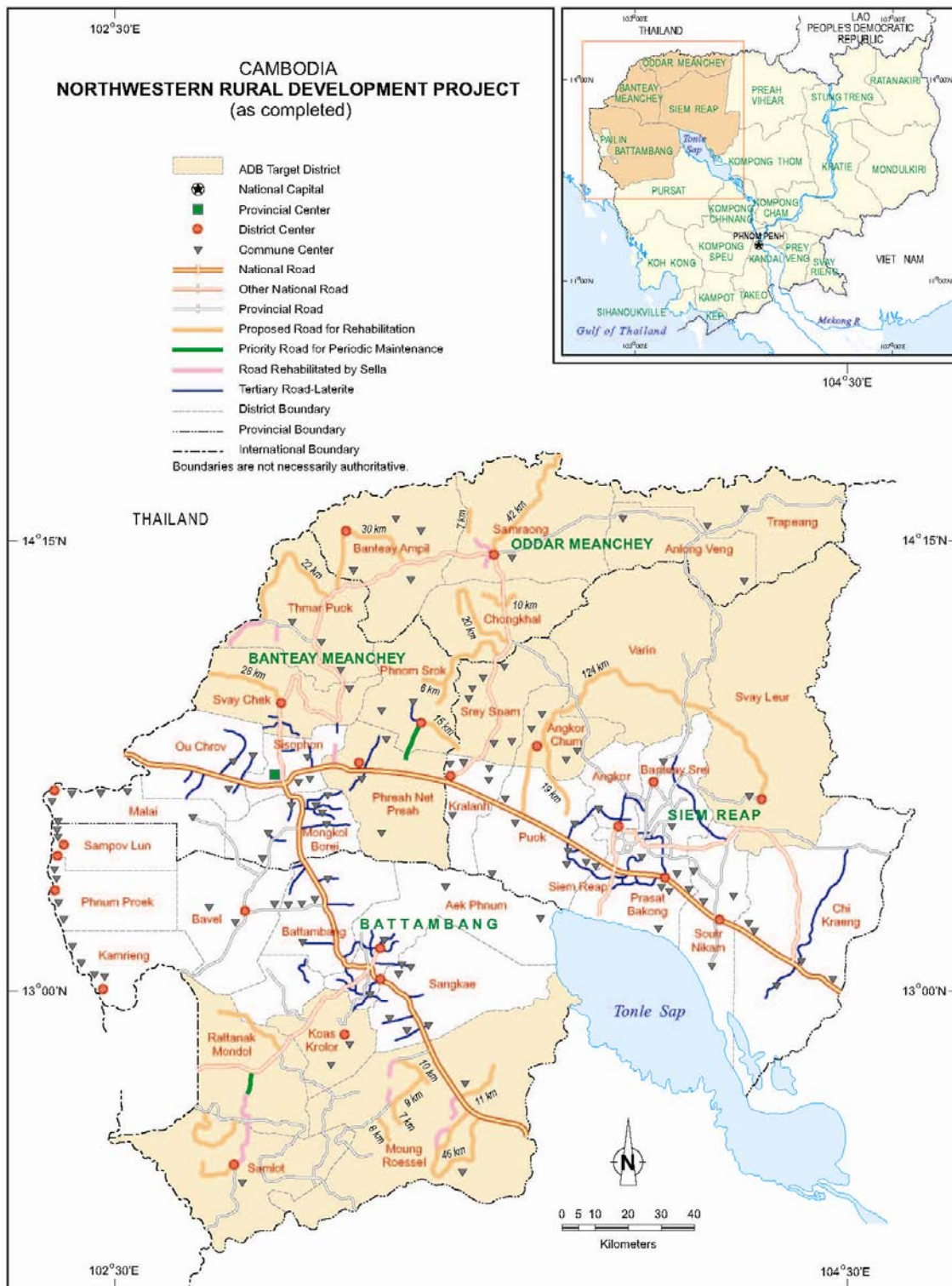
Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 3 Sep 2002 to 31 Dec 2003	S	S
From 1 Jan 2004 to 31 Dec 2004	S	S
From 1 Jan 2006 to 31 Dec 2006	S	S
From 1 Jan 2007 to 31 Dec 2007	HS	HS
From 1 Jan 2008 to 30 June 2008	HS	HS

HS = highly satisfactory, S = satisfactory

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
Loan Fact-Finding	1–22 Jul 2001	6	21	a, c, e, l, m, n
Loan Appraisal Mission	22 Aug–8 Sep 2001	6	17	a, c, d, l, k, n
Inception Mission	12–19 Jun 2002	2	8	d, f,
Review Mission 1	8–18 Jun 2003	5	11	d, f, o, g, c
Review Mission 2	18–26 Feb 2004	3	9	o, g, c, p
Review Mission 3	1–9 Feb 2005	4	9	o, g, c, f
Review Mission 4 (midterm)	3–18 Nov 2005	3	16	g, c, f
Review Mission 5	10–14 Feb 2006	2	5	o, g
Review Mission 6	13–19 Aug 2006	3	7	o, g, c
Review Mission 7	15–17 Feb 2007	3	3	o, g, c
Review Mission 8	24–28 Sep 2007	3	5	o, g, c
Review Mission 9	3–18 Nov 2007	3	10	g, c, f
Review Mission 10	23–28 Mar 2008	4	6	o, g, c, f
Completion Report Mission 11	23 Nov–13 Dec 2008	3	27	g, o, n

^a a = engineer, b = financial analyst, c = staff consultant, d = economist, e = environment specialist, f = project analyst, g = implementation officer, h = transport specialist, i = senior operations assistant, j = counsel, k = programs officer, l = poverty reduction specialist, m = young professional, n = consultant, o = portfolio management specialist, p = rural development specialist.



I. PROJECT DESCRIPTION

1. On 27 November 2001, the Asian Development Bank (ADB) approved a loan of SDR21.3 million for the Northwestern Rural Development Project (NRDP) that became effective in September 2002.¹ In April 2007, the original closing date of December 2007 was extended to 30 June 2008. The Borrower was the Kingdom of Cambodia, and the Ministry of Rural Development (MRD) was the executing agency.

2. The project objective was to support the Government of Cambodia in reducing poverty through accelerated rural development by establishing physical transport and social infrastructure, improving socioeconomic conditions, and enhancing rural livelihoods in northwestern Cambodia. The Project focused on 14 target districts of four provinces: Battambang, Banteay Meanchey, Oddar Meanchey, and Siem Reap.² These were selected on the basis of (i) the high incidence of poverty; (ii) the need for post-conflict reconstruction; (iii) the large number of internally displaced persons, repatriated refugees, demobilized soldiers, and other vulnerable groups; (iv) the prospect of cross-sector synergies with ADB's country program³; and (v) the opportunity for complementarities with activities of other aid agencies.

3. The Project supported the Government's decentralization and deconcentration program by innovatively placing project management within a province-based project management unit (PMU) in Banteay Meanchey, co-located with the provincial department of rural development (PDRD).

4. As designed and implemented, the Project had the following three components:

- (i) **Rural infrastructure development.** This component extended the rural road network and established social infrastructure including schools, health facilities, and markets. Integrated rural accessibility planning⁴ (IRAP) methods guided selection of larger-scale infrastructure such as approximately 600 kilometers (km) of tertiary road rehabilitation, 250 classrooms, 14 health facilities, 14 market facilities, and 220 water points. Standard designs for construction were supplemented by provision for complex designs from engineering consultants, and other professional assistance to better understand local hydrology issues. Labor-based appropriate technology⁵ (LBAT) was the construction technology used to provide income to rural residents, especially the poor. Clearing land mines and unexploded ordinance was the responsibility of the Government, which also guaranteed land occupancy rights or ownership to beneficiaries along the road alignments.

¹ ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Northwestern Rural Development Project*. Manila.

² Project provinces and districts were Battambang (districts of Koas Krolor, Moug Rueseï, Rattanak Mondol, and Samlot), Banteay Meanchey (districts of Phnom Srok, Phreah Net Phreah, Svay Chek, and Thmar Puok), Oddar Meanchey (districts of Banteay Ampil, Chongkhal and Samrongl), and Siem Reap (districts of Angkor Chum, Svay Leur, and Varin). In addition, complementary to other development initiatives, special provision was included for bridges, culverts, and drifts for construction of road structures in Anlong Veng and Traapaeng Prasat districts of Oddar Meanchey.

³ ADB. 2005. *Country Strategy and Program (2005-2009): Cambodia*. Manila.

⁴ IRAP is a local participatory planning process based on the concept that lack of access of rural people to goods and services is the fundamental constraint to development, and that improving access is a major tool in poverty reduction. IRAP, as an integrated tool, encompasses all the households' access needs and considers the full range of possible interventions to improve access depending on local conditions. The process has five main stages: (i) primary data collection at village level, (ii) assessment of accessibility through data analysis and development of indicators, (iii) identification and prioritization of villages for possible interventions, (iv) detailed planning and mapping at the priority village level, and (v) costing and development of a local action plan and program.

⁵ LBAT is a method of using local village labor resources through labor management and production techniques that address Government policies on employment generation and poverty reduction, especially for the disadvantaged.

- (ii) **Capacity building.** This component was an essential contribution of the project. PDRD staff received training in planning, survey design, costing, management, supervision, gender-sensitive participatory approaches, and the use of standard designs and specifications for infrastructure. Commune councils and village committees received training in prioritizing, planning, and implementing small-scale infrastructure using participatory approaches. Nongovernment organizations (NGOs) and private sector contractors received training in LBAT, participatory planning, and other aspects of community organizing, contracting, and infrastructure supervision and maintenance. IRAP and management capabilities were institutionalized within the MRD through acquisition of computers and training in geographic information system (GIS), data management, and IRAP procedures.
- (iii) **Rural livelihood enhancement.** This component supported community participatory selection capacities and empowered beneficiaries. Village infrastructure focused on water supply and sanitation, culverts, footbridges, rice drying pads and storage facilities, meeting halls, and similar structures. Five NGOs familiar with the areas provided assistance to communities in participatory selection. Envisaged microfinance initiatives through village savings, credit groups and CBOs were moved to the Community-Based Livelihood Enhancement Project (CBLE) funded under JFPR 9017⁶ were a significant input of the NRDP.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

5. The ADB operational strategy for Cambodia focused on economic growth and poverty reduction. The Project responded to three priority areas: (i) broad-based development of rural areas, (ii) human and social development, and (iii) private sector development. The NRDP also supported decentralized governance, in particular to commune councils. The Project supported rural infrastructure directly, increased capacities and skills of administrators and beneficiaries, and utilized and provided training for local civil society and private resources, while supporting participatory development planning and implementation within communities.

6. The Project was based on extensive community consultations, reflected in the relevance and appropriateness of the design, which addressed progressively more difficult development needs. The need for infrastructure is incontestable, and resolvable. The related obligation to increase the capacity of public institutions, civil society, private sector service providers, local elected officials, and village organizations is a longer-term challenge reflected ultimately in the sustainability of infrastructure through maintenance and planning. Empowerment of communities to address their infrastructure needs and livelihoods requirements is an ambitious and long-term undertaking, with the potential contribution of communities only beginning to become defined. The use of IRAP to gain knowledge of community needs and their support, and the use of LBAT to provide income to residents of the districts, related well to the social development and poverty reduction needs of the project area and increased the effectiveness of the infrastructure selection process.

⁶ ADB. 2002. *Proposed Grant Assistance to the Kingdom of Cambodia for Community-Based Livelihood Enhancement for the Rural Poor*. Manila. The impact of the NRDP was to be enhanced by linking it to the Community-Based Livelihood Enhancement Project set up by a grant from the Japan Fund for Poverty Reduction.

B. Project Outputs

7. The achievements of the Project are consistent with design. Extension by 1 year was a result of procedural and operational matters related to records, documentation, and the flow of funds, and was not due to technical planning and implementation issues.

1. Rural Infrastructure Development

8. Identification and prioritization of large-scale infrastructure using IRAP methods led to (i) rehabilitation of 525 km of tertiary roads, 70 km of which was a pilot test of a stabilized road surface to improve laterite surfaces; and (ii) an additional 800 km of routine maintenance and 150 km of periodic maintenance; an estimate of 600 km rehabilitated during appraisal. Much-needed water points included 52 ring wells, 106 drilled wells, and 7 ponds. More water points were built under the rural livelihood enhancement component. Construction of 277 classrooms exceeded plans by 22 rooms. Eleven district health centers were constructed. Of the 14 planned markets, 13 were constructed (a land dispute stopped construction of the final one). The relevance of physical markets to the Project's poverty reduction objective is unclear, and future projects should include assistance for market processes of information, transportation, quality, and price determination. The LBAT method generated more labor days than anticipated, with a PDRD estimate of 1.9 million working days, or 3,745 labor days/km, versus the 2,000 labor days/km estimated at appraisal, although recent labor shortages have somewhat curtailed the use of LBAT.

9. De-mining of the rights of way and land titling were undertaken by the Government. Due to lack of space for additional staff required for the Project, office facilities for the PMU and one project implementation unit (PIU) were constructed under the Project.

2. Capacity Development

10. Capacity development for government personnel (PIU, PMU, PDRD, and MRD) included the introduction of administrative, financial, and contract management systems, as well as staff development through formal and on-the-job training. The Rural Roads Department and PDRDs created standard contract documents and procedures for road construction and maintenance, established a benefit monitoring and evaluation (BME) unit in the MRD, and created an extensive training program with training of trainers for the MRD and province staff and local contractors in road rehabilitation and maintenance. IRAP, together with the related GIS and a community consultation process, expanded the quality of the prioritization and selection process, creating a tool for future planning and monitoring. Success in institutionalizing the method depends on keeping it up to date, as it requires a 2-year consultative and selection process. IRAP and additional planning assistance greatly strengthened commune council abilities in identifying, prioritizing, planning, and implementing small-scale infrastructure. In all, 74 contractors were trained in LBAT methods, providing a strong core for future work. NGOs were also provided training in participatory techniques, LBAT, and gender issues. The training which was provided is summarized in Appendix 5.

3. Rural Livelihood Enhancement

11. Stakeholder participation in subproject selection was a feature of the Project. Planning workshops involving key stakeholders were held in each project province to review proposals. Detailed community consultations and workshops led to large- and small-scale infrastructure planning and implementation. Key infrastructure was provided for rural communities. Small-scale infrastructure was very successful, with the following works undertaken or provided: 3.28 km of irrigation canal rehabilitation, 3.95 km of dam rehabilitation and/or repair, 95 community ponds, 13 pond fences, 97 drilled wells, 61 drilled well repairs, 140 ring wells, 4 community drinking water small enterprises, 264 purified water

tanks, 10,442 cleaned water systems, 1 water tower tank, 20.44 km of village laterite road, 49.74 km of village paths, 250 pipe culverts, 13 simple wooden bridges, 1 Bailey bridge, and 1 spillway. Community activity infrastructure was also constructed, with 19 school buildings, 1 school gate, 1 community resource center (repair), 39 community meeting buildings, and 6 community granaries. A total of 558 family latrines improved sanitation.

12. Although the NRDP was appraised prior to the commune council elections of 2002, it anticipated the need and desirability of planning and implementation at the level of the village and commune council, supporting the process. An appropriate and efficient project funding mechanism established in early 2007 was the use of block grants through the commune council funds, which allowed flexibility of planning and fund use, with the commune councils justifying expenditures based on forward action plans, not separate subproject applications. This is an innovation worthy of emulation by other projects. Despite involvement in selection and implementation, communes and villages rarely carry out O&M on small infrastructure, a matter that arguably could improve with further training by NGOs.

