



# Completion Report

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Project Number: 29204  
Loan Number: 1515  
December 2007

## Viet Nam: Forestry Sector Project

Asian Development Bank

## CURRENCY EQUIVALENTS

Currency Unit – dong (D)

	<b>At Appraisal</b> (31 January 1997)	<b>At Project Completion</b> (31 December 2005)
D1.00 =	\$0.00009	\$0.000064
\$1.00 =	D11,080	D15,500

## ABBREVIATIONS

5 MHRP	–	5 Million Hectare Reforestation Program
ADB	–	Asian Development Bank
CDP	–	commune development plan
CFM	–	community forest management
CPC	–	commune people's committee
DARD	–	Department of Agriculture and Rural Development
DPMU	–	district project management unit
EA	–	executing agency
EIRR	–	economic internal rate of return
FIRR	–	financial internal rate of return
FLITCH	–	Forest Livelihood Project in the Central Highlands
FPD	–	Forest Protection Department
GTZ	–	<i>Gesellschaft für Technische Zusammenarbeit</i> (German Agency for Technical Cooperation)
KfW	–	<i>Kreditanstalt für Wiederaufbau</i> (German Development Bank)
M&E	–	monitoring and evaluation
MARD	–	Ministry of Agriculture and Rural Development
MBFP	–	Management Board for Foreign-Aided Projects
MIS	–	management information system
MTR	–	midterm review
NASA	–	National Aeronautics and Space Administration
PMO	–	project management office
PPMU	–	provincial project management unit
SDR	–	special drawing rights
SERD	–	Southeast Asia Department
SFDP	–	Social Forestry Development Project
SFE	–	state forest enterprise
TA	–	technical assistance
TFAP	–	tropical forest action plan
ToT	–	trainers of trainers

## GLOSSARY

Afforestation	–	Establishing forests by natural regeneration/tree planting in areas that were not previously forested.
Degraded forests	–	Forested lands with less than 40% tree cover that are allotted or assigned to the population for permanent agriculture, forestry, livestock production, or other purposes.
Intercropping	–	Annual crop planting mixed with tree planting.
Reforestation	–	Re-establishing forests by natural regeneration/tree planting in areas that were previously forested.
Shifting cultivation	–	A farming system in which land is periodically cleared, farmed, and then returned to fallow.
Tree plantation	–	Forest crop or stand raised artificially either by sowing seeds or planting seedlings.

## NOTES

- (i) The fiscal year (FY) of the Government ends on 31 December.
- (ii) In this report “\$” refers to US dollars.

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## BASIC DATA

### A. Loan Identification

1.	Country	Viet Nam
2.	Loan Number	1515-VIE
3.	Project Title	Forestry Sector Project
4.	Borrower	State Bank of Viet Nam
5.	Executing Agency	Ministry of Agriculture and Rural Development
6.	Amount of Loan	\$10.494 million (SDR7,443,749)
7.	Project Completion Report Number	PCR 1016

### B. Loan Data

1.	Appraisal		
	– Date Started	24 June 1996	
	– Date Completed	12 July 1996	
2.	Loan Negotiations		
	– Date Started	19 February 1997	
	– Date Completed	21 February 1997	
3.	Date of Board Approval	20 March 1997	
4.	Date of Loan Agreement	11 June 1997	
5.	Date of Loan Effectiveness		
	– In Loan Agreement	9 September 1997	
	– Actual	8 October 1997	
	– Number of Extensions	1	
6.	Closing Date		
	– In Loan Agreement	31 December 2003	
	– Actual	28 November 2006	
	– Number of Extensions	1	
7.	Terms of Loan		
	– Service Charge	1%	
	– Maturity (number of years)	40 years	
	– Grace Period (number of years)	10 years	
8.	Disbursements		
a.	Dates		
	<b>Initial Disbursement</b>	<b>Final Disbursement</b>	<b>Time Interval</b>
	21 January 1998	28 November 2006	8 years, 10 months
	<b>Effective Date</b>	<b>Original Closing Date</b>	<b>Time Interval</b>
	8 October 1997	31 December 2003	6 years, 3 months

## b. Amount

In \$ million

Category	Original Allocation	Last Revised Allocation	Amount Cancelled (Reallocated) <sup>a</sup>	Amount Disbursed	Undisbursed Balance <sup>b</sup>
Civil Works	28.542	8.262	20.280	8.320	(0.058)
Equipment and Vehicles	1.028	1.157	(0.129)	0.876	0.281
Resource Inventory	1.388	1.081	0.307	0.487	0.594
Incremental Costs	0.842	0.757	0.085	0.608	0.149
Interest during Construction	1.200	0.540	0.660	0.203	0.337
Unallocated	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>33.000</b>	<b>11.797</b>	<b>21.203</b>	<b>10.494</b>	<b>1.303</b>

<sup>a</sup> There were two partial cancellations: \$10.203 million in January 2001 and \$11.000 million in September 2004.

<sup>b</sup> Cancelled at loan closing.

In SDR

Category	Original Allocation	Last Revised Allocation	Amount Cancelled (Reallocated) <sup>a</sup>	Amount Disbursed	Undisbursed Balance <sup>b</sup>
Civil Works	21,656,663	5,816,056	15,840,607	5,855,265	(39,209)
Equipment and Vehicles	481,823	833,378	(351,555)	644,316	189,062
Resource Inventory	532,541	1,043,755	(511,214)	358,611	685,144
Incremental Costs	369,518	542,843	(173,325)	442,684	100,159
Interest during Construction	869,455	369,455	500,000	142,873	226,582
Unallocated	-	-	-	-	-
<b>Total</b>	<b>23,910,000</b>	<b>8,605,487</b>	<b>15,304,513</b>	<b>7,443,749</b>	<b>1,161,738</b>

<sup>a</sup> There were two partial cancellations: SDR7,801,000 in January 2001 and SDR7,503,513 in September 2004.

<sup>b</sup> Cancelled at loan closing date.

9.	Local Costs (Financed)	
-	Amount (\$)	\$7,880,808
-	Percentage of Local Costs	44.27%
-	Percentage of Total Cost	75.10%

**C. Project Data**

## 1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	10.400	8.551
Local Currency Cost	42.800	13.383
<b>Total</b>	<b>53.200</b>	<b>21.934</b>

## 2. Financing Plan (\$ million)

<b>Cost</b>	<b>Appraisal Estimate</b>	<b>Actual</b>
Implementation Costs		
ADB-Financed	31.800	10.291
Dutch Government	7.000	6.782
Borrower-Financed	5.200	1.797
Beneficiary-Financed	8.000	2.861
<b>Total</b>	<b>52.000</b>	<b>21.731</b>
Service Charge during Construction		
ADB-Financed	1.200	0.203
Borrower-Financed	0.000	0.000
<b>Total Costs</b>	<b>53.200</b>	<b>21.934</b>

ADB = Asian Development Bank

## 3. Cost Breakdown by Project Components (\$ million)

<b>Cost</b>	<b>Appraisal Estimate</b>	<b>Actual</b>
Resource Inventory	0.800	0.540
Capacity Building	2.000	1.142
Development of Subprojects	41.800	12.262
Consulting Services	5.200	5.640
Equipment	0.700	0.924
Incremental Operating Cost	1.500	1.223
Service Charge During Construction	1.200	0.203
<b>Total Project Cost</b>	<b>53.200</b>	<b>21.934</b>

## 4. Project Schedule

<b>Milestone</b>	<b>Appraisal Estimate</b>	<b>Actual</b>
Completion of Socioeconomic Surveys, Mapping, Land Allocation	Jun 2002	Sep 2004
Date of Contract with Consultants	May 1998	Jan 1998
Commencement of Services	Jun 1998	Feb 1998
Completion of Services	Dec 2002	Feb 2005
Capacity Building		
Commencement	Jun 1998	May 1999
Completion	Dec 2003	Oct 2005
Preparation of Subprojects		
Commencement	Jun 1998	Mar 1999
Completion	Dec 2003	Oct 2005
Establishment of Nurseries		
Commencement	Jul 1998	Jan 2001
Completion	Dec 1999	Feb 2002
Operation of Nurseries		
Commencement	Jul 1999	Mar 2002
Completion	Dec 2003	Mar 2005
Physical Development		
Afforestation/Reforestation		
Commencement	Jul 1999	Jul 1999
Completion	Dec 2003	Dec 2005
Enrichment Planting		

Commencement	Jul 1999	Jul 2000
Completion	Dec 2003	Jun 2004
Agroforestry		
Commencement	Jul 1999	Jun 1999
Completion	Dec 2003	Dec 2005
Vehicles and Equipment		
First Procurement	Jul 1998	Dec 1998
Last Procurement	Jun 1999	Sep 2003
Physical Completion of Project	Jun 2003	Dec 2005

## 5. Project Performance Report Ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 30 Jun 1998 to 31 Aug 1999	Satisfactory	Satisfactory
From 30 Sep to 30 Nov 1999	Partly Satisfactory	Partly Satisfactory
From 31 Dec 1999 to 30 Nov 2000	Satisfactory	Satisfactory
From 31 Dec 2000 to 30 Jun 2001	Partly Satisfactory	Partly Satisfactory
From 31 Dec 2001 to 30 Nov 2002	Satisfactory	Partly Satisfactory
From 1 Dec 2002 to loan closing	Satisfactory	Satisfactory

## D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members <sup>a</sup>
Reconnaissance	21 Aug to 9 Sep 1994	2	40	a, m
Fact-Finding	24 Apr to 11 May 1996	7	125	a, c, d, f, j, h, n
Appraisal	24 Jun to 12 Jul 1996	5	95	a, f, g, h, l
Inception	17 Nov to 28 Nov 1997	3	36	a, f, k
Special Project Administration	14 to 19 Jun 1998	2	12	a, k
Review 1	10 to 18 Dec 1998	1	9	a
Review 2	12 to 25 May 1999	1	7	a
Review 3	10 to 20 Jul 1999	1	11	a
Review 4	12 to 21 Dec 1999	3	22	b, e
Review 5	2 to 15 Mar 2000	2	28	b, e
Review 6	14 to 22 Jun 2000	2	18	b, e
Midterm Review	4 to 19 Dec 2000	3	29	a, b, e
Review 7	11 to 15 Jun 2001	2	10	a, k
Review 8	19 to 23 Nov 2001	2	10	b, d
Review 9	3 to 11 Apr 2002	3	27	a, b, e
Review 10	7 to 28 Jun 2002	2	25	a, b
Review 11	18 to 23 Nov 2002	1	6	a
Review 12	9 to 14 Jun 2003	2	12	a, k
Review 13	22 to 24 Oct 2003	1	3	a
Review 14	8 to 24 Mar 2004	1	17	a
Review 15	19 to 25 May 2004	1	7	a
Special Project Administration	16 to 18 Jan 2005	2	6	a, k
Review 16	24 to 25 Feb 2005	1	3	a
Review 17	1 to 7 Jun 2005	2	13	a, e
Review 18	23 Jan to 3 Feb 2006	1	12	k
Special Loan Administration	8 to 15 Jun 2006	2	16	b
Project Completion Review <sup>b</sup>	28 May to 1 Jun 2007	3	15	a, k, m

<sup>a</sup> a = forestry specialist, b = natural resources specialist, c = environment specialist, d = social development specialist, e = institutional specialist/technical assistance consultant, f = economist, g = counsel, h = financial analyst, i = control officer, j = programs officer, k = project/programs analyst, l = secretary, m = economist/staff consultant, n = project specialist

<sup>b</sup> The Mission comprised Javed Hussain Mir, senior forestry and natural resources specialist and mission leader; Lorna Enjaynes, associate programs analyst; and Alastair Fraser, forestry management and economics specialist/staff consultant. The Project Completion Report was prepared by Mr. Mir.



## I. PROJECT DESCRIPTION

1. Viet Nam's forest cover and surrounding area were severely threatened due to their conversion into agricultural land and excessive logging activities by state forest enterprises (SFEs). It was estimated that around 110,000 hectares (ha)—1% of the forest area—was lost annually.<sup>1</sup> Loss of forest covers in mountainous areas was due to the practice of shifting cultivation by many ethnic minorities. The country's unique topography—limited flat land along the coast and a mountainous interior with short, easily eroded, steep river valleys that rapidly discharge flood water following heavy rains—makes the protection of watersheds particularly important. In addition, the rapidly growing population's increasing demand for forest products, including fuelwood, is adding to the pressures on the forests.

2. The Forestry Sector Project (the Project) aimed to restore the vegetative cover of the hilly and mountainous areas in three watersheds in four provinces: the Chu River in Thanh Hoa, the Truc Kinh Reservoir in Quang Tri, and the Ba River in Gai Lai and Phu Yen. The Project particularly sought to improve existing forestland management in these areas. In the project provinces, the rivers supply irrigation water to around 85,000 ha of farmland. The major source of livelihood is settled agriculture, with paddy and estate crops, in Thanh Hoa and Quang Tri, while slash-and-burn shifting cultivation is practiced in Gia Lai and Phu Yen. It was expected that about 114,000 ha of barren land/degraded forests would be fully utilized either through forestation, improvement of grasslands, or cultivation of food crops, and would therefore improve watershed protection. In addition, the Project supported forest-based communities through agricultural/forest extension services and village infrastructure improvement, such as that relating to small-scale irrigation and village roads. The Project also required active participation of target beneficiaries in the planning and implementation of its activities. To prepare communities for this participatory approach, a training program focusing on participatory land use planning, silvicultural practices, and agroforestry was provided. The Project's overall goals, purpose, and outputs are summarized in the project framework in Appendix 1.

3. As designed, the Project had four components:

- (i) **Resource inventory.** This component comprised three activities in support of detailed investment package planning for each commune, which formed a subproject. The project design envisaged (a) resource mapping of around 1 million ha at a scale of 1:50,000 to show current land use, (b) mapping of 114,000 ha of commune lands at a scale of 1:10,000 for detailed commune development planning, and (c) the preparation of commune development plans (CDPs), which would involve a participatory rural appraisal approach to identify priority investments for each commune.
- (ii) **Capacity building.** This component consisted of government staff and beneficiary training for a participatory-approach orientation to ensure successful project implementation.
- (iii) **Subproject development.** Using detailed land use maps and CDPs, eight core projects were implemented, and 45 subprojects were developed. The list of subprojects is in Appendix 2.

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<sup>1</sup> ADB. 1999. *Technical Assistance to the Socialist Republic of Viet Nam for the Study on the Policy and Institutional Framework for Forest Resources Management*. Manila.

- (iv) **Strengthening of forest policy framework.** Existing regulations pertaining to forestry development needed to be aligned with the overall objective of sustainable forestry development.

4. In March 1997, Asian Development Bank (ADB) approved \$33 million equivalent from its Special Funds resources to fund the Project. The loan included a 40-year repayment term, including a 10-year grace period with a service charge of 1% per year. In July 1997, the Grant Financing Agreement between ADB and the Government of the Netherlands was signed. This agreement stipulated that ADB would administer the grant of \$7 million to support consultancy requirements and capacity building of the executing agency (EA), the Ministry of Agriculture for Rural Development (MARD), and project beneficiaries.

5. The loan became effective on 8 October 1997, and the Project was to be completed by December 2003. The loan's closing date was extended until 31 December 2005 due to delayed implementation. The Project was physically completed in December 2005.

6. The loan was closed on 28 November 2006 after keeping the loan account open for 11 months from the revised loan closing date. The Project utilized \$10.494 million of the loan while \$22.506 million was progressively cancelled on three occasions: \$10.203 million in January 2001, \$11.000 million in September 2004, and \$1.300 million in November 2006. A total of \$6.782 million (inclusive ADB administration charges of \$0.133 million) of the Dutch grant<sup>2</sup> was utilized for consulting services and capacity building. Loan savings were allocated to other investments of ADB's Viet Nam program<sup>3</sup>.

## II. EVALUATION OF DESIGN AND IMPLEMENTATION

### A. Relevance of Design and Formulation

7. The project approach was relevant to achieving both the Government's 5 Million Hectare Reforestation Program (5 MHRP),<sup>4</sup> which requires replanting of heavily degraded forests and bare lands, and ADB's Country Strategy and Program for Viet Nam. It was also consistent with ADB's forestry policy, which is founded on the three basic principles of protection, production, and participation. In Viet Nam, the loan was the first sector loan project to combine watershed protection, raising forest resource productivity, agroforestry, and infrastructure-related measures linked to poverty alleviation efforts. The focus on poor communities in selected upland watersheds demonstrated that the Project aimed to partner with local communities for its implementation.

<sup>2</sup> ADB. 1997. *Technical Assistance to the Socialist Republic of Viet Nam for the Forestry Sector Project*. Manila.

<sup>3</sup> The cancelled savings of \$10.203 million in January 2001 was utilized for Emergency Assistance for Flood Damage Rehabilitation in Viet Nam, which was approved by the Board on 18 December 2000. Loan 2273-VIE: Emergency Rehabilitation of Calamity Damage Project, which was approved on 21 November 2006, utilized the savings of \$1.303 million.

<sup>4</sup> Approved by Parliament in 1997 and by the Prime Minister under Decree No. 661/QĐ-TTg dated 31 July 1998, hence many of the projects are referred to as Decision 661 projects. The program was scheduled to run between 1998 to 2010 for afforesting or replanting 5 million ha by 2010 to restore forest cover to its pre-independence level of 14.3 million ha, i.e., equivalent to 43% of total land area. Broad afforestation targets comprise 2 million ha of production forests, 2 million ha of protection and special-use forests, and 1 million ha of perennial tree crops. The objectives are to (i) protect the environment and conserve soil and water resources, (ii) increase wood supply for domestic use and export, and (iii) reduce poverty and improve social development, especially among ethnic minorities.

8. However, the project design lacked approved implementation guidelines, resulting in delayed implementation. A clear strategy for subproject selection, approved cost norms for project activities, and agreement among government agencies and potential beneficiaries on cost- and benefit-sharing arrangements were not in place during the design phase.

9. The selection of the communes was based on three basic criteria related to the degree of forest degradation, the proposed interventions' potential benefits, and the communes' socioeconomic status. This method resulted in subprojects spread over four provinces in the Central and Central Highlands regions. Furthermore, even within provinces, subprojects were distributed over a large area, resulting in high transaction costs for project planning, implementation, and supervision.

## **B. Project Outputs**

10. The project design contained the following four components.

### **1. Resource Inventory**

11. This component comprised three activities in support of detailed investment package planning for each commune, which would form a subproject (see para. 3). Emphasis was placed on preparing maps for these subprojects, and a series of maps at a scale of 1:50,000 were prepared by interpretation of Landsat<sup>5</sup> images, mainly from 2000. In digital format, these maps form part of the management information system (MIS) and include topography, current land use, land use planning, forest zoning and classification, site classification, infrastructure, and planned investments.

12. The total area covered by the 45<sup>6</sup> communes that eventually received project investment was around 400,000 ha, which was mapped at 1:50,000 and 1:10,000 scales. The larger-scale maps were used for land use planning and project intervention mapping. Of this area, 80,000 ha were classified as "protection forest", and a further 30,000 ha were identified for plantations, enrichment planting, agroforestry, or home garden improvement.

13. The 1993 land law provided a broad framework for giving local peoples extensive use rights over agricultural and forestland. The law foresees that long-term usufruct rights should be issued for most land to non-state entities, including households, individuals, and organizations. Village communities, however, are not considered legal entities. Land use rights include those to exchange, transfer, lease, mortgage, and pass on land for inheritance, and are endorsed by a red book certificate. State rights are restricted to specifying the broad purpose for which the allocated plot is to be used in general accordance with overall plans and technical guidelines defined by the responsible organization. Decision 02/CP (1994) specified that forestland without forest cover, as well as existing natural and planted forests, can be allocated to local households and that the use rights granted in the red book certificates should extend over a 50-year period. Decision 01/CP (1995) introduced annually renewable contracts for forest protection for former SFE employees and farmers. Contract holders receive cash compensation of up to D50,000/ha/year. Contracts can be formed with individual households, groups of households, villages, or communes.

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<sup>5</sup> Landsat represents the world's longest continuously acquired collection of space-based land remote sensing data. The Landsat Project is a joint initiative of the US Geological Survey and the National Aeronautics and Space Administration (NASA) designed to gather the Earth's resource data from space.

<sup>6</sup> A total of 38 communes (subprojects) were set as the revised physical target at the Midterm Review, and an additional seven communes were added in December 2003 due to the splitting of some original communes.

14. As a precondition for effective and successful land allocation, the need for land use planning was raised, particularly for participatory approaches. The Social Forestry Development Project (SFDP) Song Da,<sup>7</sup> working in northwest Viet Nam, was among the first donor projects to develop and test a participatory method for land use planning, land allocation, and community-based forest management approaches. The experiences of the SFDP and other projects<sup>8</sup> were brought to the National Working Group for Community Forest Management attached to MARD's Forest Protection Department (FPD), which then created a legal basis to allocate forestland and existing forests to communities on a long-term basis for management and utilization.

15. Following resource mapping, land suitable for tree planting and other productive uses—or forests in need of protection—was identified and allocated to households. Land allocation has been an important project intervention by contributing to stabilizing land tenure and resource management. A total of 65,047 has of land were allocated to 31,487 households during the Project. Table 1 shows that over two thirds of the area allocated was natural protection forest, with about one quarter of households benefiting. One half of the households received an average of 0.6 ha for agroforestry, comprising about 15% of the total area allocated.

**Table 1: Allocation of Land by Forest Use and Household**  
(in number of hectares)

Category	Component	Land Area per Latest CDP	Allocated	%	Number of HH	%	Average Area per HH
1-A	Protection forest and enrichment planting	11,032	4,697	7	4,668	15	1.0
1-B	Forest protection and natural regeneration	80,040	46,105	71	6,902	22	6.7
1-C	Production forest	7,538	4,648	7	3,814	12	1.2
1-D	Agroforestry	12,435	9,597	15	16,103	51	0.6
<b>Total</b>		<b>111,045</b>	<b>65,047</b>	<b>100</b>	<b>31,487</b>	<b>100</b>	

CDP = commune development plan; HH = households; % = percentage

## 2. Capacity Building

16. This component consisted of government staff and beneficiary training. Initially, consultants funded by the technical assistance (TA) grant (footnote 2 and paras. 20 and 57) were to administer the training budget due to its importance as a capacity-building instrument. In December 1998, the EA established an imprest account for the training budget, which transferred this portion of the TA to direct Vietnamese management, thus, applying the Government's regulations to fund administration and control. As these regulations did not cater to the Project's training approach, several legal documents had to be prepared.<sup>9</sup>

<sup>7</sup> The SFDP Song Da (1993–2004) in Son La and Lai Chau was funded by the Government of Germany through Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation [GTZ]).

<sup>8</sup> The Sustainable Management of Resources Project (1996–2002) in Dak Lak was funded by the Government of Germany through GTZ.

<sup>9</sup> Decision No. 163/1999 QD/BNN-TCKT by MARD dated 10 December 1999 stipulating the development and management of project training program; Decision No. 34/2000/QD/BNN-TCKT by MARD dated 4 April 2000 on additional issuance of cost norms for the Project; Decision No. 112/2001/QD-BTC by Ministry of Fisheries dated 9

17. Preparing these documents delayed the training program's implementation. The transfer of the training funds to the EA also meant that the consultants no longer had influence over the training design. The training budget was no longer considered an instrument for capacity building and innovation, but rather a supplementary financing source for regular training inputs. This resulted in classic, less interactive, and less adult learner-centered training methods. Furthermore, flexibility for the use of these funds was severely compromised, with design and approval procedures remaining centralized, bureaucratic, and occasionally ambiguous.

18. The ADB Midterm Review (MTR) in December 2000 considered the Project's TA component, and in view of the decision to reduce the loan's magnitude and project scope, it also reallocated the remaining TA funds in favor of capacity-building measures and a prolongation of the consultants' assignment. This latter reallocation was necessary because the TA inputs in the Project's early years had not been scaled back in line with the reduced rate of loan disbursement.

19. The arrangements to recruit trainers of trainers (ToT) for subproject planning, project management skills, specialized technical implementation support, and monitoring and evaluation (M&E) required a pool of highly qualified, external ToTs. Capable ToTs could be identified in central-level institutions, but the demand by the Government and other donors on this resource was high. Therefore, their availability could not be secured and depended on the Project's competitiveness. Although a TA consultant assisted the project management office (PMO) in mobilizing external ToT sources, tight cost norms for qualified trainers as applied under Vietnamese regulations for fund administration—and very limited PMO personnel capacities—resulted in the Project only occasionally succeeding in tapping into the small pool of highly qualified ToTs.

20. The Dutch grant financed capacity building (footnote 2) with an initial budget of \$1.4 million, which was reduced by \$0.310 million to facilitate the harmonization of investment procedures and project implementation framework (\$0.110 million) and the prolongation of the TA consultancy assignment (\$0.200 million). Of the remaining \$1.090 million, \$0.890 million was spent by the end of 2004. The remaining funds were used for domestic training and overseas study tours organized during the Project's final year. The total actual amount spent on capacity building was \$1.142 million, inclusive of administrative charge of \$0.022 million.

21. In accordance with the decision of a special review mission by ADB in April 2002 and after formal approval by ADB and MARD in July 2002, the capacity-building program covered the following modules: (i) analytical tools and communication skills; (ii) project cycle management for natural resources; (iii) human resource development; (iv) financial administration of loan projects/grant components; and (v) local capacity building. For all modules, external trainers were involved in conducting training courses. For Modules iii to v, the training courses were complemented by on-the-job coaching, partially conducted by external coaches and partially by PMO or TA consultants. Over 11,537 persons were trained during the Project, including 664 forestry staff members, which exceeded the appraisal target of 200. In addition, 4,215 farmers were trained, exceeding the appraisal target of 500. The number of courses and participants is in Appendix 3.

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November 2001 on some cost norms for loan projects; Circular No. 103/2002/TT-BTC by Ministry of Finance on 13 January 2002; and Decision No. 572 QD/DALN-TCKT by Management Board for Forestry Projects dated 16 May 2002 on delegation of training implementation.

22. The management training program participants were selected from project staff at all levels and from involved institutes, line agencies at provincial and central levels, and from staff members of the Management Board for Forestry Projects (MBFP)<sup>10</sup> involved in other overseas development assistance projects.<sup>11</sup> Participants were representatives of subproject implementation groups, commune people's committees (CPCs), Women's Union, Farmers' Association, and commune extension workers. Trainers were selected from the construction university, the national administration academy, and Xuan Mai Forestry University.

23. Before 2002, the training courses were mainly conducted for project staff members. The technical courses' curricula were developed in a conventional manner—there was much theoretical content and no information on teaching methods or practical implementation. Handouts contained mainly written language in small font sizes, which were not suitable for farmers. In 2003, implementation of training courses at provincial and lower levels declined compared to 2002. In Gia Lai, the number of agroforestry courses conducted for farmers accounted for about 50% of the field demand as reflected in the yearly target approved by MARD, and many courses occurred only after the planting season finished. In Thanh Hoa, the situation was worse—only four farmer courses out of 25 were conducted, and only after the planting season ended. In Phu Yen, only one farmer course was organized before the planting season, and the total number of courses implemented in 2003 remained about 30% below target.

24. With the discontinuation of TA consultants' involvement in training in September 2003, implementation and reporting of training measures further deteriorated—in 2004, 54 training courses were conducted in Gia Lai, and only one workshop in Nha Trang was conducted on best practices. In Phu Yen, Quang Tri, and Thanh Hoa, no further training courses were conducted, although with the inclusion of an additional seven communes in 2004, a definite demand for training existed.

25. ToT courses were organized in all project provinces. Trainers were selected from the Social Forestry Center of Xuan Mai Forestry University and from ongoing relevant projects.<sup>12</sup> Qualified curricula were developed based on project requirements, trainer experiences, and suggestions by involved provincial project management units (PPMUs).<sup>13</sup> Participants were selected from line service providers in provinces, e.g., province extension centers, district extension sections, Department of Agriculture and Rural Development (DARD), forest enterprises, and provincial training institutes. Selected PPMU staff and key farmers also participated in the courses. All ToT courses were conducted before the planting season, thus providing the required technical knowledge to farmers on time.

26. All participants of farmer courses were representatives of households involved in project implementation. All trainers for farmer courses had been trained in ToT courses, which included a subject on teaching methodology. Curricula were prepared on approved designs for different activities such as agroforestry, protection and production afforestation, and home garden improvement. Pictorial handouts were provided to all participants. All farmer courses were conducted less than 1 month before actual field implementation. In most cases, field

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<sup>10</sup> The special body within MARD in charge of coordinating and overseeing all large-scale overseas development assistance projects in the forestry sector.

<sup>11</sup> Kreditanstalt für Wiederaufbau (German Development Bank [KfW]), World Bank, Public Administration and Civil Service Authority, and Japan Bank for International Cooperation.

<sup>12</sup> KfW3 Project and Song Da Social Forestry Development Project funded by GTZ.

<sup>13</sup> Established by MARD at the provincial level and responsible for preparing subprojects to be included in the Project.

assessments on the training's impact confirmed sufficient quality. However, some unqualified/late designs on agroforestry resulted in unclear training contents.

27. As for extension materials, PMO issued several publications related to standard training courses on agroforestry and home garden improvement, using earlier publications of other sources, which were slightly adjusted. In all communes, PPMUs fielded commune extension workers, who learned the required skills through special courses by provincial ToTs, supported by facilitating TA consultants.

28. The following were the main reasons for the deterioration of domestic training:

- (i) Towards the end of 2002, the PMO removed PPMUs' responsibility over administrative matters concerning training due to their poor performance in timely submission of convincing payment evidence. During the March 2003 board of project directors meeting, all PPMUs were requested to submit outstanding evidence as soon as possible. It was also decided that once the evidence was submitted, the PMO would give responsibilities back to PPMUs while assisting in financial administration through on-the-job coaching. Although the PPMUs had submitted satisfactory evidence to the PMO by September 2003, the PMO failed to give responsibilities back to the PPMUs. As a result, bureaucracy continued to extend to many levels, the effects of which could no longer be mitigated by the dwindling number of TA staff members.
- (ii) Despite repeated suggestions and reminders by ADB and the TA consultant, the PMO failed to coach PPMUs on administrative matters pertaining to domestic training, with severe consequences for the timely implementation of training courses and the number implemented, which caused negative effects on the quality of civil works implementation.

29. However, overseas training under the Project was successfully completed. Fourteen participants, including two women, were sent to various<sup>14</sup> countries to pursue further studies. Six participated in long-term courses, and eight obtained master's degrees in tropical forestry, natural forest management, social forestry, public policy, and administration. This has helped enhance MARD's human resource capacity in critical areas of forestry sector development.