C. Project Costs

13. The total cost of the Project at appraisal was SDR21.29 million (\$27.2 million equivalent), currently estimated at \$31.73 million, of which \$11.85 million (34%) was foreign currency costs and \$22.78 million (66%) was local currency costs. The loan was for \$27.20 million equivalent (78% of project cost), with ADB financing \$15.30 million of local currency costs due to the low level of national income and savings, as well as the Government's fiscal deficit. Counterpart funding from the Government of \$7.40 million estimated the local currency costs of civil works, de-mining, land titling and acquisition, salaries, and exemptions from duties and taxes on imported vehicles and equipment.

14. The actual amount disbursed at loan closure was SDR20.45 million, currently equivalent to \$32.53 million⁷, consisting of \$14.26 million of foreign exchange costs and \$18.27 million equivalent of local costs. The government contribution to the total project cost was estimated at \$4.25 million (11.7% of total costs) made up of \$0.97 million of local costs for civil works and local labor together with \$0.94 million O&M, \$0.12 million operating costs, and \$2.03 million costs for de-mining, and an estimated \$0.18 million for exemption from taxes and duties.

15. Training costs were below estimates (\$2.01 million budgeted as against \$0.51 million disbursed) as some community training responsibilities went to NGOs under the Japan Fund for Poverty Reduction-funded Community-Based Livelihood Enhancement (CBLE) project (footnote 5). Incremental staff expenditures increased due to the need to employ more technical staff (\$0.28 million planned versus \$0.82 million disbursed). Operation and maintenance (O&M) expenses were higher than anticipated (\$0.57 million planned and \$1.7 million disbursed) due in part to early maintenance of provincial roads. Civil works costs increased marginally, with \$15.92 million planned and \$18.96 million disbursed, in part reflecting rising costs for materials.

D. Disbursements

16. The disbursement of funds from ADB to the PMU by way of withdrawal application replenishment and reimbursement through the MEF was slower than project managers wanted and the process required an extension of 6–8 weeks, which was a result of a large number of relatively small contracts. Many small projects moving through the system resulted in a cash flow problem that might be avoided in future projects through a larger imprest account. This could accommodate the predictable delays resulting from documenting many small amounts from inexperienced contractors, and through a process

⁷ The difference between the original amount and the revised total amount was due to the exchange rate variation between SDR and the US dollar.

requiring sequential action by the PMU, MRD, and MEF before reaching the Cambodia Resident Mission. The system became more rapid when the Project was delegated to the resident mission, which began direct monitoring. A simplified process of funding direct to the MRD (as executing agency) with information to the MEF should be pursued in future projects. Use of proper procedures and email by the MRD would also speed up the process.

17. The ADB Controller's Department exercised prudent control of advances, beginning to reclaim them from replenishment requests, but the MRD did not anticipate the apparent loss to the imprest account. For the PMU, this was one of the problematic features of managing implementation at the end of the Project, and four subprojects were not funded by the closure date (they were finished by the Government).

E. Project Schedule

18. The project design realistically anticipated a 2-year initial period to establish project infrastructure, management, procedures, and capacity building. The MEF requested that loan effectiveness be moved from 27 May to 28 August 2002 to meet loan conditions and prepare project implementation. The actual date was 3 September 2002, shortly after which an imprest account was established and recruitment of government staff began. The letter of agreement with the International Labor Organization (ILO) was signed in December and the contract with the management consultant was signed in January 2003. Mobilization of technical services and incremental staff, and procurement, took place in the first half of 2003. Rehabilitation of roads began in the dry season (October to April) of year 2, with road rehabilitation and periodic maintenance bid openings in October 2003, even prior to completion of the first consultative cycle IRAP process. Implementation of large-scale infrastructure picked up pace well; subsequent delays were not a result of technical or design flaws of design or implementation.

19. Operational delays by contractors in civil works construction resulted from occasional slow procurement and contracting, which caused further delays when building was pushed into the rainy season.

F. Implementation Arrangements

20. The Project was implemented as designed. The MRD as the executing agency established a PMU at Sisophon with PIUs in the provinces. The ILO provided IRAP and GIS assistance from within the MRD offices in Phnom Penh. A management consulting firm to provide management services was recruited through competitive bidding and fielded a team at the PMU. The Project's organization structure is given in Appendix 6. The PMU covered five functions: (i) administration and finance, (ii) benefit monitoring and evaluation, (iii) staff training, (iv) mechanical services, and (v) technical support including planning and monitoring. PIUs were set up in each of the project provinces and were responsible for selection of subprojects, detailed design, construction, and administrative control in their respective provinces. Recruitment of NGOs was delayed until 2005 by procedural issues⁸ related to use of NGOs; five NGOs provided assistance to communities in participatory methods of subproject identification and selection. These were CARE and ZOA⁹ in Oddar Meanchey, Handicap International in Battambang, Ockenden in Banteay Meanchey, and PADEK in Siem Reap.

21. A project liaison office, established in August 2002 at the MRD in Phnom Penh, facilitated initial procurement, recruitment of consultants, and accounting. With experience, decentralized management was seen as effective and the liaison office was ultimately deemed redundant by ADB, which also found all but one PIU ineffective. ADB funding for all

⁸ The PMU was not able to receive clear authorization from MEF to proceed with direct selection of NGOs to provide the services.

⁹ ZOA is the abbreviation in Dutch for Zuid (South) Oost (East) Azie (Asia).

but the PMU and one PIU ceased after August 2006 in an adjustment that recognized the effectiveness of the decentralized PMU.

22. The management consultant provided international and national consulting services in project management, road and infrastructure design, and livelihoods enhancement. PMU staff received formal and on-the-job training throughout the course of the Project. With the increasing workload of the NRDP, a continuing deficit in capacity was notable for overall planning, management, and project supervision at the PMU and the PIUs. During early implementation there was a shortage of technical staff in the PIUs, specifically mechanics, civil engineers, and technicians for the new roadworks sites. The Project therefore increased its budget allocation for incremental staff as required. A recurring problem was that all authority in the PIUs was vested in the provincial project managers, who had other duties not related to the Project.

G. Conditions and Covenants

23. The Government complied with all covenants. Conditions and covenants are provided in Appendix 7. Regular reporting requirements and O&M are two issues that require continued monitoring. Implementation of the gender strategy is given in Appendix 9.

H. Related Technical Assistance

24. There was no additional technical assistance.

25. The NRDP did not directly address the low level of participation from the most vulnerable people in rural villages. The CBLE project (footnote 5), funded under a Japan Fund for Poverty Reduction grant, provided parallel assistance towards (i) production to raise the income of the poor, (ii) community-based conflict resolution, and (iii) confidence building through counseling. The CBLE project was active in six of the poorest 14 target NRDP districts.

I. Consultant Recruitment and Procurement

1. Consultant Recruitment

26. **Project Management Consultant.** The Project procured the services of a project management consultant in accordance with the ADB *Guidelines on the Use of Consultants* (2007, as amended from time to time). The contract for consulting services with Maunsell/Meritec was signed on 13 December 2002 and the consultant was mobilized on 4 March 2003. The total cost of the project management consultancy services was \$4,360,683. The initial consultancy included 98 person-months of international consultants and 285 person-months of domestic consultants. There were five contract variations, ultimately extending the total level of effort to 154.34 person-months of international and 382.06 person-months of national consulting services, with the contract ending in June 2008. Consultants provided expertise in management supervision of internationally financed projects, and expertise in civil engineering, hydrology, bridge construction, and livelihoods enhancement as well as implementation of the commune council fund. The original terms of reference for the project management consultancy included provision of a micro credit expert, but as this responsibility was placed within the CBLE project, this expert was no longer required.

27. **Integrated Rural Accessibility Planning and Geographic Information System.** Consulting assistance was recruited by direct selection from the ILO for the provision of planning and prioritization services and mapping of the project area using IRAP and GIS capabilities. The ILO mobilized on 1 March 2003 and had its main office in Phnom Penh housed in the MRD headquarters, with regional offices in all PDRDs and the PMU. Originally,

the ILO was to provide 23 person-months of international IRAP specialists and 48 person-months of a national IRAP specialist, with additional professional and support staff. A variation in September 2005 extended the agreement to the end of December 2006. The total cost to the Project for IRAP and GIS services was \$1,730,590, of which \$560,904 was administered by the MRD for procurement of equipment and training, and \$1,169,686 by the ILO for IRAP and GIS technical assistance. Initially, some discussion between ADB and the MEF took place over the use of direct selection, with the MEF ultimately accepting its appropriateness where the ILO had existing capability within the MRD.

28. Local consultant services and service providers were recruited under the NRDP. Intech was recruited to provide design services for structures and to recommend alternative pavement surfacing for a trial stabilization project. The firm was mobilized in April 2005 and demobilized in December 2005, incurring a total cost to the Project of \$144,283.17. The CARIC Group was recruited by the Project to undertake a market survey and design. The total cost of this consultancy to the Project was \$48,745.52. Kosan Engineering, ILI, and Mony Associates were contracted by the Project to provide engineering design and supervision services to all major road structures. Minor contractors were used throughout the Project for construction and maintenance, while local NGOs were employed to work closely with community organizations.

2. Procurement of Civil Works

29. Procurement under the Project was in accordance with the ADB *Procurement Guidelines* (2007, as amended from time to time). Accordingly, procurement of the various works was carried out as follows:

a. Labor-Based Appropriate Technology

30. LBAT was used by the Project. Labor-intensive activities were based on recruitment of labor gangs from among participating beneficiaries. Local NGOs recruited labor for the subprojects, thereby (i) ensuring transparency, gender equality, and fair pay; and (ii) providing laborers to the contractor as well as oversight of their working conditions and timely payment. Instances of contractors failing to pay laborers or inserting “ghost” workers on time sheets resulted in investigation and removal of some contractors. It became increasingly difficult to recruit sufficient workers; some women refused manual road labor employment if any other work was available, and some workers preferred to go to Thailand where pay rates are better. The quality of the road sub-base also became an issue, with the finding that roads constructed in the early years of the Project using LBAT had poor longevity. Consequently, in the final construction season a move towards machine-based construction was instituted, particularly in maintenance activities. This provides better quality, longer life, and less expense than when LBAT is used.

b. Local Competitive Bidding

31. The PMU, with input from the MEF and ADB, developed a full contract management system, including bidding procedures, conditions of contract, specifications, and supervision and payment procedures. This was used initially for local competitive bidding and domestic canvassing for culverts, small bridges, laterite supply, and buildings. Later, full road works contracts were also awarded by local competitive bidding. Contract documents were prepared by the project engineers, advertised as required, and publicly opened. Bid evaluation committees evaluated bids and submitted the evaluations to the PMU for approval and then to the MEF and ADB for their respective “no objection.” The introduction

of the MEF's procurement manuals¹⁰ simplified matters as lengthy delays in procurement approval were reduced significantly.

c. Procurement of Maintenance Works

32. Routine maintenance was carried out by contracts with small local operators. Laterite for pothole patching was provided in stockpiles along the road through laterite supply contracts. An LBAT routine maintenance agreement was developed by the Project for use with these contracts. Routine and periodic maintenance was sometimes delayed where counterpart funds were not available, leading to degradation of roads and subsequent increased maintenance costs.

d. Materials and Equipment

33. Materials and equipment were procured by various means, including local competitive bidding, direct purchase, international competitive bidding, and international shopping. Procurement was carried out in accordance with the requirements in the ADB *Procurement Guidelines* by the MEF, MRD, and the PIUs according to the prescribed financial limits for each procurement method. A full list of equipment procured under the Project is in Appendix 2.

J. Performance of Consultants, Contractors, and Suppliers

34. The project management consultant provided all staff inputs as required, with setbacks fielding some specialists due to delays in obtaining contract variations through the MRD and MEF. A schedule of staff inputs is in Appendix 8. The IRAP system established within the MRD, with assistance provided by the ILO, established planning methods using a clear and practical georeferencing system; it is a major contribution to regional planning methods and capability. The digital databases require updating every 2 years using the IRAP consultative mechanism.

35. Other contractors and suppliers were employed. Intech's outputs were so late they became unusable, inaccurate, or not produced. The consultant was based in Phnom Penh, leading to difficulties in day-to-day communication with the PMU and project management consultant. The CARIC Group complied with its terms of reference and provided plans and site locations for the project to undertake market construction, although not all plans were fully complete. Whether market justifications were accurate is a matter for further assessment. Kosan Engineering, ILI, and Mony Associates provided invaluable input into ensuring structural integrity and specific performance. A review of contractor performance was undertaken by the Project in 2006, with the resulting list of acceptable and unacceptable contractors used as one criteria for further contract awards.

36. Locally operating NGOs¹¹ were identified and provided project assistance to the commune councils and village organizations in using participatory planning and selection methods; they worked best when closely integrated with the PMU. Their slow recruitment up until 2005 due to procedural issues reduced the ability of the NRDP to fulfill the full potential of the rural livelihoods enhancement component. However, these NGOs have continued to operate within the areas after project closure.

37. No problems were encountered with the supply of equipment and vehicles. Some problems were encountered at the PMU and PIUs for the maintenance of major office

¹⁰ Kingdom of Cambodia, Ministry of Economy and Finance. 2005. *Manual on Standard Operating Procedures for Externally Financed Projects/Programs in Cambodia*

¹¹ NGOs assisting the Project were CARE and ZOA in Oddar Meanchey, Handicap International in Battambang, Ockenden in Banteay Meanchey, and PADEK in Siem Reap.

equipment, in part as a result of the location of these offices. Internet service, which has become vital for coordination and management, was sometimes unreliable.

K. Performance of the Borrower and the Executing Agency

38. The MEF performed satisfactorily and improved its capabilities over time. Delays in disbursement due to a cumbersome system were encountered and marginally affected implementation. Additionally, approval for contracts in the early stages was slow, a situation vastly improved by the use of SOPs and implementation of a block grant disbursement method for commune councils. Early slow approvals for commune council bank accounts somewhat delayed the introduction of the livelihoods component. The current capability of the MEF to support decentralized projects is high.

39. Over time, there was considerable achievement within the MRD's central and provincial levels in creating and upgrading technical and management capability. Administrative, financial, and technical management practices were introduced, although these still require consolidation and refinement to ensure their sustainability. A procurement-related audit¹² by ADB in the first half of 2006 found possible substandard quality work, but also that supervision was improving. There were possible collusive practices among contractors, lack of due diligence by the project liaison office, and some noncompliance with ADB *Procurement Guidelines*. ADB requested the MRD to strengthen its internal controls to ensure future procurement activities are transparent and comply with ADB *Procurement Guidelines*. A change in project director and the need to resolve the contractor issue delayed approval of major structures and was the main factor in the MRD requesting an extension in May 2007 for another year to June 2008. More to the point, the MRD did not follow best practices in documentation, as indicated by ADB suspending the statement of expenditure procedure. As a result of the audit, the MRD was required to continue providing full documentation for all withdrawal applications. A delay also resulted from the already mentioned ADB decision to reclaim advances in early 2008, leaving the PDRD with an unanticipated shortfall requiring curtailment of some subprojects. This delay in the last months of the Project contributed to some uncompleted infrastructure or subprojects not starting, despite the existence of a remaining balance of funds from the loan. ADB had informed the MRD that subprojects not completed would have to be funded to completion by the Government of Cambodia, and the MRD (as the executing agency) would be responsible for the operational costs of the PMU. Four subprojects were thus completed through counterpart funding; the MRD is seeking funds for implementation of others.