### **3. Subproject Development**

30. The design adopted by TA consultants during project implementation was based on experience with participatory approaches to natural resource management and community development in donor-funded projects in Viet Nam's forestry sector, particularly the SFDP Song Da<sup>15</sup> and *Kreditanstalt für Wiederaufbau* (German Development Bank)-assisted afforestation projects. Cornerstones of the design were (i) participatory approaches, (ii) decentralization of management tasks to the lowest possible administrative level, and (iii) a clearly sequenced combination of steps involved in land use planning and forestry investment planning.

31. Because the Project was a loan rather than a grant, in the absence of approved cost norms for land-use planning, the EA was unable to execute these activities during the initial stage of project implementation. Moreover, all loan-financed activities required approval from

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<sup>14</sup> Overseas training was conducted in Sweden, Philippines, Netherlands, United Kingdom, India, and Malaysia.

<sup>15</sup> Funded by GTZ.

several government levels and were subject to lengthy administrative procedures. This resulted in serious delays in project implementation.

32. The December 2000 MTR refocused investment planning on the originally intended approach, using CDPs to integrate land use planning, land allocation, and investment planning into one approach. Subproject formulation was similarly important for individual communes and for the entire project design. Individual subproject design formed the conceptual and qualitative foundation of subproject implementation. With the decentralization of CDP preparation to PPMUs and provincial project steering committees, the work force involved in CDP preparation greatly increased. As a result, most CDPs could only be completed in 2001, and by mid-2002, CDPs had been approved for the revised MTR target of 38 communes.

33. The quality of subproject planning was strongly influenced by the delegation of powers and responsibilities to the communes. Participatory planning tended to suffer from the dominance of central planning and control of the implementation mechanism. This, in turn, had a negative impact on the overall sustainability of project investments. As a result, the EA and implementation consultants made CDP preparation a top priority in 2001 and for most of 2002. For subprojects to be implemented, contractual services from a range of technical agencies were employed. The project design, as well as government regulations, stipulated local competitive bidding to secure commune services. Unfortunately, the project design had not investigated detailed service delivery mechanisms, and thus, did not consider the existing reality of service provision requirements, conditions, and options.

34. Procurement and management of these services could be carried out at the commune level under project-specific arrangements decentralizing management responsibilities to commune administrations, or at higher levels in line with common practices. While for an effective rendering of services, commune involvement would have been preferred, districts' role in service provision limited the choice of service providers and, in case of first-line services, reduced options for full competitive bidding.

35. Individual yearly investments in forestry/agroforestry were designed by the involved district project management units (DPMUs) or contracted design companies, while infrastructure design work was normally subcontracted. Most individual investments in agricultural/agroforestry and forestry works were small and scattered over large areas. Since forestry/agroforestry designs were normally done per household in line with land tenure arrangements, field design used a lot of time to visit individual plots. This created great difficulties for the design teams, which in turn slowed down implementation.

36. Implementation of investments in agroforestry, production forest or protection forest plantations, and rural infrastructure construction was supervised by eligible technical agencies, which were designated as the provinces' design agencies. For small infrastructure and civil works, it was difficult to attract and appoint qualified and experienced design engineers due to the subprojects' small size and scattered nature. For small, remote irrigation schemes, designs were completed with limited information on hydrology or geology. Coupled with quality requirements of the donor and strictly regulated cost norms, the design and construction of small irrigation schemes was challenging for the involved construction companies, which must also bear the risk and responsibility for their work.

37. Technical departments at the provincial level were responsible for approving the design of the project works. The appraisal procedure was often lengthy, requiring many supporting documents and approvals from different departments.

38. Payments to households were made upon acceptance checks, which were carried out by DPMUs and cross-checked by mixed teams of the involved PPMU and PMO. Acceptance checks regularly encountered problems in determining the exact size of an individual plot per family and disputes, e.g., whether high mortality rates were caused by unsatisfactory quality of seedlings, poor planting techniques and maintenance, or unfavorable weather conditions. Although commune and village leaders were involved in such disputes, their formal standing did not solve them since contracts had been made between PPMUs or DPMUs and individual households.

39. The entire process of detailed investment design, design approval, and acceptance checks was very time-consuming, and costs for manpower and transport were very high compared with the investments realized. Repeated efforts by TA consultants and the PMO to simplify procedures and to streamline functions of involved levels were not supported by MARD's departments. Thus, these elaborate procedures pertaining to investment preparation and acceptance became a major obstacle to smooth and timely project implementation.

40. After the CDPs' final revision in June 2004 and the inclusion of an additional seven communes into the Project in 2004 (see Table A4.1), total base costs for 45 communes amounted to D181.580 billion (about \$11,714,859). Including contingencies, total subproject costs had been targeted at D203.806 billion (\$13,148,809). The actual investment achieved, as calculated in the CDPs, remained below the target of \$20,905,976 set by the MTR. Even allowing for the cancellation of the grazing area improvement component budgeted at \$532,054, the difference is striking. The weakening of the dong from a yearly average of D12,233 per \$ in 1998 to about D15,700 per \$ in 2004, only accounted for a small proportion of this difference. The continuing tendency of decision makers at various levels to overestimate absorption capacities of the EA, provincial authorities, and beneficiaries perpetuated this overly optimistic budgeting.

41. The CDPs approved by the involved PPCs become legal documents in the Vietnamese financing system and were then viewed by involved Vietnamese authorities as the yardstick for project implementation. In the CDP budgets, forestry components comprised 75–80% of the investments, and rural infrastructure the rest. The MTR's decision to cap infrastructure at 25% was to ensure that while allowing flexibility, the overall balance between the Project's forestry and non-forestry aspects was adhered to. However, provincial authorities continued to show inflexibility in adapting to communes' demands and needs, which resulted in underutilization of loan funds in many cases.

42. In terms of implementation investment by province (see Table A4.2), the bulk was targeted for agroforestry (28.9%), rural infrastructure (22.8%), and protection forest afforestation (19.6%), followed by production forest afforestation (12.1%), forest protection (11.9%), and enrichment planting (4.8%). The relative importance of individual investment categories for each province showed a high variation. Agroforestry was the most important component for Gia Lai and Phu Yen, while protection forest afforestation was highly important for Quang Tri, Thanh Hoa, and Phu Yen. Rural infrastructure ranged between 25.6% in Thanh Hoa to 19.3% in Quang Tri, while inter-village road improvement had priority in Gia Lai and Phu Yen, and small-scale irrigation and primary schools in Thanh Hoa. Water management-related investments comprised most of the rural infrastructure budgets, followed by inter-village roads and primary schools, while budgets for health posts remained negligible.

#### 4. Strengthening of Forest Policy Framework

43. The project design's assumption that the legal and organizational environment for large-scale investments in the forestry sector was in place proved to be unrealistic. However, policies, a supporting regulatory framework, and institutional organization have developed during the Project's lifetime and are continuing to evolve quite rapidly. Some changes to the regulatory framework occurred in direct response to project needs and are project-specific. The Project has contributed to the development of policy and supporting regulations in four major areas: land tenure, community forest management (CFM), fuelwood resource development, and SFEs.

44. During the Project's early years, forest policy reforms focused on forestland tenure and completely overlooked land management and utilization. This was partly due to imitating the agricultural land process, in which an assignment of use rights to individual households automatically led to better management. In forestry, however, the allocation of small plots to individual households is much more problematic in terms of sustainable management. At the same time, it inhibits organizational development at the village and commune level. CFM initiatives were characterized by efforts of developing methodologies for participatory land-use planning and allocation that allows for community-based management schemes. The attempt to influence national policy towards a further shift from household forestry to community forestry was a complicated and time-consuming effort that resulted in neglecting technical and organizational issues regarding CFM. Later in the Project, CFM approaches were incorporated into the broader rural development framework as a logical step after land allocation to plan and implement actual activities that improve land management. Subsequently, the increasing role of forestry in efforts to reduce poverty, especially in mountainous areas, stimulated further interest in the possibilities for CFM. Eventually, the new policy trend of decentralization proved the most conducive to CFM because it rendered earlier problems less significant, most notably the issue of forestland allocation to communities—now automatically supported by the new trend. Decentralization will further open up opportunities for CFM, especially if implemented and supported by the donor community.

45. The Project's basic concept was designed in the early period of forest policy reforms, when land tenure, organizational and technical aspects of CFM, and supporting systems were not in place. As policies evolved, the Project became increasingly relevant for policy makers—although the basic project concept was not particularly innovative if compared with the approaches pioneered by bilateral projects, it was most relevant for Vietnamese policy makers who viewed and used the Project as a learning case for the institutions involved.

46. The Project's forest development approaches were closely linked to the 5 MHRP and particularly the 661 project (footnote 4) while the infrastructure development approaches were in line with the 135 project.<sup>16</sup> Implicitly, the Project inherited the approaches and the procedural and financial stipulations provided under these programs. Because of the prescriptive nature of Vietnamese regulations, any deviation from the national projects to facilitate participatory approaches, or the combination of investment planning with land use planning, required a

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<sup>16</sup> Approved in July 1998 and is implemented by the Committee for Ethnic Minorities. The main focus of Program 135 is on providing essential basic infrastructure to poor communes in mountainous, isolated and remote areas. Several existing programs with broadly similar adjectives were merged into Program 135 by the Prime Minister's Decision 135/2000QD-TTg. These included the infrastructure components of the fixed cultivation and fixed settlement programs, the commune cluster program, and the program for training of cadres in remote and ethnic minority areas.

lengthy process of preparing and securing official approval of the necessary decisions and decrees, which sometimes involved the Prime Minister's Office.

47. Thus, while policy developments supported the project concept, the institutional environment was rather slow in translating policies into appropriate financial support mechanisms. As a result, project implementation remained behind the initial targets. The Project's advantages as a conceptually well-placed and visible actor during times of important policy changes were originally overshadowed by the disadvantages arising out of the Project's function to facilitate—as the pioneering loan project in Viet Nam's forestry sector—the emergence of organizational, regulatory, and financial tools to implement the new policies within the administrative system.

48. The Project was the first sector project in Viet Nam to combine the objective of watershed protection with that of increased productivity of forest resources, combined with agroforestry and infrastructure-related measures, in view of poverty alleviation. The Project was able to incorporate approaches and elements of technical cooperation and grant investment projects and to feed those into the institutional mainstream. The main impacts of the Project on the development of the forestry sector have been:

- (i) advocating an integrated project approach that underscored the influences of related sectors on forest development;
- (ii) introducing land use planning as an integrated part of forest management on a wider scale;
- (iii) the response to the main current policy trends of decentralization and poverty reduction and its incorporation into the project approach;
- (iv) the contribution to advancing forest policy reform towards a directional shift from state forestry to household and CFM; and
- (v) the contributions to the Project, which focus on establishing and harmonizing the policy, legal, and administrative framework for forest resource management.

49. During the Project's course, reforms relating to both fuelwood utilization and SFEs were implemented, but since neither issue had a direct impact on project implementation, the Project was much less influential in the related processes.

### **C. Project Costs**

50. The total project cost was about \$21.934 million, against the appraisal estimate of \$53.200 million (Appendix 5). This lower cost is attributable to changes in the Project's physical and financial dimensions at the MTR, which aligned the investment size with the Project's small-scale nature of forestry and non-forestry interventions as well as the EA's prevailing absorption and delivery capacity.

### **D. Disbursements**

51. Disbursements of the loan commenced in January 1998, 3 months after it became effective, with an initial drawdown of \$0.500 million to the imprest account. Loan disbursements peaked in 2005 when most of the village infrastructure works were completed and paid. The last disbursement made in November 2006 was for the payment of minor civil works. The loan was closed on 28 November 2006 after \$10.494 million, or 34%, of the original loan amount was disbursed. The \$22.506 million unused portion of the loan was progressively cancelled (see

para. 6). Disbursements were mainly through statement of expenditures. Appendix 6 compares the projected and actual disbursements.

### **E. Project Schedule**

52. The Project was to be implemented over a 6-year period from October 1997 to December 2003. It was extended until 31 December 2005 due to delayed implementation during the first 3 years (paras. 31–32) and to allow sufficient time for the completion of post-planting after-care of Project's forestry assets. The Project was physically completed in December 2005. However, the loan account was kept open until November 2006 to allow liquidation of the remaining loan and grant funds for major village infrastructure works and training, respectively. The actual implementation schedule is in Appendix 7.

### **F. Implementation Arrangements**

53. The Project cut across several sectors, resulting in a complex organizational structure for project management (Appendix 8). Five main ministries and departments were involved, with the primary responsibility being with MARD as the EA, but the Ministry of Planning and Investment and Ministry of Finance had influence over the Project's planning and the use of project funds, while the latter were channeled through the State Bank of Viet Nam as ADB's partner organization. The Ministry of Construction was involved in the planning and implementing of the Project's infrastructure-related components, while the General Department of Land Administration<sup>17</sup> dealt with all issues related to land allocation. Within MARD, the responsibilities for forestry-related matters were divided among four different departments: (i) Department of Forestry Development, (ii) FPD, (iii) Agriculture and Forestry Extension Department, and (iv) Agriculture and Forest Product Processing Department. Separate MARD departments oversaw finance, policy, planning, personnel, and organization. A special MARD body, the Management Board for Foreign-Aided Forestry Projects (MBFP), which coordinates and oversees all large-scale projects in the forestry sector, was charged with project implementation at the national level. At the provincial level, in three out of the four provinces, the provincial FPD provided the managers for PPMUs and DPMUs. The exception was Thanh Hoa, where project management was placed within DARD.<sup>18</sup>

54. The choice of the MBFP as the EA at national level and the FPD at provincial levels<sup>19</sup> did not favor cross-sector coordination. The MBFP is an umbrella organization with no internal hierarchy and a strong forestry-oriented bias. The FPD is probably the most vertically structured agency in the country. At the provincial level, it is outside the DARD structure and enjoys a high degree of operational autonomy and little incentive to coordinate its operations with technical agencies under DARD. Thus, in an institutional environment that already experiences weak interagency coordination, the choice of the MBFP and FPD represented an additional obstacle to cross-sector coordination. These concerns were expressed by the TA consultants in early 1998 to the PMO project director and MARD, with particular reference to provincial management's uncertain capacity to mobilize personnel and technical inputs from complementary disciplines.

<sup>17</sup> Now integrated into the Ministry of Natural Resources and Environment.

<sup>18</sup> DARDs were established after the merger of the central-level ministries of agriculture, forestry, and irrigation into MARD. While most of the departments under the former Ministry of Forestry were merged into the Department for Forest Development, FPD maintained its status as a fully operational department also within the new ministry. Furthermore, only FPD has a centralized chain of command from the central to the provincial level, which sets the organization apart from all other departments.

<sup>19</sup> Except for Thanh Hoa where a watershed management board is in place.

55. The project design and formulation was therefore weak with respect to the mechanisms for coordination between the institutions involved, procedures for financial management, and availability of technical knowledge within the involved institutions for project implementation. The problem was partly resolved when the Project moved into large-scale implementation in 2002, and central-level project management recognized the need to facilitate further decentralization of management tasks and to strengthen coordination among provinces. In response to recommendations from the TA consultants, a board of project directors was established, and commune administration was strengthened. The PMO and TA consultants had to conceptualize, draft, and negotiate more than 50 documents in the form of decisions, circulars, regulations, and guidelines for central and provincial governments and the MBFP between 1998 and 2004 to enable project implementation. The delays meant that little was achieved during the Project's first 3 years. Consequently, the MTR initiated a reduction in the Project's physical and financial scale and a prolongation from 6 years to a total of 8 years, including a prolongation of the TA consultancy assignment.