40. On benefit monitoring and evaluation (BME) and socioeconomic planning, the MRD has met its responsibilities, with project help. The MRD is using lessons from the Project to strengthen its planning processes, although more progress in institutional strengthening and professional capacity development is needed.

L. Performance of the Asian Development Bank

41. ADB performed well in providing approvals, and especially in close monitoring once project administration and oversight was placed at the Cambodia Resident Mission (in August 2005), which was especially appropriate for a decentralized project. Disbursements were occasionally delayed due to inadequate documentation from the MRD. In the final year of the Project, a delay in reimbursement of commune council funds to the imprest account slowed civil works contracts under way. Review missions by ADB recommended effective remedial action. Considering the complexity of the Project, its decentralized and innovative

¹² The Integrity Division of ADB conducted a procurement-related audit on the NRDP from February to July 2006 with the National Audit Authority of Cambodia and a team of consultants assisting. The audit reviewed \$12 million (64%) of the \$18.8 million contracts awarded as of 17 February 2006.

nature, and expansion into participatory development, the performance of ADB was highly satisfactory.

III. EVALUATION OF PERFORMANCE

A. Relevance

42. At appraisal, infrastructure in the northwestern region was poorly developed; access to services extremely difficult; and schools, markets, health centers, and village infrastructure such as bridges and water points were poorly developed. The MRD's ability to manage a major development initiative was limited by low capacity and inexperience. Customarily, projects were almost entirely managed from Phnom Penh, so that local decision making and involvement of communes and villages was minimal. The Project ambitiously addressed these challenges, by expanding opportunity, access to services, and enhanced ability of the PDRD through a decentralized PMU, as well as strengthening commune councils and village groups. The design of the Project was guided by the ADB country strategy¹³ and a desire to strengthen the MRD.

43. Use of LBAT increased benefits to the poor through appropriate labor-intensive methods, albeit with a decline in their use as competing opportunities for labor arose with improved economic activity. The IRAP road selection methodology, as well as the several cycles of participatory planning and infrastructure mapping, contributed to improved infrastructure identification, selection, and maintenance, and established a partnership between communities, commune councils, and the MRD. PDRD staff maintains an interest in IRAP, but its maintenance requires regular planning cycles, with budgetary resources from the MRD. The infrastructure provided through the Project contributes to the alleviation of rural poverty through access to markets and services and diminished transport costs. Water points, and health and education facilities were recognized by beneficiaries as effectively responding to these needs. The MRD, PDRD, and the PMU enhanced their technical and management skills, with positive effects for future projects requiring skilled people (assuming these people remain within the government workforce).

44. The NRDP also used NGOs with local experience to assist communities in their participatory planning—a novel approach that proved consistent with the development of government policy. The Project also instituted a block grant funding mechanism that is less cumbersome for commune councils and improves the speed and efficiency of implementation, and is a technique that should be used for future rural development activities. The CBLE funded by JFPR 9017 ran in parallel with supporting goals, which enhanced the synergistic effects of the interventions and consequently contributed to achieving outcome.

B. Effectiveness in Achieving Outcome

45. The NRDP strengthened local participatory planning in the northwest, and in most places the concept was introduced. As part of the planning cycle, planning workshops prioritized market and road subprojects. The IRAP method contributes to improved planning and BME for socioeconomic improvement.

46. The rehabilitation of 525 km of poor rural roads linking poorly served rural areas to market towns and/or the primary transport network reduced transport costs. It also provided greater ease of travel for an increased number of persons traveling for economic and social purposes, and for access to services. The volume of goods transported has increased greatly. According to the June 2008 BME baseline evaluation and report¹⁴, fares for transport

¹³ ADB. 2005. Country Strategy and Program (2005-2009): Cambodia. Manila.

¹⁴ *BME Baseline Evaluation and Report, NRDP-MRD, June 2008*

services reportedly fell by 20%–50%. The price of land near improved roads also increased by more than 50%, and increased farming activity can be observed along newly created or rehabilitated road alignments. Population movement and settlement of the area and bringing abandoned lands (now in secondary forest) into cultivation are also major socioeconomic effects of the road program. The road rehabilitation component of the Project generated 1.9 million person-days of employment, particularly benefiting women.

47. Market subprojects came late in the Project cycle and their effectiveness is not yet clear. The responsibilities of market committees, their involvement with the commune councils, and the ownership of markets by communities or the commune council still require clarification.

48. The Project trained public officials, contractors, commune officials, and village chiefs to operate within a decentralized method. Training is never undertaken, however, and constant refreshment and use of the system is the only guarantee that it will continue to be used.

49. Small-scale infrastructure subprojects were high priorities for communes and were well received, with clearly understood benefits in terms of increased school enrolment, improved motivation for children and adults to learn, and better health and hygiene through access to health services and better quality water. The experience gained in workshops, consultations, and participatory decisions is valuable, but Project expectations that users of the facilities would be motivated to undertake maintenance through asset management structures has not proved valid. Under the commune council fund, community work was facilitated by NGOs. The BME study of June 2008 found that the effectiveness of NGOs and of the component itself would have been greater had NGOs participated earlier in the selection process and preparation of communities for small-scale infrastructure. In particular, the poorest members of society had little if any participation in determining investments, which remain largely managed by a small group in most communes and villages.

C. Efficiency in Achieving Outcome and Outputs

50. Production statistics, likely marginal increases in production, and vehicle operating cost figures were collected during project design and appraisal, but have not been collected since. Many of the project inputs related to social infrastructure, capacity development, and livelihoods development did not lend themselves to clear evaluation. The beneficial results of the investment are clarified through assessments at the end of the Project.

51. There has been significantly higher population movement into Siem Reap and especially Oddar Meanchey provinces (paras. 57–60) than anticipated. The NRDP's June 2008 BME baseline evaluation and report concludes that the NRDP had substantial benefits as perceived by beneficiaries. The investigation used community discussions and secondary information to assess the overall impact of the NRDP. The executive summary and conclusions are provided in Appendix 11. Road rehabilitation has had major impact in creating accessibility and availability of services, as well as entrance to the area by buyers, although maintenance has become a concern of beneficiaries. Infrastructure improvements and benefits are well recognized.

52. From the BME report and from observation it is apparent that a significant number of farmers moved into selling surpluses and out of subsistence agriculture. At a minimum, the rice productivity assumptions of the economic analysis at appraisal (of moving from 1.3 tons per hectare [t/ha] to 2.1 tons per hectare t/ha) have been realized, although wet season production can be less than 1 t/ha and some farmers in the dry season can produce 3–4 t/ha. The appraisal estimates did not take into account the recent large increase in cassava cultivation, particularly in the rain-fed uplands, which is purportedly produced for sale in Thailand. The decrease in transport costs is estimated to be 20%–50%, indicating that the

early assumptions at appraisal have been surpassed. The Project provided rehabilitation and regular and periodic maintenance on 1,475 km of rural roads, which is well beyond the amount envisaged at appraisal. There are good reasons to conclude that the Project was an efficient expenditure of funds resulting in substantial benefits to people within the affected districts, and that the conservative estimates of benefits within the RRP¹⁵ have been surpassed. Although the data for reformulation are not available, the economic internal rate of return at appraisal of 19.79% may greatly understate the overall benefits of the project.

D. Preliminary Assessment of Sustainability

53. Similar to the conclusions reached in the ADB completion report for the Rural Infrastructure Improvement Project,¹⁶ the major sustainability issue with the NRDP is the need for regular and periodic maintenance for rehabilitated roads. Routine maintenance on these roads was accomplished, and periodic maintenance initiated on some links. Although the Government has a genuine commitment to planned maintenance on roads to sustain their benefits and impacts, this is yet to translate into the timely provision of funding. A revision of the policy for rural roads and the provision of a financial management system for rural road maintenance will ensure that those resources constructed under the NRDP continue to be used effectively. With the strengthening of the local contracting industry by the Project, the establishment of the IRAP and GIS system within the MRD, and the creation of a core group of trained staff able to plan and supervise the implementation of maintenance works, the Government has a strong foundation for a sustainable rural road maintenance strategy. The MRD now has trained and experienced professionals capable of managing future projects. The Project emphasized training of trainers so that training capabilities exist. The low remuneration in government service continues to draw trained individuals into the private sector or NGOs, and this could undermine the ability of the MRD to maintain these capabilities. Procedures and systems for planning, technical standards, implementation, contract management, financial management, training, and BME are now MRD "standards" applied on other projects. This has provided the MRD and the provinces with a substantial increase in their capability to manage rural infrastructure development in the future. As a result of the NRDP, the MRD has a much better ability to execute its ever-expanding workload.

54. Markets were completed only in 2008, and it is too early to assess their impact and management. Market management committees were established and trained under the Project, and they may ensure that the markets are operated, maintained, and used effectively. Whether the provision of physical markets is enough to effectively and sustainably improve markets is yet to be seen. Further assistance in market information systems or value chain analysis, which makes markets more efficient, should be provided, along with any future physical market construction, which itself should be subject to careful review of local demand and likely effectiveness.

55. The various small-scale civil works (schools, wells, etc.) have been handed over to village committees, who have taken ownership of the assets provided by the Project, and are now responsible for their O&M. Creation of mechanisms for O&M of community infrastructure would be a valuable contribution for future ADB projects to make.

56. Capacity development activities are valuable, but they must continue over time and are seldom effective as one-off interventions. Similarly, participatory mechanisms within commune councils and communities probably require continued input by NGOs for some years beyond project closure. It appears that NGOs that worked in the area have continued to operate in helping to guide commune councils and communities.

¹⁵ ADB. 2001. *Report and recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Northwest Rural Development Project*. Manila.

¹⁶ ADB. 2005. *Project Completion Report on the Rural Infrastructure Improvement Project in Cambodia*. Manila.

E. Impact

57. The Project benefited the rural population, particularly the disadvantaged, by providing direct and indirect employment and income opportunities, as well as access to services. Favorable social impacts are the provision of local employment and income for rural employment seekers from average to poor households, increased access to education and health services, reduced travel time and expenditure, and easier access to markets thereby increasing return on sale of produce. Unfavorable impacts of social dislocation of workers are sometimes associated with labor-intensive projects, but this was reduced by recruiting local labor and not setting up labor camps.

58. Table 1 illustrates the possible changes resulting in part from road infrastructure, demonstrating that population growth in both Battambang and Oddar Meanchey provinces exceeded estimates. The 172% increase of population in Oddar Meanchey—much of it attributable to improved roads access—reveals that migration to the area was much heavier than anticipated. There would be a commensurate increase of beneficiaries and of production due to the increased area under cultivation, whether or not average productivity increased.

Table 1: Population Growth in the Project Provinces

Province	NIS Census 1998	NIS Population Projection to 2005	NIS Population Projection to 2010	NIS Census 2008	Actual Population Growth 1998–2008 (%)
Banteay Meanchey	577,772	773,092	886,198	678,033	17
Battambang	793,129	997,840	1,101,461	1,024,663	29
Siem Reap	696,164	861,214	970,666	896,309	29
Oddar Meanchey	68,279	97,803	111,079	185,443	172

Source: National Institute of Statistics.

59. Environmental impact was greatly reduced by rehabilitating existing roads rather than new construction; resettlement issues were therefore minimal. However, roads in Oddar Meanchey appear to draw increased settlement with resultant reduction of secondary forest as it reverts to agricultural land.

60. A review of the economic and financial analysis is in Appendix 10.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

61. The Project succeeded in directly rehabilitating rural roads and providing assistance for rehabilitation in two additional districts of Oddar Meanchey. Road maintenance was carried out on an extended selection of roads. Social infrastructure has been constructed and is making a positive contribution to communities, an impact that was effectively expanded through the LBAT construction method. The consultative and participatory methods used under both IRAP and in community development have provided villages and commune councils with hands-on experience in infrastructure prioritization and implementation. A high level of capacity has been provided to public service professionals, councilors, and village residents. Although such training requires constant renewal, the existing base of trained individuals is a valuable asset for the future. The direct impact of the project on communities is highly satisfactory, while the establishment of sustainable institutions within the MRD is a potential to be realized, dependent on further improvement in

procedures such as funding of maintenance and improved financial and reporting documentation.

B. Lessons

62. There are a number of important lessons from the NRDP:
- (i) **Operation and maintenance.** Improved infrastructure investment results in obvious benefit in terms of service delivery and economic activity, and justifies its regular and periodic maintenance. It is the very success of road rehabilitation that results in its rapid degradation as usage increases. The increased traffic resulting from rehabilitation rapidly degrades the rural roads, which are laterite or stabilized laterite best used in the dry season. The benefit flow from rehabilitation of roads is substantial and would more than justify the expense of regular and periodic maintenance.
 - (ii) **Integrated rural accessibility planning.** Selection and prioritization methods for rehabilitation are especially appropriate in supporting participatory and community-based activities; regular updating is necessary to maintain databases as effective tools.
 - (iii) **Labor-based appropriate technology.** LBAT is a cost-effective method for distributing benefits and should be a priority for initial construction, where it can achieve good results. It is far less effective in terms of quality for regular maintenance that is best done with machinery.
 - (iv) **Decentralized decision making.** This brings project administration physically and socially closer to beneficiaries. It requires clear structures and decentralized authority, particularly in regard to financial structures which operate best when simplified for quick reporting, communication, and disbursement, in keeping with the need to maintain effective momentum and credibility with participating communities.
 - (v) **Capacity development.** This is key to making a decentralized project work with attention to the needs of government, NGOs, and communities. Development of skills results in a problem for Government to retain trained staff; this can be resolved through improved benefits.
 - (vi) **NGOs have a vital role as service providers.** The effectiveness of NGOs in working directly with communities is confirmed; government, consultant services, and NGO mobilization inputs are complementary and should be structured for ease of communication and common approach.

C. Recommendations

1. Project Related

63. **Future Monitoring.** Lack of funding for O&M remains a difficult issue.¹⁷ The MRD and MEF both recognize the importance of O&M, and the resolution of the problem is within the budget process. The issue should be addressed by Government on a continuing basis, by ADB in upcoming projects such as the proposed Road Assistance Management Project, and as part of ADB's contribution to the public financial management reform program for rural development ministries, such as the MRD and MOWRAM.

64. Community maintenance of infrastructure places an unacceptable additional burden on beneficiaries so that user charges or even local taxes may be the only viable option for regular upkeep. A simplified process of funding direct to the MRD with information to the MEF should be pursued in future projects. Cash flow estimates, and the total time for reimbursement to a decentralized project, should determine the size of the imprest account,

¹⁷ Noted in some detail in the completion report for the Rural Infrastructure Improvement Project (footnote 16).

building upon the experience of the NRDP in cash flow management. Block grants to commune councils, based upon work plans, are especially effective in providing them with appropriate flexibility in implementation and reporting.

65. The IRAP system requires updating with communities on a regular basis. ADB should monitor that process for its regular and continued use, since the IRAP tool degrades rapidly as the databases age.

66. In future ADB and the Government should investigate cost-effective, improved internet access, perhaps via satellite. Effective communication grows in importance as capabilities increase. Decentralized projects require reliable communication.

2. Covenants

67. **O&M.** The covenant on O&M is subject to budget issues that could reduce maintenance and place infrastructure at risk. The economic benefits of road rehabilitation are such as to clearly justify maintenance. Dialogue with the Government on this should continue and include ways in which user charges or local taxes could be used to supplement the MRD's low O&M budget. Other covenants should remain.