### **G. Conditions and Covenants**

56. Compliance with the loan covenants is summarized in Appendix 9. Most major covenants were complied with, although had some delays. However, the Loan Agreement's covenant that mentions the preparation of an annual plan of operation to specify project activities for the coming year, related budget estimates, and staffing requirements was partially complied with. The covenant that requires the PMO to select and engage suitable local research institutions to carry out applied research in relevant agroforestry-related subprojects was no longer applicable since the component on applied research in agroforestry was cancelled and the allocated amount was utilized to enhance capacity building.

### **H. Consultant Recruitment and Procurement**

57. A grant of \$7 million<sup>20</sup> was provided by the Government of the Netherlands to engage international consultants in assisting project implementation agencies at national and local levels in subproject preparation and appraisal, project supervision, capacity building, and training. A total of 709.55 person-months of consultant inputs were provided to the Project, which consisted of 151.65 person-months of international services, and 557.9 person-months of domestic services, including 250 person-months from district liaison officers contracted by the consultant. International consultants were engaged in accordance with ADB's *Guidelines on Use of Consultants* (2007, as amended from time to time). Consultants were fielded on time, but their engagement was prolonged due to the delay in project implementation (para. 55).

58. Procurement was carried out in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). Civil works contracts were tendered following the Government's procedures among pre-qualified local contractors acceptable to ADB, and these were awarded under local competitive bidding procedures. Civil works were also carried out by beneficiaries using their own labor<sup>21</sup> and local materials under the supervision of contractors and staff. Contracts covered forest protection, mapping activities, village infrastructure including irrigation systems, construction of access roads, classrooms, and health care stations. Vehicles and equipment were also procured under the Project as shown in Appendix 10.

<sup>20</sup> As of closing date, a total of \$6.782 million (inclusive of ADB administrative charge of \$0.133 million) was disbursed as follows: consulting services—\$5.640 million and capacity building—\$1.142 million. The unutilized balance was returned to the Royal Netherlands Embassy in April 2007.

<sup>21</sup> No land acquisition and resettlement were involved.

## **I. Performance of Consultants, Contractors, and Suppliers**

59. The international supervision consultants performed their tasks satisfactorily. The international consultants provided advice on technical issues related to project management (para. 57), assisted in the preparation of CDPs, reviewed bidding documents, and supported the EA in project management. The consultants and the project management units at the national and provincial levels had a good working relationship, and the PPMUs appreciated the consultants' contributions.

60. The contractors generally complied with the contractual terms. No major problems were experienced with the supply or performance of any vehicle or equipment procured under the Project.

## **J. Performance of the Borrower and the Executing Agency**

61. The performance of the Government, through MARD, was generally satisfactory. However, it was noted that government operations were highly regulated, and the EA had to prepare and obtain approval of various special project implementation regulations by different government agencies. This lengthy process contributed to the implementation delays.

62. Performance of EA counterpart staff in the field of silviculture and agroforestry was satisfactory. Though there was a lack of experts in training, infrastructure, and community development, this was mitigated by TA consultants. Capabilities of counterpart staff in participatory planning, M&E, economic analysis, and project financial administration remained limited.

## **K. Performance of the Asian Development Bank**

63. ADB's performance in monitoring the Project was satisfactory. The Project was monitored with regular review missions and frequent consultations and briefings with the EA. ADB representatives spent adequate time reviewing physical progress and resolving implementation issues. ADB's approval process was prompt. ADB provided timely advice, especially during the MTR, to make necessary adjustments for accelerated and effective loan and TA implementation. Other timely response measures included adjustments in the imprest account ceilings to ease EA's liquidity constraints caused by cumbersome government financial disbursement procedures.

# **III. EVALUATION OF PERFORMANCE**

## **A. Relevance**

64. The Project was highly relevant to the development priorities of ADB and the Government and to the needs of the communities that benefited from the investment. The inclusion of small-scale infrastructure, especially that related to irrigation, village roads, water supply systems, and school buildings, was appreciated by the communities, and made a positive contribution towards improving food security as well as forestry and tree-planting activities. The home garden improvement and agroforestry components contributed towards income generation and enhanced nutrition, while commercial tree planting is about to bring significant income benefits. Forest protection provided additional short-term income for those households contracted to carry out the work, and there is some evidence that it has generated economic benefits through improved water conservation and reduced illegal logging. It is too

early to measure the full magnitude of plantation benefits, since they are still growing and will not be fully realized for some years.

## **B. Effectiveness in Achieving Outcome**

65. The Project established forest cover on 23,739 ha of barren land within the project area and protected 77,666 ha in existing protection forest areas that might otherwise have been degraded or destroyed. The area planted was well below the original expectations of 102,000 ha, as the target area to be planted was finally reduced to 31,000 ha. Therefore, the final achievement was about 75.6% of the revised plantation target. The project design provided for 12,000 ha of improved grazing but did not envisage protection of existing forests, but made provision for 12,000 ha of improved grazing. At the MTR, the grazing component was cancelled due to lack of suitable land, but provision was made for protecting 80,040 ha of existing natural protection forest through contracts to household groups. A total of 77,666 ha of such forest was protected, or 96% of the target, for up to 3 years. The length of time for which protection was contracted depended on the Project's remaining duration, and in a few communes, this was only 2 years. The protection has been highly successful since the practice of shifting cultivation has almost ceased in all the project communes, and illegal logging has also been strongly curtailed. A comparison of the physical targets against actual achievements is in Appendix 11.

66. Training and extension services provided for local government staff and farmers, combined with the experience gained during implementation, have improved the capacity of the communes that participated. The Project eventually overcame the constraints resulting from the project design failure to appreciate that a loan project would be subject to rigid government procedures for planning, approval, and fund disbursement, not applicable to donor-funded grant projects. Overall performance of the Project is assessed as "effective".

## **C. Efficiency in Achieving Outcome and Outputs**

67. The original intention to afforest around 102,000 ha of barren land and to improve around 12,000 ha of grassland for grazing was not achieved. Instead, around 22,000 ha of bare land were planted with trees as production or protection forest plantations, agroforestry, or home gardens. About 77,700 ha of existing forests were protected through contracts with households or farmers' groups. Since forest protection is cheaper than establishing plantations, this explains the large reduction in investment, while there appears to be only a modest reduction in the area over which interventions were undertaken.

68. Thus, the original purpose of increasing vegetative cover through reforestation was partially achieved. A possible decline in the pre-existing forest cover was also prevented through protection. It is difficult to assess how much forest cover may have been lost had there been no Project, but through the national pre-project rate of natural forest cover loss of around 1% annually, and noting that shifting cultivation was practiced within the areas pre-project, around 800 ha could have been lost annually or around 2,400 ha over the period in which the protection contracts were effective. Thus, the area planted plus the area that might otherwise have been lost amount to around 27,000 ha, or about 27% of the area originally intended to have vegetative cover restored. In the end, the total loan amount utilized was also only about 32% of that originally proposed, and so the project achievement *pro rata* to the actual investment is in line with the original expectations.

69. Average expenditure per ha on the new forest cover plus the area saved was around \$304 (\$8.2 million for 27,000 ha) compared with the original project proposal of around \$310 per

ha (\$31.35 million for 102,000 ha). This latter cost was for the creation of new forest cover and did not include any provision for maintaining cover that would otherwise be lost. This level of expenditure is in line with the Government's cost norms. However, this level of investment is low by international and commercial standards but is adequate for soil protection and water conservation. Concerning efficiency, these results indicate that it is cheaper to protect forests and prevent destruction rather than to destroy forests and then invest in replanting.

70. The actual number of households eventually granted land tenure through the Project was about 31,500 households. They benefit from having land allocated to them, which will provide income and the incentive to invest more time and labor into improving land use efficiency. This has contributed to the reduction in loss of forest cover due to shifting cultivation.

71. The project design was not specific on the area that would benefit from the investment in small-scale irrigation, since only a few core subprojects were evaluated and the need for irrigation varies greatly from place to place. A total of around \$812,000 was invested in small-scale irrigation, including dams and channels, and the total area benefiting from the irrigation is around 210 ha. All communes visited reported that rice yields had increased substantially, from 1–5 tons/ha for a crop intensity of one per year with the irrigation schemes to 6–11 tons/ha for crop intensity of two per year with the irrigation schemes. Taking a median value, the additional production is about 5.25 tons/ha or a total annual additional production of about 1,100 tons in the project area. Assuming an average farm-gate value of about \$250/ton for the rice, the additional annual revenue for the farmers is about \$275,000, which allowing for annual maintenance at 5% of the capital cost, gives an internal rate of return of 44%, making it an extremely good investment.

72. The project design did not specify the number of people to be trained, although it indicated that about 10 farmers per village should receive technical training on silviculture and agroforestry. With an average of eight villages per commune, the 45 communes that eventually participated would have yielded around 3,360 farmers to be trained. The total number of farmers attending all the courses organized by the project was about 7,760. With most farmers having attended at least two courses, this would indicate that the training program met the expectations in terms of numbers trained. Overall, the Project is assessed as "efficient".

#### **D. Preliminary Assessment of Sustainability**

73. All the indications are that the Project's outcome is sustainable since the various tree crops are already beginning to produce income, both from wood fiber as well as from fruit and nuts and other commodities. In addition, yields and incomes will increase as the trees mature. The irrigation schemes are providing substantial income for the beneficiaries as well as additional income to cover the costs of maintenance. Similarly, the village roads have brought tangible benefits through better prices for products sold in the benefiting villages and reduced costs for importation, and these will increase as production and income rise in the coming years. The training provided by the Project has enabled farmers to cultivate a much wider range of crops, and the investment in school classrooms has resulted in all school-aged children now attending school. The training for the local government officials, and their experience gained in implementing the Project, has improved their confidence in managing development projects. Many expressed willingness to pass on their knowledge and experience to other commune leaders who had not benefited from the Project. Therefore, there is a cadre of people who can spread the experience to neighboring communities as well as bring greater professionalism to their own future activities. Overall, the sustainability of the Project is assessed as "likely".

## **E. Impact**

74. The Project's environmental impact appears to have been entirely positive. A rapid visual inspection of sites visited during the June 2007 Project Completion Review Mission shows that the vegetative cover has been restored over a substantial area, and this will certainly reduce soil erosion on the steeper slopes and prevent sediment being deposited into the watersheds. All the communes visited reported that water in the rivers and wells is now available for longer periods during the dry season, and the Truc Kinh reservoir manager reported on television that the water levels remained higher for longer, due to the reduction in flash run-off following heavy rain. Although evapotranspiration may be higher from tree crops than from bare soil or scrub, it seems that improved infiltration is more than offsetting the additional water used by the trees.

75. The social impact has also been positive. Food security was improved through increased agricultural production, the production of fruit and nuts, farmers having tenure security over the land that they cultivate, sources of income diversified through a range of new crops, and incomes enhanced from increased outputs of marketable products. The improvement in access provided by the village roads helps villagers to maximize the value of these benefits, aided by better market intelligence gained through mobile phones. All young children in the project communes are now attending school, and the increased incomes should help families sustain their children's education. The additional classrooms constructed also perform a valuable community function by providing room for meetings and other cultural activities, especially in the more remote villages where classrooms may be the only public building.

76. The Project's additional beneficial impacts include the strengthening of institutional capacity at all levels. The strengthening was not confined to the project implementation staff, but also benefited staff from the line agencies involved, especially at the commune and district levels, where exposure to new ideas and approaches led to the acceptance of a participatory approach to planning. Strengthening the institutions at commune and district levels also demonstrated that given adequate training, support, and exposure to improved management methods, local institutions are capable of greater responsibility. This was an important finding in support of greater decentralization of technical and financial management.

## **F. Financial and Economic Performance**

77. As plantations are in the early stages of growth and will not come into full production until 2012, it is premature to undertake a project-wide financial or economic analysis. However, financial returns of sample subprojects indicate moderate to high financial rates of return (FIRR). For example, for six sampled subprojects, FIRR for bamboo, agroforestry, irrigated rice, and *Acacia mangium/Litsea spp.* plantations are estimated at 21%, 19%, 11%, and 12%, respectively. If other project benefits such as soil and watershed protection are monetized, the economic rate of return (EIRR) is likely to be above 16–17%, which is a good EIRR for a project of this nature. Appendix 12 provides the financial and economic analyses.

# **IV. OVERALL ASSESSMENT AND RECOMMENDATIONS**

## **A. Overall Assessment**

78. Overall, the Project is assessed as "successful" based on relevance, effectiveness, efficiency, and sustainability. This assessment of achievements is based on the funds actually invested. The plantation and financial targets achieved were substantially smaller than that

originally envisaged, but the reduced scale was in line with the reduced expenditure. Watershed protection outcome was much as originally planned because the Project focused on protection instead of reforestation. Due to the fact that this was the first loan for the sector in Viet Nam, there was no previous experience that might have drawn attention to the difficulties of working within the Government's rigid financial management procedures.

## **B. Lessons**

79. For integrated forestry sector projects, a time frame of 6 years for project implementation is not appropriate. At least an 8-year implementation phase must be envisaged from the beginning.

80. It is important that investment scales are commensurate with the nature of operations, absorption, and delivery capacity on the ground. Moreover, for maximizing operational, administrative, and financial efficiency, a cluster approach to project design and implementation is worth exploring.

81. It is important that the correct institutions are involved in project design and implementation. For example, while FDP might have been the correct provincial-level Implementing Agency from the official point of view, DARD was better suited for the Project, because unlike FPD, it is not a forestry law enforcement department.

82. The project design must incorporate financial planning and management procedures that apply to project implementation according to the Government's regulations. These procedures were too inflexible and cumbersome to cope with the Project's needs, so special arrangements had to be negotiated during project implementation. The Government eventually recognized the CDPs as the official documents for budgetary approval, but they could not be adjusted after approval. The project design envisaged development plans being prepared at the district/provincial level and then being incorporated into an annual plan of operations. This plan was primarily intended to meet ADB's requirements for ensuring that the request for funds was in line with the agreed investments and disbursement schedule. The Government required a more detailed plan, which gave exact targets for each commune and exact budget amounts in accordance with their standard cost norms, to be used in disbursing funds to local bank accounts. Steps have subsequently been taken through a harmonization of investment framework study to improve the integration of procedures for the Government and all donors.

83. It is necessary to ensure that arrangements are made to provide expertise for designing, managing, and implementing training programs. Viet Nam's forestry sector has not yet developed the capacity to provide training in accordance with accepted international standards using participative and interactive approaches with curricula based on training needs.

84. The causes of implementation delays at the initial stage should have been identified earlier. When the MTR was carried out in December 2000, so much time had passed that it became necessary to reduce the loan's amount and to extend the Project's duration. Despite the delays, which were mainly due to the project design, the TA consultants' inputs were not adjusted, and the consultants' inputs for the first 3 years were mainly used in the preparation of a range of reports that had little impact on project performance. When it became apparent that implementation was seriously delayed, the consultants' inputs should have been deferred so that the available budget was not depleted and the technical support was available for the time when implementation eventually commenced.

## C. Recommendations

### 1. Project-Related

85. The combination of forestry investments with poverty reduction, food security, and community development greatly enhanced project benefits, since later investments resulted in almost immediate improvements to livelihoods that will sustain farmers. To this end, it is important that MARD adheres to the timetable for issuing a decree to allow the Governments' interests in the plantations to be handed over to the farmers so that they can harvest crops as soon as they are ready.<sup>22</sup> This will avoid disappointment for the farmers and will help to sustain interest in maintaining the plantations and in regenerating them after harvest.

86. The Project's social, environmental, and economic impacts will increase in the coming years as the forest cover develops and crops begin to generate income. The main reported benefit of water conservation is improved distribution of groundwater discharge into reservoirs and wells, which has the effect of prolonging the availability of water throughout the dry season. Impressions of such effects are notoriously subjective and can be fleeting if only judged over one or two seasons. However, if the changes are real and sustained, then it represents an extremely important project outcome and will greatly enhance its economic benefits. Regularly monitoring water levels in wells with a simple depth gauge would provide good quantitative evidence of any changes that are occurring.

87. The agroforestry and home garden improvement investments are already yielding a variety of produce, and some bamboo plantations are also being harvested. By the end of 2007, it is expected that regulations will be in place to allow the Government to liquidate its interests in the plantations and the beneficiaries to commence harvesting. However, the MIS set up by the Project for monitoring the inputs and physical planting targets has been allowed to lapse. The EA should allocate a specific budget for its maintenance and data collected for each commune on the quantities of produce harvested and the prices obtained by project beneficiaries. This information will be invaluable for improving the efficiency of future investments, and will help to support advice to farmers on what crops to grow and how to ensure good yields.

88. MARD should prepare a follow-up action plan for the farmer beneficiaries in Thanh Hoa and Quang Tri who will not have access to continued support from the follow-up TA on the Forest Livelihood Project in the Central Highlands (FLITCH).<sup>23</sup> The FLITCH provincial implementation units in Gia Lai and Phu Yen should provide continued support to the farmers that participated in the Project, especially in the areas of harvesting, marketing, business development, and regeneration of the planted crops post-harvest. For Thanh Hoa and Quang Tri, MARD should submit the action plan to the Trust Fund for Forests to seek funds to cover the same type of support, with a budget to cover the continuation of the monitoring as recommended above.

89. FLITCH will allow the EA and ADB to consolidate the project outcomes in Gia Lai and Phu Yen. ADB should also work with the EA and other development partners to consolidate project outcomes in Thanh Hoa and Quang Tri.

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<sup>22</sup> Scheduled during last quarter of 2007.

<sup>23</sup> ADB. 2006. *Report and Recommendation of the President to the Board of Directors for Proposed Loan and Technical Assistance to the Socialist Republic of Viet Nam for the Forests Livelihood Improvement in the Central Highlands*. Manila.

90. The timing of the Project Performance Evaluation Report should be planned no earlier than 2012, when most plantations established under the Project reach harvestable age. Information on harvests and yields will be essential to measure and evaluate project performance in terms of outputs and impact.

## **V. GENERAL**

91. Viet Nam's forestry sector is developing very rapidly, and lessons related to improving and developing this sector are being learned from many sources. The Government is decentralizing responsibilities to the provinces and lower levels of administration, where capacity and experience is still weak. Therefore, it is very important that experience and knowledge gained during project implementation is shared as widely as possible and is fully utilized in sector management. There is insufficient appreciation at all government levels that the forestry sector must be managed efficiently if it is to fully contribute to national development. The sector is overregulated, with too much emphasis on detailed prescription of what must be done rather than on defining only those activities that are not permitted. This stifles innovation and results in many perverse outcomes, such as the establishment of protection forest plantations on land that is suitable for productive commercial forestry without any serious environmental limitations. There is also overemphasis on the rigid definition of forestland according to function rather than on the development of management plans for tracts of forest. It is proposed that FLITCH (footnote 23) gradually introduce this type of management planning.

## PROJECT FRAMEWORK

Design Summary	Primary Target	Monitoring Mechanisms	Key Assumptions
<p><b>Goal</b></p> <p>To enhance environmental protection and conservation of Viet Nam's natural resources</p>	The net rate of forestry resources depletion reduced to zero by the end of 2005	Periodic FPD reports from monitoring of the forest utilization and replanting program	<ul style="list-style-type: none"> <li>Government consistently supports implementation of TFAP and mobilizes adequate resources for this purpose.</li> </ul>
<p><b>Purpose</b></p> <p>To rehabilitate degraded forests and barren land</p> <p>To improve watershed management</p>	<p>Resource inventory of critical watersheds completed by end of 1998</p> <p>Participatory approach adopted by FPD and implemented by field staff</p>	<p>FPD progress reports on resource inventory</p> <p>FPD progress reports on social forestry</p>	<ul style="list-style-type: none"> <li>Necessary maps and aerial photographs are prepared on time.</li> <li>Active participation of forest-based communities in field implementation</li> </ul>
<p><b>Outputs</b></p> <p>1. Capacity building</p> <p>1.1 FPD staff trained participatory land use planning</p> <p>1.2 Villages organized into functional groups</p> <p>1.3 Villages trained in social forestry</p> <p>1.4 MIS established and operational</p> <p>2. Policy reform</p> <p>2.1 Land allocation policy revised and disseminated</p> <p>2.2 Role of SFEs redefined</p> <p>2.3 Fuelwood utilization policy formulated</p>	<p>200 FPD staff trained within the country by end of 1999</p> <p>6 FPD staff members trained overseas by end of 2000</p> <p>50 subprojects have functional organizations by end of 1999</p> <p>500 members of farmer groups trained by end of 1999</p> <p>At least 4 FPD staff members assigned to MIS</p> <p>MIS reports issued quarterly by end of 1998</p> <p>Participatory land allocation procedures issued by end of 1998</p> <p>SFEs' role redefined by end of 1998</p> <p>Regulation issued by the end of 1998</p>	<p>Project progress reports and ADB review mission reports</p> <p>Project progress reports and ADB review mission reports</p>	<ul style="list-style-type: none"> <li>Wide acceptance of social forestry approach by FPD hierarchy</li> <li>FPD hierarchy endorses policy improvements in the allocation of forestlands and the roles of SFEs and minorities in forestland development</li> </ul>

Design Summary	Primary Target	Monitoring Mechanisms	Key Assumptions
<p>2.4 Cost recovery policy formulated</p> <p>3. Subprojects</p> <p>3.1 Social analysis carried out</p> <p>3.2 Village land use maps prepared and accepted by village groups and FPD</p> <p>3.3 Degraded forestlands replanted</p> <p>3.4 Barren lands afforested</p> <p>3.5 Food crop production enhanced</p> <p>3.6 Agroforestry schemes implemented</p> <p>3.7 Grazing lands improved</p>	<p>Implementation procedure issued by end of 1998</p> <p>Socioeconomic surveys completed for each subproject by end of 1999</p> <p>A land use map for each village/subproject completed in first year of subproject implementation</p> <p>33,000 ha replanted by end of 2003</p> <p>45,000 ha afforested by the end of 2003</p> <p>15,000 ha cultivated for production of food grains and other crops</p> <p>9,000 ha under agroforestry operational by end of 2003</p> <p>12,000 ha of grazing lands improved</p>	<p>Project progress reports and ADB's review mission reports</p>	<ul style="list-style-type: none"> <li>• Effective leadership at grassroots level; and strong support by political leadership at commune, district, and provincial levels</li> </ul>
<p><b>Activities</b></p> <p>1. Capacity building</p> <p>1.1 Preparation of aerial photographs and acquisition of satellite imagery</p> <p>1.2 Contracting out of in-country training of FPD staff and farmers</p> <p>1.3 Arranging for overseas training of FPD staff</p> <p>1.4 Field consultants</p>	<p>\$2.0 million</p>	<p>Progress reports</p>	<p>Close coordination between village organization and FPD staff</p>

Design Summary	Primary Target	Monitoring Mechanisms	Key Assumptions
2. Policy reform 2.1 Review of existing regulation regarding land allocation	\$5.2 million for consultancy services	Progress reports	Close coordination between village organizations and FPD staff
2.2 Discussion of new policies at local level and with central government officials 2.3 Dissemination of new regulations 3. Subprojects 3.1 Organize project office and designate key staff members 3.2 Recruit consultants 3.3 Recruit FPD staff for training 3.4 Establish nurseries 3.5 Procure vehicles and equipment	\$41.7 million		Close coordination between village organizations and FPD staff

ADB = Asian Development Bank, FPD = Forest Protection Department, MIS = management information system, SFE = state forest enterprise, TFAP = tropical forest action plan

## LIST OF SUBPROJECTS

### A. Ba Watershed

#### Gia Lai Province

1. So Pai\*
2. Dong
3. To Tung
4. Dak Troi\*
5. Ayun\*
6. Ha Ra
7. Dear
8. Lo Bang
9. An Trung
10. Chu Kray
11. Ha Tam
12. Ear Sai
13. Ear Bol
14. Ear Tun
15. Ear To
16. Ear Moc
17. Dak Bang
18. Chu Ngoc

#### Phuyen Province

1. Son Ha
2. Son Nguyen
3. Son Xuan
4. Son Phuoc
5. Song Hinh
6. Song Giang
7. Duc Binh Dong
8. Duc Binh Tay

### B. Chu Watershed

#### Thanh Hoa Province

1. Xuan Cam
2. Luong Son
3. Xuan Cao
4. Van Xuan
5. Tan Thanh\*
6. Xuan Khao
7. Xuan Thang
8. Xuan Loc
9. Luan Khe
10. Yen Nhan
11. Xuan Chinh
12. Xuan Le

### C. Truc Kinh Watershed

#### Quang Tri Province

1. Cam Tuyen
2. Cam Thuy
3. Cam Chinh
4. Cam Nghia
5. Linh Thuong
6. Hai Thai\*
7. Linh Hai

\* Core subprojects

## SUMMARY OF TRAINING

Year	Target Participants	No. of Courses	Total No. of Participants <sup>a</sup>	Female	%	Minority	%
1998	Project Staff	8	144	7	5	20	14
	Farmers	0	0	0		0	
	<b>Total</b>	<b>8</b>	<b>144</b>	<b>7</b>	<b>5</b>	<b>20</b>	<b>14</b>
1999	Project Staff	9	156	10	6	12	8
	Farmers	0	0	0		0	
	<b>Total</b>	<b>9</b>	<b>156</b>	<b>10</b>	<b>6</b>	<b>12</b>	<b>8</b>
2000	Project Staff	16	312	32	10	26	8
	Farmers	0	0	0		0	
	<b>Total</b>	<b>16</b>	<b>312</b>	<b>32</b>	<b>10</b>	<b>26</b>	<b>8</b>
2001	Project Staff	20	512	76	15	6	1
	Farmers	0	0	0		0	
	<b>Total</b>	<b>20</b>	<b>512</b>	<b>76</b>	<b>15</b>	<b>6</b>	<b>1</b>
2002	Project Staff	32	931	155	17	45	5
	Farmers	159	4,508	593	13	2,686	60
	<b>Total</b>	<b>191</b>	<b>5,439</b>	<b>748</b>	<b>14</b>	<b>2,731</b>	<b>50</b>
2003	Project Staff	28	1,189	189	16	478	40
	Farmers	61	2,076	265	13	1,261	61
	<b>Total</b>	<b>89</b>	<b>3,265</b>	<b>454</b>	<b>14</b>	<b>1,739</b>	<b>53</b>
2004	Project Staff	8	309	59	19	13	4
	Farmers	54	1,050	244	23	244	23
	<b>Total</b>	<b>62</b>	<b>1,359</b>	<b>303</b>	<b>22</b>	<b>257</b>	<b>19</b>
2005	Project Staff	9	227	30	13	64	28
	Farmers	8	123	2	2	24	20
	<b>Total</b>	<b>17</b>	<b>350</b>	<b>32</b>	<b>9</b>	<b>88</b>	<b>25</b>
Grand Total	Project Staff	<b>130</b>	<b>3,780</b>	<b>558</b>	<b>15</b>	<b>664</b>	<b>18</b>
	Farmers	<b>282</b>	<b>7,757</b>	<b>1,104</b>	<b>14</b>	<b>4,215</b>	<b>54</b>
	<b>Grand Total</b>	<b>412</b>	<b>11,537</b>	<b>1,662</b>	<b>14</b>	<b>4,879</b>	<b>42</b>

<sup>a</sup> Includes 664 Ministry of Agriculture and Rural Development (MARD) staff engaged in forest related activities

Source:MARD.

## COMMUNE DEVELOPMENT PLANS

**Table A4.1: Subproject Investments  
by Commune Development Plan**  
June 2004, \$

Province	Gia Lai	Phu Yen	Quang Tri	Thanh Hoa	Total	%
<b>A. Implementation Costs</b>	<b>3,880,818</b>	<b>1,917,591</b>	<b>1,589,923</b>	<b>3,201,313</b>	<b>10,589,645</b>	<b>80.54</b>
<b>Forestry Components</b>	<b>3,072,047</b>	<b>1,442,092</b>	<b>1,283,360</b>	<b>2,382,222</b>	<b>8,180,080</b>	<b>62.21</b>
Protection Forest Afforestation	69,148	428,042	704,653	878,010	2,079,853	15.82
Enrichment Planting	49,315	163,888	0	292,690	505,894	3.85
Forest Protection	500,815	186,799	19,445	550,248	1,257,307	9.56
Production Forest Afforestation	361,949	135,011	410,758	373,096	1,280,815	9.74
Agroforestry	2,091,179	528,351	148,503	288,178	3,056,211	23.24
<b>Rural Infrastructure</b>	<b>808,411</b>	<b>475,499</b>	<b>306,564</b>	<b>819,090</b>	<b>2,409,564</b>	<b>18.33</b>
Small scale irrigation	131,394	25,427	123,296	531,886	812,002	6.18
Water supply systems	107,400	97,519	13,709	6,413	225,040	1.71
Inter village roads	381,924	259,753	124,419	28,171	794,267	6.04
Primary schools	187,694	85,949	43,657	219,650	536,949	4.08
Health posts	0	6,852	1,484	32,971	41,306	0.31
<b>B. Other Costs</b>	<b>99,924</b>	<b>48,102</b>	<b>18,934</b>	<b>40,880</b>	<b>207,839</b>	<b>1.58</b>
Checking	8,597	2,461	2,999	5,527	19,584	0.15
Bank Charges	91,327	45,640	15,935	35,353	188,255	1.43
<b>C. Implementation Support</b>	<b>388,493</b>	<b>182,072</b>	<b>83,725</b>	<b>263,085</b>	<b>917,375</b>	<b>6.98</b>
Subproject Preparation	102,583	45,862	24,079	92,509	265,033	2.02
Investment Support	231,929	106,705	21,031	50,607	410,271	3.12
Incremental Operating Costs	53,981	29,505	12,015	29,163	124,664	0.95
Extension	0	0	26,600	90,806	117,406	0.89
<b>D. Total Base Costs</b>	<b>4,369,234</b>	<b>2,147,764</b>	<b>1,692,583</b>	<b>3,505,277</b>	<b>11,714,859</b>	<b>89.09</b>
<b>E. Contingencies</b>	<b>560,827</b>	<b>327,271</b>	<b>205,503</b>	<b>340,348</b>	<b>1,433,950</b>	<b>10.91</b>
Physical Contingencies	71,875	37,078	56,006	42,665	207,625	1.58
Price Contingencies	488,952	290,192	149,497	297,683	1,226,324	9.33
<b>F. TOTAL SUBPROJECT COSTS</b>	<b>4,930,062</b>	<b>2,475,035</b>	<b>1,898,086</b>	<b>3,845,626</b>	<b>13,148,809</b>	<b>100.00</b>
<b>Percentage</b>	<b>37.49</b>	<b>18.82</b>	<b>14.44</b>	<b>29.25</b>	<b>100.00</b>	

Source: TA Final Report, Forestry Sector Project, February 2005.