68. **Further Action or Follow-Up.** The Project has been completed successfully and loan accounts have been properly closed following the cancellation of the undisbursed loan amount. There is a need to monitor government annual budget allocation for rural road O&M and the actual amount reaching the project provinces.

69. **Additional Assistance.** The IRAP remains a valuable and essential tool for access planning and infrastructure maintenance management. Additional support to the MRD to institutionalize IRAP nationally, and its effective application, is required.

70. **Timing of the Project Performance Evaluation Report.** Due to the extension of the project implementation and project completion until June 2008, the project performance audit report should be deferred until the end of 2009 when an assessment can be made of road maintenance and of benefits to adjoining households from improved access to markets and other public services.

3. General

71. In keeping with its decentralized and regional nature, the Cambodia Resident Mission provided extraordinary input into monitoring and managing the NRDP. The Project was the first ADB-financed project to assist the government's decentralization and deconcentration policy, and was province-based so as to work closely with provincial departments. This was an opportunity to strengthen local capacity for improved and efficient rural service delivery through (i) providing continuing support to decentralization and deconcentration, (ii) providing opportunities for local institutions to strengthen their capacity, and (iii) strengthening the relationship between villagers and local government based on community-driven plans promoting accountability and sustainability. In future, ADB should invest in livelihood development, sequenced to cover the same geographical areas as rural infrastructure projects.

72. Performance by the MRD (as the executing agency) relative to the design and monitoring framework was satisfactory, and benefited from the 2005 assignment of the Project to the resident mission that allowed close and regular interaction. The MRD's documentation process for contracting was found faulty by ADB and in need of improvement, with satisfactory rectification of the problem by the end of the Project. The MRD and MEF agree that disbursement procedures were more cumbersome than necessary and should be streamlined in future, based on NRDP experience.

PROJECT FRAMEWORK MATRIX

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
<p>Overall Aim (Project Goal) Support government policy on poverty reduction in rural areas through the provision of physical infrastructure, improvement of socioeconomic conditions, and enhancement of rural livelihood in the four northwest provinces of Cambodia.</p>	<p>Number of villages with year-round access to commune centers, health services, and education facilities.</p> <p>Incidence of poverty reduced from 43% to 33% in the target area.</p> <p>Average household income of target beneficiaries raised by 30% from the baseline.</p>	<p>Provincial department of rural development (PDRD) village and commune database of vital statistics</p> <p>Ministry of Planning (MOP) socioeconomic surveys and completion report</p> <p>MOP socioeconomic surveys and project completion reports</p>	<p>Government commits the necessary resources to ensure that road access is maintained.</p> <p>Government continues reform efforts with a focus on good governance through public sector reform.</p>
<p>Immediate Objective</p> <p>1.0 Rural Infrastructure Development Implement rural infrastructure interventions that will contribute to the improvement of living conditions of people in the project area.</p>	<p>Time spent transporting goods to/from markets and accessing social services.</p> <p>Numbers attending schools.</p> <p>At least 613 kilometers (km) of rural roads, 250 classrooms, 14 health facilities, and 14 markets rehabilitated or constructed.</p>	<p>Participatory monitoring of infrastructure utilization</p> <p>Project-generated reports</p> <p>Project completion report</p>	<p>Product surpluses are available in target areas.</p> <p>Government budgets for operation and staffing of infrastructure continue.</p> <p>Government takes on responsibility for de-mining road alignments and maintaining infrastructure.</p>
<p>Output 1.1</p> <p>A network of rural roads rehabilitated or reconstructed to the Ministry of Rural Development (MRD) standards with established operation and maintenance procedures in place.</p> <p>1.1.1 Identify priority roads to be rehabilitated using integrated rural accessibility planning (IRAP) procedures.</p> <p>1.1.2 Design and construct rural road subprojects.</p> <p>1.1.3 Establish supervision, monitoring, and evaluation procedures.</p> <p>1.1.4 Establish operation and maintenance procedures and provide training in the use of</p>	<p>Length (km) of road rehabilitated.</p> <p>Maintenance fund operative.</p> <p>14 sets of IRAP district maps generated.</p> <p>Designs prepared and contract specifications detailed.</p> <p>613 km of rural roads constructed.</p> <p>Procedural manual produced.</p> <p>Participatory monitoring undertaken by communities.</p>	<p>Quarterly project reports</p> <p>Annual budget allocation</p> <p>Direct observation and project quarterly reports</p> <p>Contracts awarded</p> <p>Project-generated reports</p> <p>Supervision, monitoring, and evaluation procedures under the Project</p> <p>Community and project-generated</p>	<p>Counterpart funds for de-mining of road alignments and maintenance of rehabilitated roads are available on time.</p> <p>De-mining is completed on identified alignments.</p>

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
1.1.5 the roads (safety awareness). Provide for consulting services and other technical support.	Length (km) of rural roads being maintained. Number of accidents. Contracts awarded.	reports Commune reports Project-generated reports	
Output 1.2 Larger-scale social infrastructure constructed at district level with operation and maintenance procedures established. 1.2.1 Identify and prioritize larger-scale social infrastructure projects using IRAP procedures. 1.2.2 Design and construct larger-scale social infrastructure projects. 1.2.3 Establish supervision, monitoring, and evaluation procedures for construction. 1.2.4 Provide for consulting services and other technical support.	Number of items constructed. Schools classrooms (250). Health centers (14). Markets (14). 14 sets of IRAP district maps generated. Civil works projects completed. Manuals prepared. Number of consulting services contracts executed.	Quarterly project reports Inspection of plans Project-generated reports Project-generated reports Disbursement on contracts	Provincial rural development committees (PRDCs) can achieve cross-sector coordination for staffing and operation of facilities constructed.
2.0 Capacity Building Strengthen the capacity for project identification, implementation, and management/maintenance of public infrastructure investments.	Infrastructure projects being identified and implemented at district, commune, and village levels.	Quarterly progress reports and participatory monitoring and evaluation (M&E) Monthly reports of PDRD	Government commitment to decentralized/devolution planning continues.
Output 2.1 Improved capacity of PDRD staff to respond to community-identified development initiatives. 3.1.1 Train PDRD staff in participatory techniques and work methodologies. 3.1.2 Train PDRD staff in data analysis techniques and resource inventory survey methodologies. 3.1.3 Support participatory workshops in villages to confirm pro-poor priority investments. 3.1.4 Support district facilitators in undertaking village	Interest group opinion and staff assessments. Number of PDRD staff trained. Number of PDRD staff trained. 36 pro-poor investment plans generated in intensive communes. Nongovernment organizations	Capacity survey conducted by the project management unit (PMU) Project trained reports Training evaluation reports Project training reports Participatory workshop reports/records	Budget support is maintained for salaries of project-associated staff. Databases on resources and other variables are made available to the Project. District facilitators are identified and committed to the Project.

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
<p>and commune meetings.</p> <p>3.1.5 Incorporate community-identified and pro-poor initiatives into village and commune development plans.</p> <p>3.1.6 Train PDRD rural economic development bureaus in microfinance schemes.</p>	<p>(NGOs) appointed and meetings facilitated.</p> <p>Pro-poor/community-responsive development plans developed/generated.</p> <p>Number of training courses and number of PDRD staff trained.</p>	<p>Project-generated contracts</p> <p>Reports of community workshops/meeting minutes</p> <p>Project-generated reports</p>	<p>Active participation of the poor and vulnerable groups is achieved through NGO facilitation.</p>
<p>Output 2.2</p> <p>Improved project implementation and management capabilities at provincial level.</p> <p>3.1.1 Train and strengthen capacity of personnel of PRDC, PDRD, and concerned agencies in project and financial management.</p> <p>3.1.2 Train local contractors in bidding procedures and project implementation.</p> <p>3.1.3 Train private consulting engineers in project supervision and quality assessment.</p> <p>3.1.4 Establish materials testing laboratory in the project area.</p>	<p>Number of training courses in project management.</p> <p>Number of training activities undertaken.</p> <p>Number of contractors trained and number of courses conducted.</p> <p>Number of consultants trained and number of courses conducted.</p> <p>A laboratory established, equipped, and operational.</p>	<p>Staff performance and assessment reports</p> <p>Project-generated reports</p> <p>Training completion reports</p> <p>Performance reports of private consulting engineers</p> <p>Observations</p> <p>Procurement contracts</p>	<p>Suitable qualified staff is appointed to project implementation units (PIUs) in the provinces.</p> <p>PRDC remains as coordinating and approving body of rural development activities, initiatives, and projects.</p> <p>Qualified and interested private sector operators are identified.</p>
<p>Output 2.3</p> <p>Improved capacity of MRD and PDRD to plan and prioritize rehabilitation and maintenance of rural roads.</p> <p>3.1.1 Train MRD and PDRD staff in IRAP procedures and geographic information system (GIS) activities.</p> <p>3.1.2 Train MRD and PDRD engineers in survey and design of roads and other civil works as required.</p> <p>3.1.3 Equip and train the planning unit within MRD's Rural Road Department to support the provincial planning of rural roads.</p> <p>3.1.4 Strengthen the capacity of MRD staff to manage rural development projects.</p> <p>3.1.5 Provide other technical training as required</p>	<p>Number of district and provincial rural road development plans generated.</p> <p>Number of training courses.</p> <p>Improved skills of staff.</p> <p>Number of training courses.</p> <p>Improved skills of staff.</p> <p>Planning unit established and equipped, staff appointed.</p> <p>Provincial maps generated of the target area with road maintenance planned.</p>	<p>IRAP-generated district and provincial plans viewed</p> <p>Project-generated reports</p> <p>Training evaluation studies</p> <p>Project-generated reports</p> <p>Training evaluation studies</p> <p>Project-generated reports</p> <p>Observations of materials in Rural</p>	<p>MRD establishes and staffs the rural roads departments at both central and provincial levels.</p>

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
(road and civil works, construction, etc.).	Number of contracts awarded. Number of training courses conducted. Evaluation of effectiveness of training.	Roads Department Project-generated reports Project -generated reports	
3.0 Rural Livelihood Enhancement Support livelihood enhancement by involving and empowering the project beneficiaries, establishing small-scale village infrastructure, and establishing savings and credit initiatives at village and commune levels.	Poor and vulnerable groups actively participating in decision making and in common interest groups. Community awareness and sense of ownership with management and user committees established.	Project-generated reports Project completion report Community group management minutes	Government recognizes the need to enlist the assistance of NGOs to implement the community development aspect of the Project. Formal credit facilities remain beyond the reach of villages and communes.
Output 3.1 Poor and vulnerable groups actively participating in determining development priorities for infrastructure investments. 3.1.1 Enhance local planning processes in villages and communes to incorporate the interests of the poor and vulnerable. 3.1.2 Train existing and prospective community-based organizations (CBOs) (commune councils, commune development committees, and village development committees) in leadership skills and literacy, where appropriate. 3.1.3. Train members of CBOs on the roles and responsibilities of office/membership. 3.1.4 Support for capacity building of CBOs, as required (technical support), in the use and maintenance of facilities	Common interest groups formed and functioning. At least 36 commune investment plans modified to reflect the needs of the poor. NGO contracts awarded. Screened investment plans. People from relevant CBOs/beneficiary communities trained. 960 members of CBOs trained. Number of village or commune meetings conducted. Consultants appointed and posted to PIU and PMUs.	Project-generated reports Commune investment plans Project-generated reports Progress and monitoring reports Training records Training reports Training impact assessments Technical service contracts/agreements Project-generated reports	Parallel programs aimed at decreasing food shortages are implemented in participating villages. The target groups feel empowered and understand the usefulness of participatory decision making.

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
<p>Output 3.2</p> <p>Water supplies established in target villages with user access and maintenance procedures in place.</p> <p>3.2.1 Identify and implement water supply micro-projects.</p> <p>3.2.2 Carry out health education to improve levels of hygiene and encourage construction of latrines in villages.</p> <p>3.2.3 Establish supervision, and monitoring and evaluation procedures.</p> <p>3.2.4 Establish operation and maintenance procedures and provide training in the use of the facility (hygiene, etc).</p> <p>3.2.5 Provide for consulting services and other technical support.</p>	<p>220 water sources, points established.</p> <p>Associated water management groups operating.</p> <p>220 water points constructed, operated, and maintained.</p> <p>2,500 additional households having access to safe water.</p> <p>Number of courses and workshops conducted.</p> <p>Decreased incidence of illnesses.</p> <p>2,500 or 10% of households in target areas having latrines and living in hygienic conditions.</p> <p>Number of user groups established.</p> <p>Number of training of user groups.</p> <p>Number of user groups established.</p> <p>Number of training of user groups.</p> <p>Number of consultant contracts issued for water establishment.</p>	<p>Quarterly generated reports</p> <p>Group meeting records</p> <p>Project-generated reports</p> <p>Participatory monitoring of small-scale village investments</p> <p>Project-generated reports</p> <p>Annual health reports</p> <p>Village statistical returns</p> <p>Health center records/reports</p> <p>Project-generated reports</p> <p>Progress and monitoring reports</p> <p>Project-generated reports</p> <p>Progress and monitoring reports</p> <p>Project-generated reports</p> <p>Disbursement records</p>	<p>Suitable water sources can be identified for development for drinking purposes.</p> <p>Suitable locations for construction of water points are identified.</p>
<p>Output 3.3</p> <p>Small-scale social infrastructure established in target communities with operation and maintenance procedures established.</p> <p>3.3.1 Identify and prioritize small-scale infrastructure using local planning process procedures.</p> <p>3.3.2 Design and construct small-scale infrastructure micro projects.</p>	<p>Number of items constructed for cumulative value of \$10,000 per commune per year.</p> <p>Modified commune development plans.</p> <p>Small-scale civil works micro projects</p>	<p>Quarterly project reports</p> <p>Inspection of plans</p> <p>Project-generated reports</p> <p>Project-generated reports</p> <p>Project-generated reports</p>	<p>PRDC can achieve cross-sector coordination to staff and operate facilities.</p>

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions and Risks
3.3.3 Establish supervision, and monitoring and evaluation procedures for construction. 3.3.4 Establish operation and maintenance procedures and provide training in the use of the investment. 3.3.5 Provide for consulting services and other technical support.	completed. Manuals prepared. Number of user groups established. Number of consulting services contracts executed.	Disbursement on contracts	
Output 3.4 Villages-based savings and credit schemes established and operating in communities. 3.4.1 Train provincial and district agency and NGO staff in informal microfinance modalities and aspects of savings and credit group establishment and operations. 3.4.2 Undertake village and commune community awareness training in concepts of informal and formal savings and credit schemes. 3.4.3 Prepare operational guidelines with standardized accounting forms, passbooks, and record maintenance procedures, etc. 3.4.4 Support the establishment and operations of village-based savings and credit groups. 3.4.5 Provide training for elected office bearers in scheme operations, basic accounting, loan management, and auditing. 3.4.6 Improve links between informal and formal credit facilities at provincial, district, commune, and village levels. 3.4.7 Support biannual coordination meetings between credit institutions and community development agencies in order to assist emerging micro enterprises.	Number (180) of savings and credit groups established and operational. Funds committed to savings activities. Number and volume of loans administered. Number of agency staff trained. NGO training contract. Number of courses conducted. Manual prepared. Procedures prepared. Group meetings conducted. Number of trainings conducted. Records maintained. Number of villager groups using the formal credit system. Number of meetings conducted. Number of enterprises gaining access to MFI funding.	NGO/microfinance institution (MFI) participatory group records and project reports NGO/MFI participatory group records and project reports NGO/MFI reports of savings and credit groups Staff performance/assessment reports Project-generated reports Project disbursement records Project-generated reports Guidelines, forms, and procedures viewed NGO monthly reports Project-generated reports Village observations MFI records in provincial centers Project-generated reports MFI records	Beneficiaries identify income-generating activities. Markets are identified for production activities. Beneficiaries choose to establish savings and credit schemes, and form groups. Interested NGOs are identified for participation in the project. Formal credit facilities remain, and borrowing from formal sector is feasible and attractive. Efforts and commitment of all stakeholders prevail for assistance to the emerging microenterprises.