**Table A4.2: Investment Portfolio by Province (June 2004)**

Investment Category	Gia Lai		Phu Yen		Quang tri		Thanh Hoa		Total	
	\$	%	\$	%	\$	%	\$	%	\$	%
Implementation Costs	3,880,818	100.0	1,917,591	100.0	1,589,923	100.0	6,201,313	100.0	10,589,645	100.0
Protection Forest										
Afforestation	69,148	1.8	428,042	22.3	704,653	44.3	878,010	27.4	2,079,853	19.6
Enrichment Planting	49,315	1.3	163,888	8.5	0.0	0.0	292,290	9.1	505,894	4.8
Forest Protection	500,815	12.9	186,799	9.7	19,445	1.2	550,248	17.2	1,257,307	11.9
Production Forest										
Afforestation	361,949	9.3	135,011	7.0	410,758	25.8	373,096	11.7	1,280,815	12.1
Agroforestry	2,091,179	53.9	528,351	27.6	148,503	9.3	288,179	9.0	3,056,211	28.9
Rural Infrastructure	808,411	20.8	475,499	24.8	306,564	19.3	819,090	25.6	2,409,564	22.8
Small scale irrigation	131,394	3.4	25,427	1.3	123,296	7.8	531,886	16.6	812,002	7.7
Water supply systems	107,400	2.8	97,519	5.1	13,709	0.9	6,413	0.2	225,040	2.1
Intervillage roads	381,924	9.8	259,753	13.5	124,419	7.8	28,171	0.9	794,267	7.5
Primary schools	187,694	4.8	85,949	4.5	43,657	2.7	219,650	6.9	536,949	5.1
Health posts	0	0.0	6,852	0.4	1,484	0.1	32,971	1.0	41,306	0.4

Source: TA Final Report, Forestry Sector Project, February 2005.

## PROJECT COSTS

**Table A5.1: Project Costs by Category**  
(\$ million)

Item	Appraisal			Actual		
	Foreign	Local	Total	Foreign	Local	Total
Development of Subprojects/Civil Works	4.200	37.600	41.800	1.153	11.109	12.262
Equipment	0.600	0.100	0.700	0.838	0.086	0.924
Resource Inventory	0.100	0.700	0.800	0.087	0.453	0.540
Capacity Building	0.300	1.700	2.000	0.298	0.844	1.142
Consulting Services	3.700	1.500	5.200	5.640	-	5.640
Incremental Operating Costs	0.300	1.200	1.500	0.332	0.891	1.223
Service Charge on Bank Loan	1.200	-	1.200	0.203		0.203
<b>Total</b>	<b>10.400</b>	<b>42.800</b>	<b>53.200</b>	<b>8.551</b>	<b>13.383</b>	<b>21.934</b>

Sources: Asian Development Bank, Ministry of Agriculture and Rural Development.

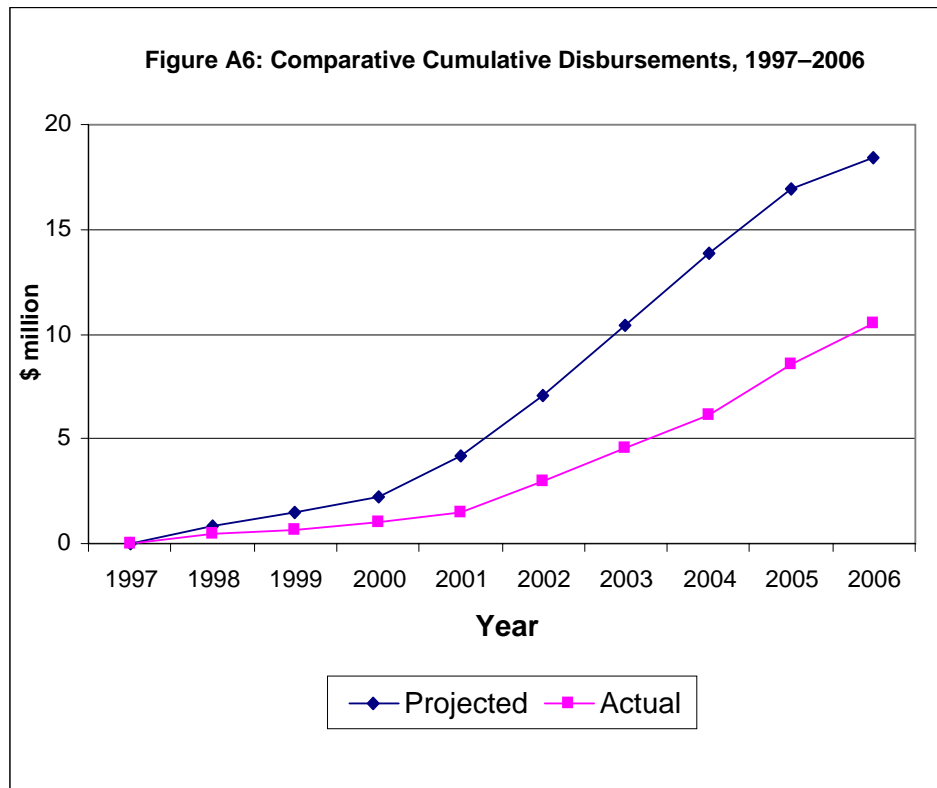
**Table A5.2: Project Costs by Financier**  
(\$ million)

Item	ADB			Government of the Netherlands			Government of Viet Nam			Beneficiaries			Total		
	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total
<b>A. Development of Subprojects/Civil Works</b>	<b>1.153</b>	<b>7.166</b>	<b>8.319</b>					<b>1.082</b>	<b>1.082</b>		<b>2.861</b>	<b>2.861</b>	<b>1.153</b>	<b>11.109</b>	<b>12.262</b>
1. Afforestation/Reforestation	0.220	1.321	1.541					0.182	0.182				0.220	1.503	1.723
2. Natural Forest Protection	0.129	0.776	0.905					0.102	0.102				0.129	0.878	1.007
3. Tree Plantation	0.092	0.547	0.639					0.077	0.077		0.582	0.582	0.092	1.206	1.298
4. Agroforestry	0.123	0.752	0.875					0.147	0.147		1.669	1.669	0.123	2.568	2.691
5. Pasture Development	-	-	-					-	-		0.610	0.610	-	0.610	0.610
6. Village Infrastructure	0.589	3.770	4.359					0.574	0.574				0.589	4.344	4.933
<b>B. Equipment</b>	<b>0.838</b>	<b>0.038</b>	<b>0.876</b>					<b>0.048</b>	<b>0.048</b>				<b>0.838</b>	<b>0.086</b>	<b>0.924</b>
<b>C. Resource Inventory</b>	<b>0.087</b>	<b>0.401</b>	<b>0.488</b>					<b>0.052</b>	<b>0.052</b>				<b>0.087</b>	<b>0.453</b>	<b>0.540</b>
1. Forest Demarkation	0.030	0.139	0.169					0.028	0.028				0.030	0.167	0.197
2. Land Inventory	0.057	0.262	0.319					0.024	0.024				0.057	0.286	0.343
3. Watershed Management	-	-	-										-	-	-
<b>D. Consulting Services</b>				<b>5.640</b>		<b>5.640</b>							<b>5.640</b>		<b>5.640</b>
<b>E. Capacity Building</b>				<b>0.298</b>	<b>0.844</b>	<b>1.142</b>							<b>0.298</b>	<b>0.844</b>	<b>1.142</b>
<b>F. Incremental Costs</b>	<b>0.332</b>	<b>0.276</b>	<b>0.608</b>					<b>0.615</b>	<b>0.615</b>				<b>0.332</b>	<b>0.891</b>	<b>1.223</b>
<b>G. Service Charge</b>	<b>0.203</b>	<b>-</b>	<b>0.203</b>					<b>-</b>	<b>-</b>				<b>0.203</b>	<b>-</b>	<b>0.203</b>
<b>Total</b>	<b>2.613</b>	<b>7.881</b>	<b>10.494</b>	<b>5.640</b>	<b>-</b>	<b>6.782</b>	<b>-</b>	<b>1.797</b>	<b>1.797</b>	<b>-</b>	<b>2.861</b>	<b>2.861</b>	<b>8.551</b>	<b>13.383</b>	<b>21.934</b>

**PROJECTED AND ACTUAL DISBURSEMENTS 1997–2006**  
(\$ million)

Year	For the Year		Cumulative		
	Projected	Actual	Projected	Actual	% of Loan
1997	-		-	-	-
1998	0.850	0.504	0.850	0.504	4.8
1999	0.680	0.152	1.530	0.656	6.3
2000	0.700	0.402	2.230	1.058	10.1
2001	2.000	0.395	4.230	1.453	13.8
2002	2.845	1.502	7.075	2.955	28.2
2003	3.300	1.565	10.375	4.520	43.1
2004	3.510	1.584	13.885	6.104	58.2
2005	3.010	2.425	16.895	8.529	81.3
2006	1.500	1.965	18.395	10.494	100.0

Source: Asian Development Bank cost estimates and actual loan records.



### PROJECT IMPLEMENTATION SCHEDULE

Activity	1				2				3				4				5				6				7				8							
	1998				1999				2000				2001				2002				2003				2004				2005							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
A. Completion of Socioeconomic Surveys Mapping, Land Allocation																																				
B. Engagement of Consultants																																				
1. Contract with Consultants																																				
2. Field Operation																																				
C. Capacity Building																																				
1. Training of Beneficiaries/Staff																																				
2. Strengthening of Extension Service																																				
3. Workshops and Seminars																																				
4. Overseas Training																																				
D. Preparation of Subprojects																																				
E. Nurseries																																				
1. Establishment																																				
2. Operation																																				

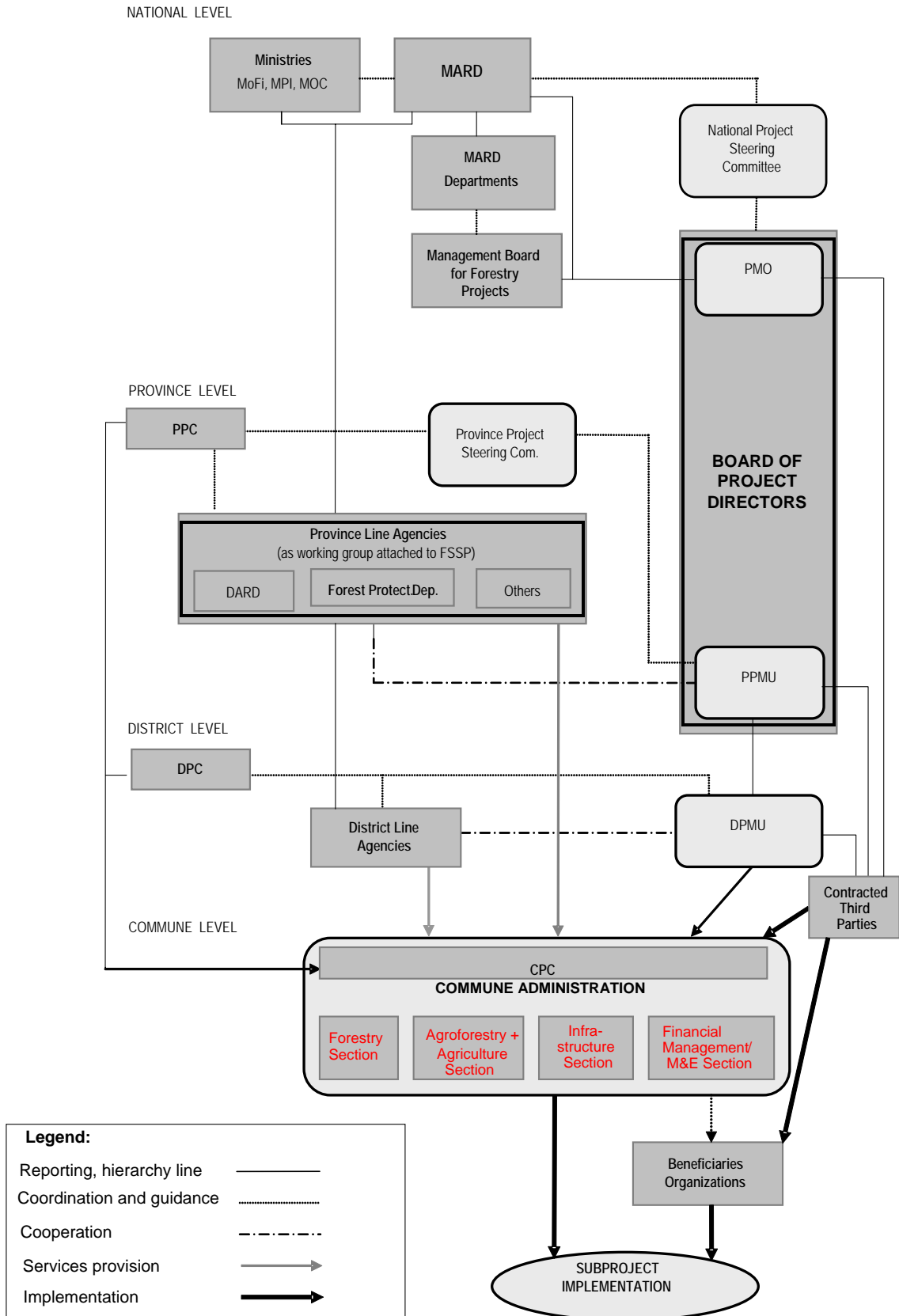


## PROJECT IMPLEMENTATION SCHEDULE

Activity	1				2				3				4				5				6				7				8			
	1998				1999				2000				2001				2002				2003				2004				2005			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
- 10 Subprojects																																
- 20 Subprojects																																
- 7 Subprojects																																
G. Procurement of Equipment/Vehicles																																

Original Implementation Schedule  
 Actual Implementation Schedule

**Revised Project Organization in Implementation Phase**



CPC = commune people's committee, DARD = Department of Agriculture and Rural Development, DPC = district people's committee, DPMU = district project management unit, FSSP = forest sector support program, MARD = Ministry of Agriculture, and Rural Development, MOC = Ministry of Commerce, MOFi = Ministry of Finance, MPI = Ministry of Planning and Investment, PMO = project management office, PPC = provincial people's committee, PPMU = provincial project management unit. Sources: GFA Terra Systems, ADB Forestry Sector Project, Final Consultant Report, Viet Nam, (TA 2852, page 9).

## Compliance with Loan Covenants

Covenant	Reference in Loan Agreement	Status of Compliance
<b>Fielding of Consultants and Contractors</b>		
In carrying out the Project, the Borrower shall cause competent and qualified consultants and contractors, acceptable to the Borrower and the Bank, to be employed to an extent and upon terms and conditions satisfactory to the Borrower and the Bank.	Loan Agreement (LA), Section 4.03	Complied with.
<b>Project Accounts</b>		
The Borrower shall maintain, or cause to be maintained, records and accounts adequate to identify the goods and services and other items of expenditure financed out of the proceeds of the Loan, to disclose the use thereof in the Project, to record the progress of the Project (including the cost thereof) and to reflect, in accordance with consistently maintained sound accounting principles, the operations and financial condition of the agencies of the Borrower responsible for the carrying out of the Project and operation of the Project facilities, or any part thereof.	LA, Section 4.06 (a)	Complied with.
The Borrower shall (i) maintain, or cause to be maintained, separate accounts for the Project; (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to the Bank; (iii) furnish to the Bank, as soon as available but in any event not later than twelve months after the end of each related fiscal year, certified copies of such audited accounts and financing statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and compliance with the covenants of this Loan Agreement as well as on the use of the procedures for imprest account and statement of expenditures), all in the English language; and (iv) furnish to the Bank such other information concerning such accounts and financial statements and the audit thereof as the Bank shall from time to time reasonably request.	LA, Section 4.06 (b)	Complied late.

Covenant	Reference in Loan Agreement	Status of Compliance
<b>Project Implementation</b>		
<p>At the national level, the PMO within MARD shall be responsible for implementation of the Project. The PMO shall be headed by the PMO Director, who will be a senior official of MARD experienced in participatory forestry development with the rank of Director or higher. The PMO shall be staffed by a team of specialists with expertise in forestry, agroforestry, accounting and economics. The PMO Director and staff shall be appointed within one month of the effective date.</p>	LA, Schedule 6, para. 1	Complied with.
<p>At the provincial level, a Provincial Project Management Unit (PMU) shall be established in each Project province prior to preparation of any subprojects. In Gia Lai Province, two District Project Management Unit (DPMU)s shall be established in addition to the PPMU. The PPMUs, assisted by the DPMUs, as the case may be, shall be responsible for preparing subprojects for inclusion in the Project.</p>	LA, Schedule 6, para 2(a)	Complied with.
<p>Each PPMU shall be headed by a Manager selected from among the senior officers of the provincial level forestry sector. Each PPMU Manager shall be assisted by one or more Deputy Managers selected from among the senior officers of the district level forestry sector of each of the districts covered by the Deputy Managers from the respective districts. Each PPMU shall be staffed by a team of specialist with expertise in forestry, agroforestry, sociology, economics and environment. The Managers, Deputy Managers and staff of the PPMUs and DPMUs shall be appointed on a full-time basis.</p>	LA, Schedule 6, para 2(b)	Complied with.

Covenant	Reference in Loan Agreement	Status of Compliance
<b>Project Coordination</b>		
<p>Within one month of the Effective Date, the Borrower shall establish a Project Steering Committee (PSC), which shall be responsible for coordination of Project-related activities among the Borrower's agencies at the national level. The PSC shall be headed by the Vice-Minister of MARD in charge of Forestry. The members of the PSC shall include, among others, senior officials from SBV, the Ministry of Planning and Investment, the Ministry of Finance, and the Ministry of Interior. The PSC shall meet at least once every quarter.</p>	LA, Schedule 6, para 3(a)	Complied with.
<p>At the provincial level, Project coordination among provincial and district level agencies shall be the responsibility of provincial level steering committees, which shall be established in each Project Province within one month of the Effective Date. The provincial level steering committees shall be headed by the Vice-Chairman of the respective provincial People's Committees and their members shall include representatives of the district People's Committees and provincial level agencies involved in Project implementation, such as the provincial offices of the Department of Agriculture and Rural Development, Land Administration and Environment. The provincial steering committees shall meet at least once very quarter.</p>	LA, Schedule 6, para 3(b)	Complied with.
<b>Annual Plans of Operation</b>		
<p>For each year of Project implementation, the PMO shall prepare an Annual Plan of Operation (APO) which shall specify the Project activities for the coming year, and related budget estimates and staffing requirements. The APOs shall be reviewed by the PSC prior to implementation and evaluated at the end of each year before preparation of the next APO. The PMO shall furnish copies of the APOs to the Bank.</p>	LA, Schedule 6, para 4	Partially complied with. APOs were produced in the form of physical and financial target projections.

Covenant	Reference in Loan Agreement	Status of Compliance
<b>Land Classification and Allocation</b>		
<p>Before the end of 1997 with respect to the Project Area, and before the end of 1998 for the rest of the country, the Borrower shall (i) complete the ongoing program of land use reclassification to demarcate the land according to the main purposes for which it shall be used, such as agriculture, forests, and human settlements, (ii) within the areas marked as forest land, classify the major types of forests to be grown in such areas, namely forests for production, protection or special uses, and (iii) provide documentation including maps showing the land use plans and forest classification to the Bank.</p>	LA, Schedule 6, para 7	<p>Complied with. In November 2003, Parliament passed a new land law which contained marked improvements in providing ethnic minorities with access to collateral land titles, based on local traditions. The new law became effective on 1 July 2004. For Project area, land classification and allocation was completed per CDP implementation program.</p>
<p>The Borrower shall expedite the ongoing allocation of land classified as production forests to communities, households, groups and enterprises with a view to competing the issuance of certifications of long-term leases on a countrywide basis before 30 June 2003. For this purpose, the Borrower shall, with the assistance of the Project consultants and local NGOs, review and simplify the current land allocation procedures and carry out a public awareness campaign to inform the beneficiaries of the land allocation procedures, the funding provided under the Project for tree planting and the cost recovery procedures.</p>	LA, Schedule 6, para 8	Complied with.
<p>Before the end of 1998, the Borrower shall prepare a model forest protection contract between local governments responsible for protection forests in the Project area and groups that will undertake the forest protection activities, specifying rights and responsibilities of the contracting parties and sanctions in case of non-compliance, and submit such model contract to the Bank for its review and comments.</p>	LA, Schedule 6, para 9	Complied with.

Covenant	Reference in Loan Agreement	Status of Compliance
<b>State Forest enterprises</b>		
<p>Before the end of 1998, the Borrower shall, with the assistance of the Project consultants, complete a review of the performance of State Forest Enterprises (SFEs) with the view to (i) redefining their role in forestry development, (ii) formulating transparent guidelines regarding timber pricing and timber marketing, (iii) determining on the basis of the financial performance of the SFEs which are viable and which are not viable, and (iv) determining whether or not to reallocate lands that are currently under the control of SFEs but are not optimally used.</p>	LA, Schedule 6, para 10	<p>Complied with. Since 1999, the Government has issued 3 decrees on the restructuring of state-owned enterprises and forest enterprises (PM decision 187/199; PM decision 179/2003; Government decree 200/2004), which have guided their transition into independent forest companies charged with sustainable, profitable and socially responsible forest management.</p>
<b>Fuelwood Policy Measures</b>		
<p>As part of its overall fuelwood policy, the Borrower shall, in consultation with the Bank, take measures to (i) increase fuelwood production, not only through large-scale reforestation but also by encouraging rural households to plant multipurpose tree species along property boundaries, canals, roads, around homesteads and public buildings' (ii) stimulate the shift in demand for energy from fuelwood toward other energy sources; (iii) increase agricultural productivity of forest-based communities to reduce their dependence on fuelwood as sources of income; and (iv) enforce regulations preventing illegal access to specific forest areas.</p>	LA, Schedule 6, para 11	<p>Complied with. With Decision No. 178 from November 2001 (policy) and Circular No. 80 from September 2003 (implementation), the Government regulated the access of forest land and utilization of forest products, including fuelwood.</p>

Covenant	Reference in Loan Agreement	Status of Compliance
<b>Applied Research in Agroforestry</b>		
<p>The PMO, in consultation with the Bank, shall select and engage suitable local research institutions to carry out applied research in relevant agroforestry-related subjects. The PMO and each selected research institution shall enter into an agreement specifying (i) the scope of the research study; (ii) a general description of the research method; (iii) the cost and duration of the research; and (iv) required reports on the research results. Prior to execution of the agreement, the final draft shall be submitted to the Bank for approval.</p>	<p>LA, Schedule 6, para 12</p>	<p>Not applicable. This was eventually cancelled</p>
<b>Benefit Monitoring and Evaluation and Midterm Review</b>		
<p>The Ministry of Agriculture for Rural Development (MARD) shall prepare and submit to the Bank within six months of the Effective Date a Project monitoring and evaluation program. The benchmark for monitoring shall be the initial socioeconomic surveys of Subprojects. Under the monitoring and evaluation program annual reports shall be submitted to the Bank summarizing the progress in the participatory land allocation, physical progress in the reforestation and tree plantation establishment the role of the women and ethnic minorities in Project implementation, and the Project impact on beneficiaries.</p>	<p>LA; Schedule 6, para 13</p>	<p>Complied with.</p>
<p>By the end of the third year of Project implementation, the Borrower shall, in consultation with the Bank, carry out a midterm review (MTR) of the Project. If found necessary on the basis of the findings of the midterm review, adjustments shall be made in the Project design and implementation strategy.</p>	<p>LA, Schedule 6, para 14</p>	<p>Complied with</p>

## LIST OF VEHICLES AND EQUIPMENT PROCURED

Item	At Appraisal		Midterm Adjustment		Actual	
	Quantity	Amount (D million)	Quantity	Amount (D million)	Quantity	Amount (D million)
<b>A. Vehicles</b>	<b>15</b>		<b>15</b>	<b>6,045</b>	<b>15</b>	<b>8,196</b>
<b>B. Bike</b>			<b>119</b>	<b>3,689</b>	<b>57</b>	<b>1,427</b>
<b>C. Furniture</b>			<b>154</b>	<b>787</b>		<b>555</b>
<b>D. Office Equipment</b>				<b>5,224</b>		<b>3,484</b>
1. Desktop Computers & A4 Printers			40	1,860	48	1,126
2. Laptop Computer			-	-	7	284
3. Photocopying Machine			16	746	15	651
4. A4 Colored Printers			5	390	5	383
5. Digitalization Table			1	78	1	23
6. Scanner			1	39	2	46
7. Telephone			86	268	27	95
8. Cell Phone			15	117	10	80
9. Fax Machine			15	116	14	121
10. Air Conditioner			26	806	6	87
11. Projector			5	775	5	571
12. Refrigerator			6	29	3	17
<b>E. Field Tools</b>				<b>426</b>		<b>176</b>
1. Camera			15	93	7	60
2. Bicycle			135	209	66	52
3. GPS			23	124		64
<b>F. Others</b>			-	<b>2,461</b>		<b>183</b>
<b>Total</b>		<b>9,909</b>		<b>18,632</b>		<b>14,021</b>

GPS = Global Positioning System

Source: Ministry of Agriculture and Rural Development.

## PHYSICAL PROJECT OUTPUTS

Component	Target		Output	
	Appraisal <sup>a</sup>	Final <sup>b</sup> (2004)	Area (ha)	% of Final Target
<b>A. Afforestation of Protection Forest</b>	<b>59,000</b>	<b>11,032</b>	<b>8,136</b>	<b>74</b>
1. Plantation of Protection Forest	57,000	8,310	6,332	76
2. Enrichment Planting	2,000	2,722	1,804	66
<b>B. Production Forest Plantation</b>	<b>14,000</b>	<b>7,538</b>	<b>6,006</b>	<b>80</b>
<b>C. Pasture Improvement<sup>c</sup></b>	<b>12,000</b>	-	-	-
<b>D. Forest Protection<sup>c</sup></b>	-	<b>80,040</b>	<b>77,666</b>	<b>97</b>
1. Protection of Natural Forest	-	70,538	69,639	99
2. Natural Regeneration	-	9,502	8,027	84
<b>E. Agroforestry</b>	<b>29,000</b>	<b>12,435</b>	<b>9,597</b>	<b>77</b>
1. Forestry Tree/Soil Improvement				
Tree Planting		6,925	5,575	80
2. Home Garden Improvement		5,510	4,021	73
<b>Total Forest Area</b>	<b>114,000</b>	<b>111,045</b>	<b>101,405</b>	<b>91</b>

Rural Infrastructure	Appraisal	Actual	% of Final Target
Small Dams	33 dams	29 dams	88
Irrigation Channel	30 km	26 km	87
Inter-villages Earth Road	289 km	259 km	90
Wells	128 wells	106 wells	83
Water Supply System	5 systems	5 systems	100
Primary School	10,549 m <sup>2</sup>	10,333 m <sup>2</sup>	98
Commune Health Station	981 m <sup>2</sup>	884 m <sup>2</sup>	90

ha = hectare, km = kilometer, m<sup>2</sup> = square meters, MTR = midterm review mission.

<sup>a</sup> Covers 50 communes.

<sup>b</sup> Reduced to 38 communes during the midterm review in 2000. An additional 7 communes were added in 2004.

<sup>c</sup> The pasture improvement was deleted from the project design at the MTR because suitable land was lacking, and protection of remaining natural protection forest was added.

Source: Ministry of Agriculture and Rural Development.

## FINANCIAL AND ECONOMIC ANALYSES

### A. Introduction

1. The Forestry Sector Project (the Project) envisaged the establishment of a range of tree plantations to (i) protect three important watersheds, and (ii) improve livelihoods for rural communities through paid employment, enhanced food security from village irrigation schemes and home gardens of fruit trees, and commercial crop production in plantations or agroforestry systems. The Project was undertaken in a total of 45 communes in four provinces within several agroecological zones. Because the resulting plantations and village infrastructures varied, a significant number of plantation models were applied. In addition, the Project's early implementation delays entails that the oldest plantations are only beginning their seventh growing season at this mission's time, and most crops are young.

2. An initial financial and economic assessment of the Project's selected outcomes was undertaken in a sample of the communes. The financial evaluation considers the Project's establishment costs and adds in the notional value of the beneficiaries' contribution, which was intended to be 10% of the costs, but was mainly provided in-kind through labor. The amount of labor provided by beneficiaries was not accounted for, but the very low cost norms applied for all plantation models utilized suggests that the labor contribution was probably substantial. The project preparatory technical assistance (PPTA) for Forest Livelihood Project in the Central Highlands (FLITCH) estimated that the actual cost of establishing plantations—taking full account of the labor costs—was around \$600 per hectare (ha), which compares to cost norms for the Project's main plantation models, i.e., \$200 per ha. For the financial analysis, the notional value of the beneficiaries' labor contribution was added to the Project's costs as an additional 10%, but the financial internal rate of return (FIRR) was calculated with the assumption that the labor's real value is \$600 minus the cost norm, i.e., being the likely real cost minus the Project's proportion.

3. FIRR estimates were made for three investment models—each had examples planted in 2000, had a harvest, or a trader made a valuation of the standing crop. The latter situation applied to production plantations because the Government's interest in the plantations had not yet transferred to the beneficiaries to enable them to liquidate the crops. FIRRs were estimated for the following plantation models:

- (i) production plantations of *Acacia mangium* and *Litsea spp.* harvestable after 7 years;
- (ii) bamboo crops in protection forests, harvestable after 4 years; and
- (iii) agroforestry crops with cashews intercropped with cassava.

4. In addition, the FIRR was calculated for rice production in five communes where there was investment in small dams and irrigation channels, which resulted in increased yields and an additional crop harvested annually.

### B. Approach and Methodology

5. Information to support the analysis was provided by project staff, local government officials, and beneficiaries. Since no crops had been harvested at the time of the Project's closure, there is no data on actual yields, volumes harvested, or revenues. Therefore, the data used is derived from a limited number of samples, but none could be verified with actual records. For some models, the values for the FIRR calculated from the data presented to the mission are significantly higher than those estimated at appraisal and for the commune development plans (CDPs). This suggests that the yields and revenues may be exaggerated, possibly by quoting figures per ha that were for a larger area or were increased from a very small area. No one could vouch for the veracity of the figures provided, and so they must be treated with extreme caution. In addition:

- (i) All revenues were quoted in dong and were the domestic price.
- (ii) The dong is the unit of account converted to \$ at an exchange rate of D15,500 = \$1 prevailing in mid-2007.
- (iii) Transfer payments such as taxes, duties, and interest are excluded from the economic analysis.