PHYSICAL ACHIEVEMENTS
Table A 2.1: Physical Progress Rural Infrastructure Development
 (As of 30 June 2008)

No.	Description	Unit	Targeted Provinces				Physical Achievements	Total Cost
			Battambang	Banteay Meanchey	Oddar Meanchey	Siem Reap		
1.	Road Stabilization	km	10.1	29.8	-	28.9	68.8	1,485,047.0
2.	Road Rehabilitation	km	150.6	120.9	119.8	124.2	515.5	8,450,502.9
3.	Total of Road Maintenance							1,718,088.7
	a. Road Periodic Maintenance	km	38.8	29.7	13.5	13.5	95.5	
	b. Road Routine Maintenance	km	213.3	269.0	301.2	73.5	857.0	
4.	School Building	room	54	73	100	68	295	1,983,648.3
5.	Health Center	place	2	3	3	3	11	325,701.1
6.	Market Building	place	4	4	3	2	13	354,337.1
7.	Total of Road Structure							1,690,164.9
	a. Road Structure(PC)	place	40	15	90	30	175	
	b. Road Structure(BC)	place	8	16	15	23	62	
	c. Road Structure(Br)	place	1	-	-	4	5	
	d. Road Structure(S)	place	-	4	-	-	4	
	e. Road Structure(CW)	place	-	-	-	1	1	
8.	Total of Water Points and Asonic Test							173,156.4
	a. Ring Well	place	-	18	-	34	52	
	b. Drilling Water	place	16	43	13	34	106	
	c. Pond	place	6	-	-	1	7	
	d. Asonic Test	place					100	
9.	Total of Water Crossing Structure							2,769,284.2
	a. Water crossing Structure(BC)	place	-	1	-	1	2	
	b. Water crossing Structure(Br)	place	8	8	13	2	31	
	c. Water crossing Structure(S)	place	1	-	-	-	1	
	e. Water crossing Structure(CW)	place	-	-	1.00	-	1	
10.	Sanitation Project	place	-	40	-	-	40	18,487.8
Grand Total Cost								18,968,418.3

BC = box culvert, Br = bridge, CW = causeway, PC = pipe culvert, S = slate.

Source: Ministry of Rural Development

Table A2.2: Physical Progress Rural Livelihoods Enhancement Commune Council Fund

Project names	Unit	Battambang				Banteay Meanchey				Oddar Meanchey				Siem Reap				All Steps
		Step I	Step II	Step III	Total	Step I	Step II	Step III	Total	Step I	Step II	Step III	Total	Step I	Step II	Step III	Total	
1 Canal rehabilitation	m	350	-	-	350	-	1,068	-	1,068	-	-	-	-	320	1,545	-	1,865	3,283
2 Community ponds	place	25	24	-	49	13	1	-	14	3	6	-	9	-	5	-	5	72
3 Community- small water enterprise	set	-	-	-	-	-	3	-	3	-	-	-	-	-	1	-	1	4
4 Clean water systems	m	-	-	-	-	75	-	-	75	-	3,767	-	3,767	6,600	-	-	6,600	10,442
5 Water gates	place	-	1	-	1	-	-	-	-	1	-	-	1	2	4	-	6	8
6 Dams and repair dams	m	-	55	-	55	428	-	-	428	-	575	-	575	2,137	726	28	2,891	3,949
7 Single and twin culverts	place	24	27	-	51	45	13	-	58	68	15	-	83	31	27	-	58	250
8 Drilled wells	place	59	18	-	77	6	-	-	6	4	1	-	5	69	-	-	69	97
9 Village laterite paths	m	-	-	-	-	3,833	780	-	4,613	3,200	8,271	-	11,471	-	4,360	-	4,360	20,444
10 Earth path and path rehab.	m	420	4,412	-	4,832	9,240	7,278	-	16,518	16,729	3,681	-	20,410	1,395	4,686	1,886	7,967	49,727
11 School building	room	-	5	-	5	-	-	-	-	7	2	-	9	-	-	-	-	14
12 Primary school buildings	room	-	3	-	3	-	-	-	-	1	1	-	2	-	-	-	-	5
13 Community- resource center repair	place	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1
14 Meeting building repairing	place	12	4	-	16	1	-	-	1	5	-	-	5	16	1	-	17	39
15 Granary communities	place	-	1	-	1	2	2	-	4	-	-	-	-	1	-	-	1	6
16 Water tower tank	place	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1
17 Pond rehabilitation	place	12	1	-	13	5	1	-	6	-	2	-	2	2	-	-	2	23
18 Repairing drilled wells	place	38	3	-	41	-	-	-	-	7	2	-	9	10	1	-	11	61
19 Latrines	place	-	9	-	9	50	146	-	196	167	102	-	269	3	-	-	3	558
20 Ring wells	place	19	-	-	19	31	-	-	31	3	13	-	16	69	5	-	74	140
21 Wooden bridges	place	3	4	3	10	-	-	-	-	-	-	-	-	2	1	-	3	13
22 School gates	place	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
23 Pond fence	place	-	13	-	13	-	-	-	-	-	-	-	-	-	-	-	-	13
24 Purified water	place	-	-	-	-	-	264	-	264	-	-	-	-	-	-	-	-	264
25 Spill ways	place	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1
26 Bailey bridge	place	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1

Source: Ministry of Rural Development

EQUIPMENT AND VEHICLES PROCURED

No.	Description	Purchased (\$)	
		Quantity	Total Price
I	VEHICLE		
1	Pick-ups (Ford Ranger)	17	286,386.00
2	Motorcycles	29	33,710.00
II	OFFICE EQUIPMENT		
3	Desktop computers	40	54,848.00
4	Desktop computers (GIS)	3	10,150.00
5	Laptop computers	10	24,266.00
6	Printers	26	18,580.00
7	Plotter printers	2	11,650.00
8	Server network	1	11,559.00
9	Auto voltage 3kVA	10	550.00
10	Copy machines	7	22,304.00
11	HP scanner	6	2,730.00
12	LCD projectors	4	9,950.00
13	Lamp	1	490.00
14	Fax machines	5	1,277.00
15	GPS, Models GPS(MAP 76), 100(94-04) Model-Finder (94-92)	18	11,116.00
16	Water coolers	3	340.00
17	Air-conditioners	31	19,589.97
18	Binding machines IBLCO	1	320.00
19	Generators	2	37,276.10
20	Electrical network for Gen 120 KVA	1	6,913.00
21	Sony digital cameras	9	5,378.00
22	Auto levels	5	5,557.00
23	Sony 3CCD 48X digital and tripod	1	2,665.00
24	Anvil testing	1	500.00
25	Concrete test hammers	4	3,085.52
27	DCP	6	1,410.00
28	Overhead projector	1	320.00
29	Bitumen speeder	1	910.00
30	Geovance torque head 19mm vance	4	3,660.00
31	Sand cone replacement equipment and included supported tools 30,000 g x 1 g	4	4,626.20
32	Sand cone replacement equipment and included supported tools 3,000 g x 0.1 g	4	3,928.80
III	Furniture		
33	Computer desks	22	1,448.00
34	Double pedestal desks	22	2,830.00
35	Single pedestal desks	12	1,452.00
36	Swivel chairs	38	1,969.00
37	Metal cupboards	11	1,543.00
38	4-drawer filing cabinets	8	658.00
39	2-drawer filing cabinets	2	135.00
40	3-drawer filing cabinets	4	240.00

No.	Description	Purchased (\$)	
		Quantity	Total Price
41	Whiteboards	8	196.00
42	Cash safe	3	760.00
43	Cupboard for stationeries	10	1,115.00
44	File cabinet 4-shelf	6	518.00
45	Wooden chairs	93	991.50
46	Wooden table for meeting rooms	22	1,230.00
47	Wooden bookcases	4	1,520.00
48	Wooden desks	8	2,780.00
49	Plastic chairs	150	750.00
50	Workbench (plywood)	2	1,240.00
51	Pin boards	2	63.00
52	Wooden bookcases	8	2,244.00

Source: Ministry of Rural Development

PROJECT COST BY COMPONENT

(\$'000)

Cost	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Base Cost						
1. Rural Infrastructure Development	4.80	13.40	18.20			
a. Civil Works (Excluding De-mining)				6.01	12.95	18.96
b. Equipment				0.28		0.28
c. Vehicles				0.32		0.32
2. Capacity Building	0.80	1.60	2.40			
a. Training				0.42	0.08	0.50
b. Consulting Services				4.32	1.19	5.51
3. Rural Livelihood Enhancement						
a. Village Infrastructure	0.90	1.50	2.40			
b. Other Livelihood Initiatives	1.10	2.20	3.30			
4. Project Management	2.00	1.80	3.80			
a. Service Contracts				1.43	1.10	2.53
Subtotal (A)	9.60	20.50	30.10			
b. Incremental Staff				0.05	0.78	0.83
c. O&M of Rural Infrastructure					1.70	1.70
d. Operating Cost				0.78	0.47	1.25
B. Contingencies						
1. Physical Contingencies ^a	0.80	1.40	2.20			
2. Price Contingencies ^b	0.50	1.10	1.60			
Subtotal (B)	1.30	2.50	3.80			
a. Interest Charge	0.90		0.90	0.65		0.65
b. Unallocated						
Total	11.80	23.00^c	34.80	14.26	18.27	32.53

^a Based on 5% of base cost for civil works and 10% of base cost for other expenditures.

^b Based on annual inflation of 2% (foreign) and 4% (local) for goods, and 1.5% (foreign) and 2% (local) for services over the project period.

^c Includes duties and taxes estimated at \$4.2 million equivalent.

Source: ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kingdom of Cambodia for the Northwestern Rural Development Project*. Manila. ADB Mainframe.

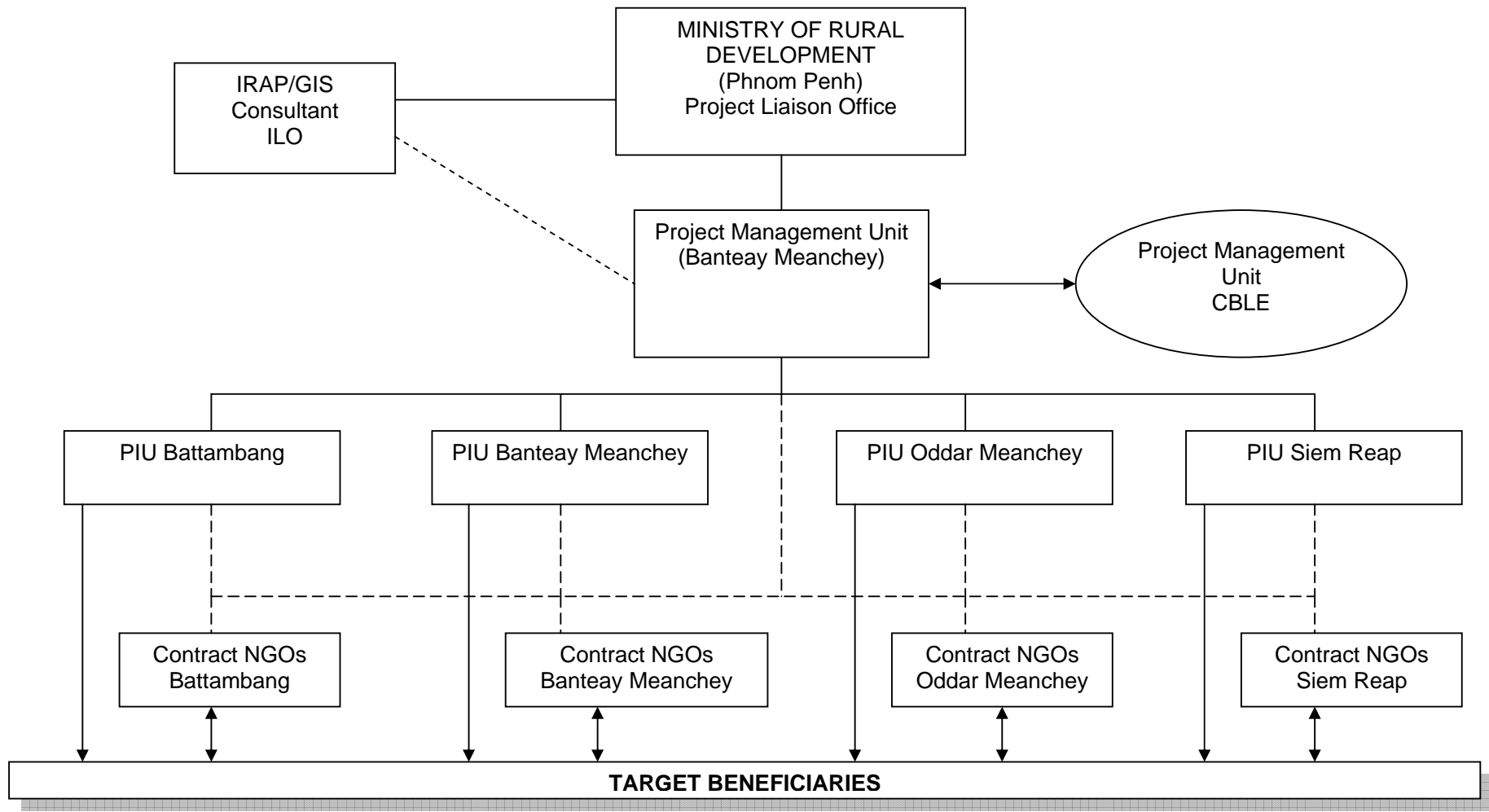
TRAINING SUMMARY TABLE

No	Training Topic	Location	Date	No of Days	Training Participants		
					Male	Female	Total
1	PLA orientation	BMC/PMU	5–16 May 2003	11 days	10	2	12
2	Environment assessment and monitoring plan	BMC/PMU	30 Sep 2003–3 Oct 2003	4 days	19	2	21
3	Microfinance training	BMC/PMU	16–18 Dec 2003	3 days	32	4	36
4	Introduction plan and hydraulic	BMC/PMU	10–11 Dec 2003	2 days	12		12
5	Labor-based appropriate technology	BMC/Svay Chaek District	22 Dec 2003–22 Feb 2004	2 months	37	3	40
6	River and bridge hydraulics	SRP/PIU	12–15 Jan 2004	4 days	12		12
7	Low-level crossing and culvert	BTB/PIU	9–12 Feb 2004	4 days	12		12
8	Contractor training on labor-based appropriate technology	BMC/Svay Chaek District	9 Feb 2004–20 Apr 2004	2 months	44	2	46
9	Site investigation and highway drainage	OMC/PIU	15–18 Mar 04	4 days	12		12
10	Bamboo reinforced concrete, double bitumen surfacing treatment, stone packing	BMC/Svay Chek District	8 Mar 2004–7 May 2004	2 months	40	3	43
11	Substructure and foundation, concrete superstructure, bridge building material drawing and specification	BMC/PMU	26–29 Apr 2004	4 days	12		12
12	Global positioning system device training for road condition survey	BMC/PMU	25–29 Oct 2004	6 days	5		5
13	Hydrology: rainfall, masonry, conclude drawing and specification	SRP/PIU	24–27 May 2004	4 days	12		12
14	Engineering level (operational procedure)	BMC/PMU	9–10 Jun 2004	2 days	12		12
15	International conference on people-centered approaches to water and environmental sanitation	Vientiane, Lao PDR	25–29 Oct 2005	6 days	7		7
16	English language training	BMC/ACD	15 Jun–15 Sep 2004	3 months	7	2	9
17	Superintendent orientation training	BMC/PMU	4–8 Oct 2004	5 days	15	1	16
18	English language training	BMC/ACD/NIC	15 Oct 2004–15 Jan 2005	3 months	5	1	6
19	PLA workshop	BMC/PMU	21–22 Mar 2005	2 days	23	8	31
20	English language training	BMC/ACD/NIC	15 Oct 2004–15 Jan 2005	3 months	6	1	7
21	Gender workshop	SRP/PIU	29 Mar 2005–1 Apr 2005	4 days	20	10	30
22	Quick book	PP/Vanda	9 Apr 2005–16 Apr 2005	7 days	4	3	7
23	Labor-based appropriate technology	BMC/PMU	3 May 2005–12 Jul 2005	2 months	36	1	37
24	Contractor and NGO contract orientation workshop	BMC/PMU	8 Nov 2005	1 day	50	3	53
25	Labor-based appropriate technology	BMC/BOsbao	29 Sep–29 Dec 2005	2 months	38		38
26	Superintendent	BMC/PMU	12–17 Sep 2005	6 days	32		32
27	DBST, bamboo-reinforced	BMC/PMU	26 Dec 2005–	3 months	28		28

					Training Participants		
	concrete, stone packing and otta seal		25 Mar 2006				
28	English language training	BMC/ACD	1 Jan–19 Mar 2006	3 months	3		3
29	English language training	BMC/PMU	25 Mar– 18 Jun 2006	6 months	2		2
30	Financial management manual	SRP/Joulina Hotel	21-24 Jun 2006	4 days	13	5	18
31	NGOs annual review training workshop	BMC/PMU	28–29 Dec 2006	2 days	1	38	39
32	Commune council fund review meeting	BMC/PMU	4–17 Jan 2007	8 days	18	128	146
33	English language training	BMC/PMU	1 Jun 2007	6 months	1		1
34	Road stabilization training to contractors, engineers and works supervisors	BMC/PMU	6 Apr 2008	2 days	8		1
35	Trial stabilization activities, road sections 1, 2, 3, and 4. Contractors, road worker foremen and operatives. Counterpart engineers and works supervisors	BMC/PMU	26–27 Apr 08	2 days	46	34	80
36	Debriefing of road stabilize sessions 1 and 3 - contractors, engineers and works supervisors	BMC/PMU	2 May 08	1 day	8		8
37	Debriefing for sessions 2 and 3 - counterpart engineers and works supervisors (NRDP and PDRD)	BMC/PMU	8 May 08	1 day	12		12
38	Training of trainers – classroom tuition and review of trial section activities. Selected trainers from contractors, PDRD, NRDP and MRD	BMC/PMU	9–10 May 08	2 days	11		11
	Total				665	251	909

Source: Ministry of Rural Development

NORTHWESTERN RURAL DEVELOPMENT PROJECT ORGANIZATION CHART



PIU = Project Implementation Unit, ILO = International Labor Organization
 Source: Ministry of Rural Development

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Project-Specific Covenants

Sector	
<p>1. The Borrower shall be responsible for de-mining the alignments along tertiary roads to be rehabilitated under the Project. [LA, Schedule 6, para. 12(a)]</p> <p>2. The Borrower shall ensure that high priority will be given to further mine clearance in lands otherwise suitable for settlement and/or agriculture which are rendered accessible by the roads rehabilitated under the Project. [LA, Schedule 6, para. 12(c)]</p>	<p>Complied with. All required de-mining under the project was achieved.</p> <p>Complied with, with emphasis on places of social infrastructure: schools, water points, and health facilities.</p>
Environmental	
<p>1. The Borrower shall ensure that any adverse environmental impact resulting from civil works under the rural infrastructure component of the Project, as identified in the relevant Initial Environmental Examination (IEE) and/or Environmental Impact Assessment (EIA), is mitigated through measures acceptable to ADB and in accordance with the relevant environmental law and regulations. [LA, Schedule 6, para. 14]</p>	<p>Complied with. A domestic environmental specialist was engaged to review work of PIUs in preparing IEEs. The PMU further strengthened environmental clause in the civil works contracts in 2005. The PMU also took measure to improve borrow pits/sites and improve stream drainages where required to minimize erosion and protect road embankments.</p>
Social	
<p>1. The Borrower shall give all necessary support to persons who were lawful occupants of the Project area on the date of promulgation of the 2001 Land Law, to obtain titles of possession and subsequently titles of ownership to the land in accordance with the provision of the law. [LA, Schedule 6, para. 13]</p> <p>2. The Borrower shall ensure that poor and vulnerable people in the Project area are enabled to participate in the prioritization, planning, implementation and monitoring of village-based infrastructure and that gender-sensitive participatory approaches are employed. [LA, Schedule 6, para. 15]</p> <p>3. The Borrower shall ensure that special measures are undertaken to promote the participation of women in the Project activities. [LA, Schedule 6, para. 16]</p>	<p>Complied with. The Government has a specific land titling program supported by a number of development partners. It aims to issue land titles to farmers, covering 24% of agricultural land by 2010.</p> <p>Complied with. The Project's rural livelihoods enhancement component required intensive involvement of local beneficiaries in a participatory process to identify and prioritize investments of village level infrastructure, financed with block grants from the Project's commune council fund (Appendix 8)</p> <p>Complied with. A high proportion of female laborers were involved in road construction activities under the labor-based appropriate technology program. Also a high proportion of female participants were involved in the participatory learning action (PLA) which leads to the priority setting of village small-scale infrastructure investments (see item 2 above and Appendix 8)</p>
Financial	
<p>1. The accounts shall be established & maintained in accordance with generally accepted accounting principal following the Guidelines in the Project Accounting Manual of the MEF. [LA, Schedule 3, para 9a]</p> <p>2. The Borrower shall maintain records and accounts adequate to identify the goods and services financed out of loan proceeds, the financing sources received, expenditures incurred for the project, and the use of local funds. [LA, Art. IV, Sec. 4.06a]</p> <p>3. Consolidated project accounts and related financial statements shall be compiled by PMU/MRD and audited annually by independent external auditor acceptable to</p>	<p>Complied. Records and accounts were maintained throughout the Project period.</p> <p>Complied. Records and accounts were maintained throughout the Project period.</p> <p>Complied with the on-time submission of the annual audited project accounts</p>

<p>ADB, and such audit accounts, and related financial statements shall be submitted to receipts later than 12 months after the end of each fiscal year. [LA, Art. IV, Sec. 4.06b]</p> <p>4. The Borrower shall enable the Bank's representatives to inspect the Project, the goods financed out of the proceeds of the Loan, and any relevant records and documents. [LA, Art. IV, Sec. 4.08]</p>	<p>Complied with (i) Loan disbursement review mission visited, and (ii) Project Procurement Related Audit Report.</p>
<p>1. Established, Staffed, and Operating PMU/PIU [LA, Schedule 6, para 1a]</p> <p>2. Fielding of Consultants [LA, Schedule 6, para 1a]</p> <p>3. Submission of quarterly progress reports. [LA, Art. IV, Section 4.07b]</p> <p>4. Submission of Project Completion Report. [LA, Art. IV, Section 4.07c]</p> <p>5. MRD with the assistance of NGOs engaged under the Project for Component 3, shall cause a BME system to be established at the start of the Project and operated throughout Project implementation. Prior to implementation of any Project activities in a village of commune, baseline data for each community shall be collected. The BME system shall include community-developed poverty indicators to monitor the Project impact. [LA, Schedule 6, Para 17]</p>	<p>Complied with. PMU/PIU offices established. Project staff appointed at PMU/PIU offices.</p> <p>Complied with. Consultants for (i) integrated rural accessibility; and (ii) project management mobilized in March 2003.</p> <p>Complied with. In 2007, the Project has submitted irregular progress reports. Report submission was improved in 2008.</p> <p>Complied with. Draft completion report was prepared with the assistance of the project consultant but not yet formally submitted to ADB</p> <p>Complied with. The NGOs that undertook component 3 established the BME system in close coordination with the corresponding JFPR 9017 project. Project prepared a BME report and submitted on 30 June 2008.</p>

Source: Loan agreement

CONSULTING SERVICES INPUTS

Table A8.1: Final Input of Project Management Consultant Contract

Name	Firm	Position	Months Input	
			Contract	Revised
International Consultants				
Warren, Philip/ Cole, Alan	Meritec	Project Management Sp/ Team Leader	30	55.3
Gray, Harold	Meritec	Microfinance Specialist	4	2.7
McKinnon, John	Kinsa	Community Development Specialist	16	16.8
Johnston, Dara/Sinclair, Colin	Fraser Thomas	Rural Infrastructure Engineer/Training	30	55.9
Williams, Leighton /Stephen, Albert/Easey, David	Meritec	Road & Bridge Engineer/ Hydrologist	12	21.6
Williams, Jean	Meritec	Regional Planner	4	0.0
Eagle, Stephen	Fraser Thomas	Environmental Assessment Training Sp.	2	2.0
		Subtotal	98	154.4
Domestic Consultants				
Pen Thay	KCEC	Community Development Specialist (1)	29.75	37.3
Chiep Piseth	KCEC	Community Development Specialist (2)	29.75	53.4
Cheap Sam Oeurn	Fraser Thomas	Community Development Specialist (3)	29.75	59.8
Dy Tith	Fraser Thomas	Community Development Specialist (4)	29.75	37.8
Ket Vesna	KCEC	Infrastructure Engineer (1)	35.5	58.7
Hong Leang Heng	KCEC	Infrastructure Engineer (2)	35.5	35.5
Thi Pipheak	KCEC	Infrastructure Engineer (3)	35.5	35.5
Chheng Sot	KCEC	Infrastructure Engineer (4)	35.5	57.5
Yin Sophy	KCEC	Microfinance Specialist	16	2.6
Pum Vicheth	Fraser Thomas	Environmental Assessment Specialist	8	2.5
		Subtotal	285	380.5
		Total	383	534.8

Source: Ministry of Rural Development

Table A8.2: Final Inputs of International Labor Organization Contract

Name	Firm	Position	Months Input	
			Contract	Revised
International Consultants				
Doekle Wielinga	ILO	Chief Technical Advisor	24	24
M.I. Azam	ILO	GIS/IRAP Training specialist	2	3.5
		Subtotal	26	27.5
Domestic Consultants				
Local Staff	ILO	Administrative Support	144	176
Local Staff	ILO	National Professional Project Personnel	162	230
		Subtotal	306	406
		Total	332	433.5

Source: Ministry of Rural Development

IMPLEMENTATION OF THE GENDER STRATEGY

A. Project's Objective

1. The objective of the Northwestern Rural Development Project (NRDP) is to accelerate rural development to help reduce poverty through (i) establishing physical infrastructure, (ii) improving socioeconomic conditions, and (iii) enhancing rural livelihood in the four northwestern provinces of Cambodia.

B. Gender Provisions at Project Design Phase

2. The project noted that women represent 52% of the active population; they are primary income earners in many households due to men's migration to work far from home. The Project has taken women's roles into consideration. The strategy to address women's needs, constraints, and participation included (i) specifically targeting women who are heads of households for employment and equal pay in the labor-based appropriate technology (LBAT) road construction works; (ii) training in management and maintenance of small infrastructure; (iii) encouraging women to expand their income-generating activities through membership and active involvement in the savings and credit groups; (iv) organizing women-only discussion and planning groups to allow them to speak freely; (v) timing the training, discussions, and planning sessions according to women's availability; (vi) providing functional literacy (particularly numeric literacy) training; (vii) supporting and training female members of village development committees, other community-based organizations, and commune councils to facilitate their active participation in public meetings; (viii) conducting specific awareness campaigns for men and women on joint registration and land titling; (ix) conducting information and awareness-raising campaigns using women-specific information channels; and (x) the four community development consultants should have a proven track record in gender and development activities, and two of them should be women. Some of these gender provisions, such as the following, were included in three of the 11 loan assurances:

- (i) The Government will ensure that (a) LBAT will be used for rural road rehabilitation under the Project wherever possible, (b) poor and very poor people (50% of them being women, subject to availability) will be offered employment in road rehabilitation work, and (c) labor inspectors will be engaged to confirm gender equity in the contractor's employment practices and payment to the workers of the appropriate market wage rate in a timely manner.
- (ii) The Government will ensure that the poor and vulnerable people in the project area will be able to participate in prioritizing, planning, implementing, and monitoring village-based infrastructure, and that gender-sensitive participatory approaches will be employed, as described in the Framework for Mainstreaming Participatory Development Processes.
- (iii) The Government will ensure that special measures will be undertaken to promote the participation of women in the project activities. To such end, in each project district (a) training in management and maintenance of small infrastructure will have at least 30% women, (b) functional literacy (particularly numeric literacy) training will be given, (c) supported community-based organizations will consist of at least 30% female members who will receive special support and training to allow them full participation in public meetings, and (d) awareness campaigns will be organized for men and women on joint land registration and titling.

C. Impact on Female and Male Beneficiaries

3. At the project midterm review, project staff had very limited awareness about the gender provisions and gender-related assurances of the Project. All the four community development consultants are men. At the beginning of the Project, there was one female community development consultant but she resigned; she could not drive a motorbike alone to all remote target communes of the province. In addition, there were very limited achievements as most of the gender provisions had to be implemented under the third component by nongovernment organization (NGOs), which were only recruited in April 2005 (the Project started in March 2003). NGO contract outputs did not have key elements of the gender strategy and targets for women's involvement.

4. To make project staff and contracted NGOs more aware of the importance of the gender provisions and their impact on the project achievements, a 4-day workshop was organized with the participation of 24 men and 10 women; the workshop was facilitated by the two gender specialists from the Cambodia and Nepal resident missions. As an output of the workshop, a revised gender strategy was produced and sent to the NRDP director for comments. Monitoring LBAT, providing HIV education for workers, and encouraging female commune facilitators were added to the NGO contract. The project director agreed to recruit a local long-term female gender consultant to monitor the implementation of the gender strategy. However, the Project could not find a competent local female gender consultant. Strengthening gender capacity of project staff was then done through semester project review and regular communication between the four community development consultants and the resident mission's gender advisor.

5. LBAT did provide benefits to local communities, especially for women who wished to work near their homes and families. If there was no road construction work, some poor families would have to migrate to the Thai border or to Thailand to find work, and when they get there they would face different kinds of hazards. When they migrate some have to leave their children alone. When there was road work, at least 50% of the laborers were women. Women and men got equal pay for work of equal value.

6. Subcontracted NGOs together with local community development consultants and provincial staff recruited and trained 32 male and 14 female commune facilitators (one in each target commune) to assist village development committees (VDCs) and village leaders to organize community consultations. Leadership and communication skills training were also organized for VDCs, for well-maintenance committees, and for community-based organizations (CBOs) to facilitate their active participation in decision-making meetings and participatory workshops. Women could participate in training sessions, including literacy training organized to enhance capacities of VDCs and CBOs. There was at least 25%–35% female membership in VDCs and CBOs, while female representation in well committees was around 80%. Targets of 30% women were mostly achieved in training, management, and maintenance of small-scale infrastructure, except for road maintenance committees and parent–teacher associations where more male members were noted. NGO activities towards empowering male and female villagers included

- (i) organizing elections of VDCs and building their community development capacities; each VDC has at least one woman among the five VDC members, and many VDCs have two women;
- (ii) forming self-help groups to save money for small-scale infrastructure (SSI) reparation or improving livelihood (women represented more than 80% of the total members);
- (iii) forming and empowering many CBOs (village committees for sustainable agriculture, livestock agents, fishery extension, literacy teacher, midwife,

health agent, gender training team, parent–teacher associations, and water users) through technical training sessions to their female and male members.

7. For the rural livelihoods component, the Project strengthened capacity of commune councilors and empowered communities by directly providing some funds to the commune council's bank account for building SSI resulting from participatory village planning. The commune council fund was disbursed in three tranche releases (each of \$800,000) to target villages in the 46 project target communes.

8. Gender-related achievements included active participation of women in the development of village action plans. Contracted NGOs, commune facilitators, NRDP local community development consultants, and provincial counterpart staff (especially community development counterparts) helped to organize community consultations; each family had to send at least one family member to these consultations. Since men mostly work far from their villages, many women participated; women's needs and interests were heard and recorded in the village action plans. These village action plans were then prioritized at the commune meeting, with the participation of all village leaders (target and nontarget villages) and VDCs so that everyone could learn about the process of prioritizing female and male villagers' needs. Local consultants, NGOs, and government staff assisted the council chief to organize and facilitate the meeting; a list of prioritized SSI projects was developed and sent for approval of the project management unit (PMU). Prioritized SSI projects included wells, ponds, village paths, dams, culverts, village meeting halls, school rehabilitation, and latrines.

9. SSI projects contributed to increasing villagers' income through internal village contractors and through hiring nonskilled female and male villagers (i.e., to dig holes for latrines and to repair dams and schools).

10. CBOs were encouraged to participate in bidding with external contractors if the SSI cost was less than \$5,000 (except for pump wells, which required more technical expertise). To cope with the local context (CBOs did not have money to start the work and got paid after some work was done), 30% of the budget was given to CBOs at the start of the work.

11. The village meeting hall was valued by villagers. It was the place for meetings among villagers, for annual New Year celebrations and other religious ceremonies, for health education, for children's and women's vaccination, for antenatal care of pregnant women, and for night literacy classes offered by NGOs to adults and out-of-school youth. Prior to the Project, villagers had their meetings under trees.

12. Village paths and culverts have replaced sandy paths or flooded paths. During the rainy season, parents could not send children to school as the paths were usually flooded. With the improved paths, women's travel time to the market for selling their chickens, eggs, and vegetables was reduced from 3 hours to less than 1 hour. Before the Project women often fell from their bicycles because of the sandy paths.

13. These remote villages suffered armed conflict prior to 2000; lack of security obliged villagers to live in a big families in the same house. After the civil war, young couples could not have their own houses due to lack of village paths to connect one village to another. The SSI project helped them to address this issue by building village paths surrounding the village, and so young couples were able to have their own houses with plots of land for gardening.

14. Under the SSI projects, some remote schools were rehabilitated, with tables and blackboards provided. Parents sent their children to school while they worked on the rice fields, children were supervised by a teacher and received the breakfast program of the

World Food Program. Before the NRDP, these children could not attend school during the rainy season.

15. The commune funds were also used to rehabilitate dams, which were damaged under the Khmer Rouge regime. For example, due to dam rehabilitation, people in Svay Sar commune had enough rice to eat for the whole year and some families had some excess which they could sell. Before the Khmer Rouge regime, Prasat commune used to sell rice for the whole province, but with the damaged dam villagers faced rice shortages for several months.

16. After the first tranche release, 36 commune councilors participated in study tours to visit development projects in other provinces. This resulted in changes in their prioritized SSI projects for the release of the second and third tranches, especially with regard to how to bring water closer to homes. Women and girls in Sangkerlak village used to spend a lot of time carrying water for family drinking and cooking from the top of the mountain. With the commune council fund, 2,400 meters (m) of pipes were laid and each house now has a water meter; a committee consisting of two men and one woman was established to collect money for maintenance. For saving purposes, and to ensure that families living far from the water source could also get water, each family had to pay KR200 (\$0.05) per cubic meter. About 30% of the total earnings were given to the water committee and 70% went to maintenance.

17. In Kauk Mon commune, people from six villages used to carry water on their bicycles from a pond. With the commune council fund, water was brought from the pond to each house through pipes, as the pond was located at a higher level than the six villages.

18. In Kauk Thom village, the commune council fund was used to buy pipes, 70 water meters, and a generator to pump water for distribution to the 70 houses in the village. Water costs KR1,000 (\$0.25) per cubic meter; money collected is used for fuel, maintenance, and payment of the maintenance committee.

19. In some pilot communes, the NGO, 1001 Fontaine pour Demain, provided technical assistance and villagers used the commune council fund to buy necessary equipment to get clean drinking water. The project was managed by a CBO and water was sold to villagers at below market price. In those communes, villagers had not had access to water even after digging wells 60 m deep. Ponds were the solution, but during the rainy season pond water was polluted by runoff from the rice fields where insecticides had been used.

20. **Contribution of Communities.** Because SSI projects (i.e., wells, village paths, meeting halls, and ponds) were identified by rural men and women, the communities actively contributed in kind and in cash (according to their ability). For example, in villages without roads, male villagers cleared the way for trucks to dig pump wells or carry contractors' equipment from the main road to their village. Better-off families permitted the construction of a village path through (i) donating a strip of their land (ii) readjusting or removing fences to make a village path straight, or (iii) providing labor and materials to construct a fence around ponds or water wells. For wells, community contribution included land donated to the community by the family living next to the well, poles for fences surrounding the well given by families using this water well, and in some cases, labor for cementing the area around the well. For ponds, people contributed bamboo for fencing. Usually each family provided one family member for work; many women participated in planting grass around the ponds, as the men were often working far from home. Often the funds allocated for the village meeting hall were not sufficient. In these cases, after harvest season commune council chiefs would organize a religious ceremony to inaugurate the meeting hall, and at this time villagers donated money to be used for things such as cementing the floor or buying tables and chairs.

21. **Maintenance of Small-Scale Infrastructure Projects.** Committees were only formed for wells and ponds. For village paths or dams, the village chiefs and people living nearby or having their rice fields nearby participated in the maintenance. Maintenance committees were set up for all wells, and these were mostly chaired by the female house owner who lived next to the well; according to commune council chiefs, only women dared to scold water users who did not pay attention to hygiene around the well. Water user groups saved small amounts of money for regular repair; some of the money could be lent to members at very low rates of interest. For maintenance of village paths, culverts, etc., maintenance committees were formed in some places, and where this didn't happen VDCs and village chiefs took responsibility for maintenance.

22. In 2008, the NGO service contract was revised to better define the roles and responsibilities of the NGOs and the community development staff of the provincial department of rural development (PDRD) in the project exit strategy. In each target province, several teams consisting of one NGO staff member and one community development or PDRD staff member were formed. The teams were responsible for assisting commune councilors of three communes with development planning and implementation, and using commune council funds in a transparent way. This new initiative contributed to better implementation of the rural livelihood component and gave benefits to female and male stakeholders by (i) providing for NGO and community development staff to have clearly identified communes for which they were responsible and accountable; (ii) promoting skills transfer from the NGOs to provincial department staff; (iii) imparting greater ownership and responsibility to the NGO and community development staff for the empowerment of local authorities in the decentralization process; and (iv) promoting team spirit among NGOs, provincial staff, commune councilors, and village authorities.

REVIEW OF THE ECONOMIC AND FINANCIAL ANALYSIS

1. This review of the economic and financial analysis undertaken at the time of the design of the Northwestern Rural Development Project (NRDP) examines those assumptions in light of the 7 years of implementation experience since design. These were based on comprehensive analyses provided by the Project's project preparatory technical assistance report¹, as well as the International Fund for Agricultural Development appraisal report—Agricultural Development Support to Seila. At the time of project design, the poverty level of the area was viewed in terms of access to (i) land ownership, housing, and productive assets; (ii) basic social services including health, education, water supply, and sanitation; and (iii) financial services. In addition, much of the area then held a large number of internally displaced persons, some of whom were demobilized soldiers, and the economic survival strategy of residents relied upon unsustainable exploitation of natural resources, particularly from the abundant secondary forests.

2. The Government at that time wished to establish the rule of law, create an environment for economic stability and structural reform, strengthen capacity of public servants and local residents, protect the environment, and improve infrastructure. The Government's poverty reduction strategy in particular focused on decentralization and promoting community participation in project selection, design, and implementation; improving agricultural productivity; and promoting access to affordable social services.

3. The NRDP addressed these issues, largely by means of improving large-scale infrastructure, but with significant and important investments in capacity building, and community identification and implementation of smaller-scale projects.

A. Impact of Main Project Components

4. **Component 1: Capacity Building.** The NRDP provided a significant investment in local capacity development to empower communities and support decentralized planning. During implementation, some aspects of the community capacity building and training program input was moved to the new Community-Based Livelihood Enhancement Project (CBLE)² funded by the JFPR 9017, which operated in some of the poorest commune councils. The two projects therefore ran in parallel with supporting goals, although coordination between the two was difficult because of implementation delays in the NRDP. Aspects of community training were coordinated with, but not directly part of, the NRDP structure. Nonetheless, nongovernment organizations (NGOs) were used within the NRDP for outreach to communities and in assistance with the NRDP infrastructure program, although their input was somewhat delayed, appearing only in the last 2–3 years of the Project. However, the NGOs continue to operate in the areas where they worked, with some community outreach and capacity building activity still under way. Capacities within communities appear to have been increased, but the NRDP benefit monitoring and evaluation study (Appendix 11) suggests that durable and sustainable benefits will only come about through continued support to community training and skills development. This appears to be going on under the selected NGOs. Commune council capabilities and those of local groups are significant and are focused on access to social and financial services. Post-project activity appears to continue in support of NRDP goals and those of the continuing government effort to support deconcentration and decentralization. Training for communities has been useful and appreciated by communities, but requires continued support and expansion in scope and area.

¹ ADB. 2000. *Technical Assistance to the Kingdom of Cambodia for the Rural Development Project*. Manila.

² ADB. 2002. *Proposed Grant Assistance to Cambodia for Community-Based Livelihood Enhancement for the Rural Poor*. Manila

5. Significant amounts of training were focused by the NRDP on government and private sector capacity development (Appendix 5) for infrastructure development. This included training for local contractors, whose enhanced capabilities and knowledge of improved contracting processes are now locally available. While the capabilities generated under the Project have been well recognized and appreciated in both the public and private sectors, it is clear that capacity development within government agencies is meaningful only if there is commensurate opportunity for those receiving training. That opportunity is often not available in the public sector, so that specialized skills training has often provided government staff with the opportunity to move into the private sector where wages are much better. In the short run that is a financial loss to the government but (i) it may be a desirable economic gain for the country as needed skills are created and made available through private contractors; (ii) it indicates that the skills provided have made a positive economic contribution and are rewarded within the larger economy; and (iii) it indicates that training in computer use, management, and planning should be expanded and made more available in public and private sectors and civil society. Whether such training should be provided only to government employees is a question that should be examined further, and balanced against other forms of skills development through enhanced and broadly available programs provided with government support. It is worth emphasizing that, where there is such a deficit of skills, targeting the pool of labor within government departments exclusively, rather than the general labor pool in the region, is inefficient and does not resolve the underlying skills deficit. Upgrading labor skills may require a strategy that is not targeted exclusively on one sector.

B. Large-Scale Infrastructure

6. Originally it was estimated that, under the Project, 613 kilometers (km) of rural roads would be rehabilitated at a cost of \$9,195,000. By the end of the Project, 525 km of tertiary road was rehabilitated, with an additional 800 km of routine maintenance and 150 km of periodic maintenance provided at a total cost of \$13,343,804, with the difference made up by some realignment of funding and appreciation of the SDR against the US dollar. Road rehabilitation and structures totaled \$10,140,668, with remaining costs made up of maintenance and the important stabilization experiments.

7. A significant change from design estimates is that more than 1.9 million labor days were generated by use of labor-based appropriate technology, according to the provincial rural development committees. Most of the work undertaken and reported on by the Ministry of Rural Development (MRD) was in the rehabilitation phase, which had been estimated at design as providing up to 2,000 labor days per kilometer of road. In fact, the financial benefits to local populations are as much as 50% higher than that, providing over 3,500 labor days per kilometer of roads in rehabilitation. A minor portion of labor days was provided for regular maintenance, but this proved not efficient for technical reasons.

C. Livelihoods Enhancement

8. As summarized in the executive summary of the NRDP benefit monitoring and evaluation baseline survey (Appendix 11), the benefits of the Project to communities are well recognized. The range of small projects was comprehensive and many of the organizational training features continue under the same NGOs. The continuation of these service providers is an unexpected benefit to the communities and a positive development after a delayed start for NGO input.

D. Economic Analysis

9. During design of the Project, the design team had access to production estimates from International Fund for Agricultural Development studies and the project preparatory

technical assistance team. At that time, production estimates were based on a 1.3 tons per hectare (t/ha) model based on production estimates for paddy rice production in 2001, rising to 2.1 t/ha by year 15 as new technologies are adopted. An increase in the agricultural surplus marketed is assumed, based on increased availability of inputs and increased land area brought into cultivation. Although the length of time that has elapsed since the Project ended is inadequate to capture actual change, these assumptions appear realistic as there appears to be a rising and clearly visible level of commercial production, and improved access to agricultural inputs and technical assistance—although in most cases this is a potential so far unrealized. Recent production estimates by Ministry of Agriculture, Forestry, and Fisheries indicate that paddy rice production in 2007 in the four provinces is variable but rising, although it is still almost entirely based on low-technology rice production.

Table A10.1: Rice Production in the Project Provinces in 2007
(tons per ha)

Province	Production
Banteay Meanchey	2.11
Battambang	2.316
Siem Reap	1.709
Oddar Meanchey	1.6

Source: Ministry of Agriculture, Forestry and Fisheries

10. The design team estimated that the greatest increases in production would be in the poorest provinces and in the most remote areas. Observation reveals that there has been a large increase of settlement in Oddar Meanchey, which is well beyond the figures predicted during project design. The 2008 census reveals that population growth for Oddar Meanchey has been startling, albeit from a low base number, reaching a 172% increase from the 1998 census to the 2008 census. Settlement in marginal areas, especially highland and formerly secondary forest areas, appears to be significant and beyond estimates at the time of design. In particular, while the NRDP economic analysis focused on a paddy rice production model based on available studies at the time, the likelihood of increases in other crops was noted. In fact, non-rice production has increased greatly with a notable growth of production in cassava, largely grown in upland areas for export to Thailand, indicating that the very conservative estimates of the original analysis have at least been met.

Table A10.2: Population Growth in the Project Provinces

Province	NIS Census 1998	NIS Population Projection to 2005	NIS Population Projection to 2010	NIS Census 2008	Actual Population increase 1998–2008 (%)
Banteay Meanchey	577,772	773,092	886,198	678,033	17
Battambang	793,129	997,840	1,101,461	1,024,663	29
Siem Reap	696,164	861,214	970,666	896,309	29
Oddar Meanchey	68,279	97,803	111,079	185,443	172

Source: National Institute of Statistics

11. While access to the area has increased with the various road improvement projects, and there has been significant increase in the area under cultivation (especially in the upland areas of Siem Reap and Oddar Meanchey), it is not apparent that there has been significant increase in the adoption of higher-technology production. As yet, Government extension services do not appear to be generally available; it appears that most farmers continue to use their own seed, and few higher-technology inputs.

E. Vehicle Operating Costs

12. Vehicle operating cost estimates during design were based on an extremely conservative 20% improvement in efficiency over time. Commune council members and local community organization members agree that the benefits of road improvements have been in the order of a 20%–50% decrease in travel times. The assumptions for reduced vehicle operating costs remain viable and appear to still understate the actual improvements resulting from the Project's intervention.

F. Estimates of Economic Internal Rate of Return

13. Data for reestimating the economic internal rate of return of the Project based on such a short period of time since implementation was not practical, but the assumptions made in 2001 are in keeping with observable changes. This analysis, which found an economic internal rate of return of 19.79, still appears conservative. A full review of project economic benefits at the time of the project performance evaluation report should be undertaken as data become available, and the results of public sector investments become clearer. At this point, since the original economic estimates were so conservative, it is likely that project benefits are in keeping with original estimates.

G. Benefits of the Northwestern Rural Development Project

14. In terms of its objectives, the NRDP has been a successful investment for the Government and the Asian Development Bank. Land ownership questions of concern during design have been addressed under other government programs. Increased productive assets are clearly available in terms of equipment and transport, and there is an overwhelming agreement among commune councilors and community members that access to water, health, and education are all greatly improved. Improvements in access to financial services have begun, with some encouraging community initiatives, although large-scale availability of finance and technology is not yet apparent. The issue of displaced people, particularly demobilized soldiers, appears to be of much less importance now as settlements have consolidated and infrastructure has become available. Exploitation of the secondary forests is a concern within many communities, and an issue for resolution as economic growth continues to provide opportunities for resource exploitation that can become destructive and result in a degraded environment.

15. Public servants working on infrastructure, as well as commune councilors and local community leaders, appear to have greatly strengthened abilities. All parties agree that the progress made over the last few years (2005–2007) is tenuous and requires further investment in capacity building and improved planning capabilities—especially in the field of environmental protection. Social services are far more available, far more used, and in need of enhancement.

NORTHWESTERN RURAL DEVELOPMENT PROJECT BME BASELINE SURVEY AND REPORT

A. Executive Summary

Project Title: Northwestern Rural Development Project (NRDP) Asian Development Bank Loan 1862-CAM(SF)

Duration: 5 years (2002–2007)

Project Cost: \$34,730,000 (Asian Development Bank \$27,164,600; Government of Cambodia \$7,444,000; beneficiaries \$136,100)

Project Area: Banteay Meanchey, Battambang, Oddar Meanchey, Siem Reap

Consulting Firms: MERITEC, International Labor Organization

Executing Agency: Ministry of Rural Development (MRD)

Funding Agency: Asian Development Bank (ADB)

1. The NRDP was launched with the intention to support the Government of Cambodia's policy on poverty reduction through participatory planning and providing physical infrastructure, improving socioeconomic conditions, and enhancing rural livelihoods in the four northwestern provinces of Cambodia. The NRDP's immediate objectives in rural infrastructure development, capacity building, and rural livelihood enhancement were planned to be realized in a 5-year time span ending in 2007. The main thrust of the Project was on large-scale infrastructure development, especially rural roads. Funding at provincial and district level (\$18.2 million, 52% of the total budget) was allocated to road rehabilitation and maintenance (600 kilometers). Resources were also provided for building markets (one per district), and as approved by government line agencies, health clinics (one per district) and schools (250 classrooms).

2. The project activities focused on the four provinces of Banteay Meanchey, Battambang, Oddar Meanchey, and Siem Reap, and targeted 50 communes in 14 districts where more than 1,200 formal and informal villages are located. In specific terms, the Project aimed to improve the quality of life of over 500,000 people by significantly enhancing the development process in 14 districts in northwestern Cambodia.

3. A significant part of the budget, allocated for capacity building programs, was required to be spent on technical training to ensure that the high-quality structures, which included small-scale infrastructure at the village level, were built. The objective of this rural infrastructure development component was to plan, rehabilitate and/or establish, and maintain public rural infrastructure that will contribute to the improvement of living conditions of the targeted rural population.

4. At the end of the NRDP, a project evaluation study was commissioned to assess the appropriateness of the project goal; the extent to which the activity achieved its stated goal and objectives; outcomes and impact (both intended and unintended) of the project efficiency of project implementation; and sustainability of benefits.

B. Findings and Conclusions

5. The NRDP deserves appreciation because of its wider canvas which attempts to integrate and stimulate rural development through utilizing the links between infrastructure

provision, capacity building, and livelihood enhancement. Much of the desired objectives of the NRDP were observed to be shaping well. Particularly, the beneficiaries were able to comprehend the links between their livelihood and socioeconomic betterment and the availability of infrastructure (such as roads, water points, schools, health centers, and markets), and gained improved understanding of the income-generating activities through capacity building efforts produced by the NGOs.

6. The provision of infrastructure, both large and small scale, through the NRDP has proved significant in improving the livelihood of the rural population. The rural population feels that their long-standing need for better roads have been fulfilled. All the beneficiaries reported that, after road construction, access to schools, health centers, markets, provincial towns, and neighboring villages has improved. The beneficiaries are now able to save substantial amount of travel-related expenditure and time due to better connectivity and easier transportation. As a result of improved roads, the number of children attending school has also increased. Due to improved accessibility, more buyers are coming to the villages to procure agricultural and non-agricultural products.

7. In spite of very competent project staff at the top level, and diligent staff at the field level, and despite sufficient resources and time spent on beneficiary participation, no evidence was found that the intensive consultation and participatory planning empowered beneficiaries in resources control and decision making, fostered their ownership of subprojects, or motivated them to take good care of project facilities. In contrast, poor maintenance of project facilities—especially rural roads—was observed, including deterioration of road quality, due to (i) insufficient routine maintenance, (ii) deferred repair of damage, and (iii) damage caused by overloaded trucks using rural roads in preference to national roads to avoid police harassment and the inconvenience of having to pay bribes. This is further exacerbated by local officials allowing trucks to use the roads and the failure of the NRDP to provide traffic barriers to limit vehicle size. The primary causes were (i) shortage of budgetary resources, (ii) provincial governments' strong incentive to fight for new investment and being less keen on operation and maintenance (O&M), and (iii) beneficiaries' reluctance to participate in O&M of project facilities.

8. Although there was good cooperation and communication between the Community-Based Livelihood Enhancement (CBLE) and the NRDP project management unit (PMU), the synergistic relationship on livelihoods envisaged in the design of both project designs floundered, mainly due to slow progress in the roll out of the NRDP livelihood component. The contracting of NGOs by the NRDP to implement key elements of that project's livelihood component was held up by having to wait for approval of the preselection process by the Ministry of Rural Development and Ministry of Economics and Finance (MEF). Progress on the agreed joint NRDP–CBLE approach to conducting Participatory Learning and Actions (PLAs) was slow and resulted in the CBLE implementing agency conducting PLAs after the event in some villages. The commencement by the NRDP of other livelihood activities, particularly the commune development plan, was also slower than planned. As the livelihood component of the NRDP was implemented by contracted NGOs, it would have been more efficient and effective to have all livelihood activities managed under the one umbrella.

9. Much of the success of livelihood enhancing activities was largely dependent upon the active involvement and support of the NGOs. However, after the completion of the NRDP project period it is valid to raise concerns over the sustainability of the initiated activities. The NGOs perceive that they would be able to provide their support to these groups even after the project completion.

10. Most of the villages mentioned that they have groups engaged in microfinance but the beneficiaries felt that the functioning and performance of these groups needs to be improved further. They reported that they have very small savings, and most of the initial

funding to start up the activities was provided by the NGOs. In this regard, in many villages the concept of microfinance is not yet operational and the beneficiaries require more training on the methods to organize these activities and to develop the concept within the village to increase the membership.

11. Actual decisions about small-scale infrastructure proposals seemed to be a mix of (i) compliance with project requirements, (ii) local politics, and (iii) local needs. Among these factors, compliance with project requirements appeared to be the most important determinant. It appeared that three factors might have influenced the “beneficiary priorities” listed in the village plans. First, since subprojects (roads, ponds, water points, etc.) were essentially free to beneficiaries, their best response was to accept whatever they were given instead of demanding something that was not supplied by the project. Second, since the village plans were prepared by outsiders (drafted by NGOs based on ADB requirements and revised and enhanced with assistance from consultants and project staff), it was not surprising that the projects’ agendas were reflected in the village plans. Lastly, it was said that local governments tend to prefer physical construction such as roads, culverts, water points, which are more visible than other livelihood improvement activities. Such a preference might have influenced the order of beneficiary priorities and small-scale infrastructure proposals in the village plans.

12. Capacity building was directed at individuals within institutions rather than the institutions themselves. This might have worked if the individual professionals selected were key players with sufficient power to change the status quo. However, most capacity building of the project was carried out at the level of middle and junior officials who had very little voice in how the institutions were run. Creating a number of competent professionals within the hierarchical and highly politicized state institutional structures is not sufficient to create change at the level of the institution. More often than not, it creates frustrated individuals who are on the lookout for better opportunities elsewhere. An unintended impact might be private sector and/or NGO development.

13. This evaluation exercise finds that the gender component was not up to expectation and there was abundant scope for strengthening of it. The presence of women in the commune councils was negligible and their presence in village development committees was also limited. This suggests that the overall gender emphasis in decision making and planning has not been properly developed. The presence of females as provincial department of rural development (PDRD) community development counterparts or in the project implementation units or PMU was very low. Even the NGO staff lacked female employees. This could have been seriously addressed by the Project. The training workshops by the PDRDs also showed very low female participation. It has become apparent that, despite goodwill and an open attitude to gender issues among staff members and partners, several concurrent factors were considerable barriers to the successful implementation of gender mainstreaming.

14. The project required that contracted NGOs and Commune Councils for Commune Council Fund (CCF) submit substantial documentation for reporting and verification purposes. This information was required to be submitted in soft and hard copies and in Khmer and English. The reporting requirements were more concerned with the progress of implementation than with analyzing what the various projects are producing in terms of socioeconomic results. There is no method of objectively determining impact on beneficiaries. However, the project failed to systematize filing and retrieval of the information to help the managers to make informed decisions. Even with a good system, it is very important to simultaneously build the capacity of NRDP managers to utilize the information, and that monitoring and evaluation becomes institutionalized and is impartial to vertical power structures.

15. Review of PIU performance revealed that the PIUs were unable to provide adequate quality supervision to contracts of works undertaken under the NRDP. Such poor supervision resulted in poor quality work and there were also instances of financial mismanagement. Towards the end of 2006, the closing of PIUs in Banteay Meanchey, Battambang, and Siem Reap changed the management structure. The Oddar Meanchey PIU was the only such unit deemed as having the capacity to continue in the role. The project management in each province was then taken over at the project management unit office so all of the technical works were under the management of the project management consultant. The financial work had also been transferred to the project management unit, and this contributed to regional project management difficulties. A project engineer and an accountant assistant were recruited and, after reforming the new work structure, the situation has been improved.

C. Recommendations

16. The overall design of the NRDP was found to be comprehensive and attempted to integrate important livelihood enhancement components. Two strategies of the NRDP warrant specific mention: (i) the commune council funds, and (ii) NGO contracting. The team finds that these two strategies had a good impact and would recommend that future NRDP-type projects include such strategies.

17. Commune council fund activities should be an important component of future NRDP-type projects. Almost all the commune council members and the village development committee members said they were participating in decision making and management of subprojects, and it was one of the most positive responses in the assessment. The commune council fund mechanism is an effective strategy for capacity building and decentralization efforts. However, to make it efficient and effective, (i) more control of commune council funds should be given to respective commune councils, (ii) the procedures for commune council funds should be simpler, (iii) systems that will avoid delays in fund disbursement should be put in place, and (iv) the paperwork and reporting requirements should be minimized.

18. Output-based contracts with NGOs should be abandoned. Such contracts restrict flexibility and result in poor quality outputs. Pre-contract workshops and discussions with potential NGOs should be conducted to facilitate more inclusive and consultative contract negotiations. The current reporting requirement from partner NGOs was "painful." Efforts should be made to make it less frequent, concise, and with fewer checkpoints with quicker turnaround time.

19. As the livelihood component of the NRDP was implemented by contracted NGOs (for livelihood components of the NRDP and CBLE), it would have been more efficient and effective to have all livelihood activities managed under the one umbrella. The design of future NRDP-type projects should consider an implementation strategy that is a mix of NRDP PMU and NGO project coordinating agency structure. The NRDP-type PMU would coordinate the infrastructure activities of respective PDRDs, and the NGO project coordinating agency would be responsible for coordinating the efforts of contracted NGOs for livelihood components. Future NRDP-type projects should rely on a standard set of implementation procedures which can be adapted to local circumstances, or should ensure that the PMU and project coordinating agency are prepared in advance of the project commencement.

20. Wherever practicable, future NRDP-type projects should seek to put in place contractual arrangements which facilitate timely, efficient, and effective project roll out, without compromising transparency and accountability, and which ensure that host government and executing agency responsibilities do not conflict.

21. Future NRDP-type projects should include a phase-out strategy in the project design, with details to be decided at least 12 months before completion.
22. The focus of livelihood activities should be agricultural improvement with a market focus. For livelihood activities, due attention should be given to the capacity of the extension services and the importance of the farmer systems approach. Land requirements should take into account present and future alternative uses and should be based on realistic assumptions regarding farming needs.
23. Improved accessibility through the provision of infrastructure, both large and small scale, through the NRDP has proved significant in improving the livelihood of the rural population. The team recommends that improvement of commune roads and feeder roads should continue to be given importance in future NRDP-type projects.
24. Project managers should have access to data to ensure efficient management, flexibility of approach, or identification of issues affecting implementation. An effective monitoring and evaluation (M&E) system must be installed from the outset. This includes identification of criteria to be monitored in assessing project impact. M&E operations are highly dependent on the institutional set-up of a project and they should be fully reappraised after any reformulation or change in the program strategy or institutional arrangement.
25. A thorough and effective consultative process with the beneficiaries and implementers of the project should be carried out at the start of project preparation to minimize potential risks to achievement of the objectives. Participation of beneficiaries should be pursued at design and implementation. For the NRDP, this would have improved coordination, focused the project on beneficiary needs, and resulted in the Project having a more positive impact on its potential target group.
26. M&E should be viewed as a management tool. The M&E system should be designed, prepared, and appraised in detail as an integral part of the work program of the project. In so doing, project designers are forced to examine the project objectives against the practicalities of achieving these objectives and to specify indicators for measuring the achievements. These indicators should be clearly defined in order to (i) allow the identification of the target group and project beneficiaries, (ii) monitor project implementation, and (iii) assess project impact. The inclusion of beneficiary consultation in the M&E of project activities will provide information on the impact of the project.