6. The data quoted for the various crops' revenues correspond to farm-gate prices paid by local traders. Therefore, for forest crops, the cost of harvesting borne by the beneficiaries has been deducted to derive a stumpage value for the crops. A harvesting cost of \$40/ha has been assumed based on estimates made for the FLITCH PPTA.

7. During the mission, six communes were visited:<sup>1</sup> two each in Thanh Hoa and Quang Tri and one each in Gia Lai and Phu Yen. Meetings were held with provincial, district, and commune staff members; former provincial project management unit (PPMU) personnel; and farmers. A sample of plantations and infrastructure investments were visited. Data was provided on the investments made in each commune; however, since the Project's completion, no monitoring has been carried out, so maintenance, harvesting, and revenue data depend on approximate estimates. The prices quoted by farmers and local officials were generally the gross revenue per hectare at farm-gate prices paid by traders, and so the apparent yield can be estimated from the factory price minus the trader's handling and transport costs. Table A12.1 gives the apparent unit price for pulp logs based on a gross revenue of the D30 million/ha farm-gate price for a range of possible assumed yields. The most plausible figures, based on factory prices, are middle-range, with a harvest of around 55 cubic meters (m<sup>3</sup>)/ha. This would imply around 1,000 trees/ha, a maximum mean annual increment of about 8 m<sup>3</sup>/ha/year, a mean tree diameter of 12 centimeters (cm), and a price of about \$35/m<sup>3</sup> at the farm-gate. Delivery costs to the mill vary. From Quang Tri and Phu Yen provinces, around \$5/m<sup>3</sup> would be added, bringing the delivered price at the factory to about \$40/m<sup>3</sup>. This is reasonably in line with current prices quoted in Viet Nam—but is substantially higher than the general international price, and is therefore unlikely to be sustained. The yields that must be assumed to match the stated revenue with the realistic prices are high compared to the crops observed. Thus, the better crops may have been harvested.

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<sup>1</sup> Two each in Thanh Hoa and Quang Tri and one each in Gia Lai and Phu Yen provinces.

**Table A12.1: Comparison of Apparent Unit Price of Pulp Logs<sup>a</sup>**

Volume Harvested (m <sup>3</sup> /ha)	Number of trees per ha	MAI (m <sup>3</sup> /ha/annum)	Farmgate Price (\$/m <sup>3</sup> )
40	722	6	48.4
50	902	7	38.7
60	1083	9	32.3
70	1263	10	27.65

ha = hectare, m<sup>3</sup> = cubic meter, MAI = mean annual increment.

<sup>a</sup> Based on a gross revenue of D30 million per ha farmgate price.

Sources: ADB staff estimates.

8. The average unit costs for communes' various infrastructure investments are very reasonable (Table A12.2), and those seen during the mission were of sufficient quality to indicate that good value for the money had been obtained. The unit costs for the irrigation systems show considerable variation. In some communes, substantial dams were constructed; in others, existing dams were upgraded or only distribution channels were needed. The most expensive dam, which cost more than \$5,000/ha of irrigated land, is barely financially viable, requiring 10 years to achieve a positive rate of return. However, as discussed below, the Project's overall return on the investment in irrigation is positive.

9. The average investment costs in roads of around \$10,000 per kilometer (km) is in line with the World Bank's 2nd Rural Transport Project,<sup>2</sup> which had an average investment cost of around \$14,000 for rural roads. Since the Project roads were mainly short and primarily connected villages, the slightly lower costs seem justified.

**Table A12.2: Summary of the Unit Investment Costs for the Main Infrastructures (\$)**

Infrastructure	Thanh Hoa		Quang Tri		Gia Lai	Phu Yen	Mean
	Tan Thanh	Xuan Cao	Cam Ngia	Hai Tai	La Rbol	Son Giang	
Road (km)	12,866	12,865		11,461	5,966	10,232	10,678
Well (per HH)	80			39	86		68
Irrig. Dam/chan. (per ha)	2,570	5,055	439	405	462		1,786
School (m <sup>2</sup> )	72	74		48	110	54	72
Clinic (m <sup>2</sup> )	485	90					287

ha = hectare, HH = household, km = kilometre, m<sup>2</sup> = square meter.

Source: ADB staff estimates.

### C. Financial Analysis

10. The cost norms for the various tree planting models were very low compared to those calculated for the FLITCH PPTA, and they are insufficient to cover material costs, e.g., seedlings, fertilizers, and labor costs that would result in a beneficiary contribution of 10%. This contribution, which will provide a future income stream, is probably far greater than 10%. The Project's records give the total annual investment for each type of intervention in each commune, and do not distinguish between the initial investment and subsequent maintenance costs that are largely borne by the beneficiaries. In order to estimate a realistic FIRR value for the various crop models, it is important to attempt to incorporate all the inputs' costs. For the purposes of the financial analysis, the FLITCH PPTA cost schedules were used to represent the actual full investment cost, and the beneficiaries' contribution was assumed to be the full investment cost spread over 3 years for crop establishment minus the Project's contribution based on the cost norms applied by the Project and recorded as investment for the commune concerned.

11. The agroforestry model, for which some data could be obtained, consisted of cashew trees planted at 5 meter (m) spacing, intercropped for the first 3 years with cassava. In this

<sup>2</sup> World Bank. 2007. *Implementation Completion and Results Report, 2<sup>nd</sup> Rural Transport Project, Viet Nam*. IDA 33060 UK 23656. Washington, DC.

system, the first year showed some income from the intercrop of cassava; from the fourth year, there was revenue from the cashew nut harvest. Two crop models can be considered as fast-growing, which have been applied in protection forest and production forest. In the protection forest, bamboo or *Acacia* was interplanted with slower-growing species such as pine, so the fast-growing component could be harvested without destroying the forest cover. In production forests, various species such as *Acacia mangium*, *A. auriculiformis*, and *Litsea spp.* were planted to harvest the entire crop. Where bamboo was planted, some income was obtained after 4 years. With the *Acacia mangium* and *Litsea spp.* plantations, there is only a harvest in the seventh year.

12. For rice cultivation on land irrigated by the Project's investment, it was important to estimate the net revenue that takes account of the planting, tending, and harvesting costs, which are all borne by the beneficiaries. In the communes visited, prior to the Project, only one crop per season could be harvested. After the Project's investment in dams or irrigation channels, two crops could be grown on most of the irrigated land. No data could be provided on the inputs for growing rice, but a labor input of 60 person-days/ha/crop plus \$40/ha/crop for seed was assumed. The FIRR was calculated as the annual aggregate gross income for all beneficiaries for each irrigation system on the benefit stream and the investment cost plus the crop-growing and harvesting costs and an annual maintenance cost of 5% of the construction cost on the cost stream.

13. In the six communes visited, one had agroforestry, two had bamboo, three had *Acacia*, and one had *Litsea* plantations. Five had investment in irrigation. The FIRRs for the four production models varied between communes according to the local site and market conditions, with irrigated rice production showing the greatest variation due to differences in the investment cost per unit area irrigated. Four of the five communes had dams constructed, but one only had channels, giving a much lower investment per unit irrigated land (see Tables A12.4 to A12.7 for details of each model). The estimated average FIRR for the four models were:

**Table A12.3: Estimated FIRRs for Four Production Models**

Production model	FIRR (%)	Area in Sample Communes (ha)
Bamboo	21	167
Agroforestry	19	341
Irrigated rice	11	340 <sup>a</sup>
<i>Acacia / Litsea</i>	12	200

FIRR = financial internal rate of return, ha = hectare

<sup>a</sup> Includes 150 ha irrigated with channels only and no dam was constructed.

Source: ADB staff estimates.

14. The FIRR for *Acacia* was particularly low due to the longer growing cycle and the fact that only a very small area has been harvested. However, the average for the fast-growing production plantations is increased by *Litsea*, which has the advantage that the whole tree—including bark and leaves—can be utilized and sold. A full and detailed analysis, in approximately 5 years when all the crops have been harvested, will require good record keeping showing the scale and timing of the actual investment and the actual revenue adjusted to a unit area basis.

## B. Economic Analysis

15. The conventional adjustments to the financial analysis to indicate the economic benefits involved reflect the opportunity cost of labor rather than the actual cost, the economic cost of materials used, and the economic value of outputs by adjusting for

international prices rather than domestic costs and prices. However, for this Project, the real economic benefits are much wider in scope but more difficult to assess. The Project's principle economic benefit was expected to be the protection of watersheds, which is likely to show up in an improved distribution of water flow in the rivers, due to the dampening effect of trees during heavy storms. In many places, the better water harvesting from this more even distribution of run-off compensates for the greater uptake of water by the tree cover. However, these effects are difficult to measure and are subject to considerable seasonal variation.

16. Despite these qualifications, the manager of the Truc Kinh Reservoir in Quang Tri has publicly reported that the reservoir's water availability has considerably improved since the catchment area's forest cover was restored. The dam was originally intended to irrigate 1,800 ha, but before the Project, it could not support such a large area. The flow of water into the reservoir is now reported to be much more even, and the surface temperature in the surrounding area has been reduced due to the shade. It was not possible to meet the reservoir manager and to obtain detailed information on the benefits. The area planted around the reservoir by the Project was 2,281 ha at a cost of \$668,000, which is about one quarter of the catchment area, and raises the forest cover to the maximum possible on the sloping land. Assuming that the irrigated area was increased by 5%, the annual net benefit of the rice production on the additional 90 ha of irrigated paddy would be around \$85,000 for one crop and \$170,000 for two crops. It was reported that generally two crops are now obtained, so the additional rice production would give an economic internal rate of return (EIRR) on the investment of around 17%, or a return very similar to that obtained with an investment in infrastructure. If the assumption on the additional irrigated area is correct, then the investment in the tree crops represents about \$7,500/ha of irrigated land. This compares with the cost of dam construction, which ranged from about \$400/ha to \$5,055/ha irrigated in the communes. These figures cannot be verified at this stage but should be investigated in more detail in the future. They do indicate, however, that there are significant economic benefits from the tree planting. In addition, there are financial benefits from timber production.

17. Apart from the Truc Kinh Reservoir—which is easier to assess—other communes also reported improved streamflow since the Project, as well as higher groundwater levels, demonstrating that wells did not dry up. In other river catchments, forest cover provided by the Project's investment is a much lower proportion of the overall catchment area. It is unrealistic to attribute such changes to the Project, but local effects such as those on groundwater or on commune dams are worth monitoring for a more complete future evaluation.

### **C. Conclusions**

18. The general conclusion is that the Project will probably bring valuable financial and economic benefits to the communities involved. It is too early to assess the full magnitude of the Project's outputs, but it is important that the monitoring and evaluation system established by the Project is maintained and extended to cover growth, yields, and harvest revenues so that a more complete assessment can be made in the future. With regulations about to be promulgated that will liquidate the Government's interests in plantations and allow the beneficiaries to begin harvesting on a substantial scale, it is essential that all crops for which permission is given to harvest are accurately measured before felling or disposal, and that the price and revenue are recorded centrally. As these records accumulate, they will provide a complete picture of the Project's benefits and information for making better investment decisions in the future.

**Table A12.4: Internal Rate of Return for Bamboo Cultivation in Two Communes**

Year	Item	Bamboo (Tan Thanh Commune 150 ha)			Bamboo (Xuan Cao Commune 33.8 ha)			Bamboo (Overall 183.8 ha)		
		Expenditure	Revenue	Net	Expenditure	Revenue	Net	Expenditure	Revenue	Net
0	Planting	36,210		(36,210)	10,084		(10,084)	46,294		(46,294)
1	Tending	10,318		(10,318)	2,325		(2,325)	12,644		(12,644)
2	Tending	5,446		(5,446)	1,227		(1,227)	6,673		(6,673)
3	Tending	1,433		(1,433)	323		(323)	1,756		(1,756)
4	Harvesting	7,433	53,226	45,793	1,675	9,346	7,671	9,108	62,571	53,463
5	Harvesting	7,433	53,226	45,793	1,675	9,346	7,671	9,108	62,571	53,463
6	Harvesting	7,433	53,226	45,793	1,675	9,346	7,671	9,108	62,571	53,463
	Internal Rate of Return			23%			12%			21%

( ) = negative, ha = hectare.

Source: ADB staff estimates.

Notes:

1. Expenditure for the first year are those of the area as reported plus an estimate of the beneficiaries' contribution based on the additional labor input that would not be covered by the Project's investment at the prevailing wage rates. Expenditure in subsequent years is the beneficiaries' contribution in labor at the prevailing wage rates, including a harvesting cost of \$40/ha when harvesting commences.
2. The revenue stream is based on the gross revenue, assumed to be the farm-gate price, reported by beneficiaries or commune officials. Harvesting costs are added to the expenditure.

**Table A12.5: Internal Rate of Return for Agroforestry Plantations**

Year	Item	La Rhol Commune – Cashew/Cassava 341.5 ha		
		Expenditure	Revenue	Net Revenue
0	Planting	55,488		(55,488)
1	Harvest cassava	21,489	22,030	542
2	Harvest cassava	26,056	22,030	(4,026)
3	Harvest cassava	13,659	22,030	8,372
4	Harvest cassava	13,659	22,030	8,372
5	Harvest cashew nuts	13,659	77,106	63,447
6	Harvest cashew nuts	13,659	77,106	63,447
	Internal Rate of Return			19%

( ) = negative, ha = hectare.

Source: ADB staff estimates.

Notes:

1. The first year expenditure is that reported as project expenditure for the area, plus an estimate of the beneficiaries' contribution based on the additional labor input that would not be covered by the Project's investment at the prevailing wage rates. Expenditure in subsequent years is the beneficiaries' contribution in labor at the prevailing wage rates, including the harvesting cost of \$40/ha for cassava in the first 4 years and for the cashews thereafter.
2. The revenue stream is based on the gross revenue reported by beneficiaries or commune officials and is assumed to be the farmgate price. The harvesting costs are added to the expenditure.

**Table A12.6: Internal Rate of Return for Irrigated Rice in Three Communes**

Year	Item	Tan Thanh -(55 ha)			Xuan Cao -(10.4 ha)			Cam Ngia -(20 ha)			Overall (85.4 ha)		
		Expenses	Revenue	Net Revenue	Expenses	Revenue	Net Revenue	Expenses	Revenue	Net Revenue	Expenses	Revenue	Net Revenue
0	Dam Construction	166,019		(166,019)	52,572		(52,572)	8,785		(8,785)	227,375		(227,375)
1	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
2	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
3	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
4	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
5	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
6	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
7	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
8	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
9	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
10	Planting and harvesting	24,668	55,000	30,332	5,957	10,400	4,443	6,839	10,000	3,161	37,463	75,400	37,937
	Internal Rate of Return			13%			(3%)			34%			11%

( ) = negative, ha = hectare.

Notes:

1. The expenditure includes the investment by the project in the dam construction plus the beneficiaries' contribution for growing the rice with an assumed labor input of 120 person days for each crop of rice and \$40 per ha of seed and fertilizer and \$40per ha for harvesting.
2. The revenue stream is based on the current local market price for irrigated rice of D1,600/kg and assumes two harvests annually as reported by beneficiaries and Commune officials. The internal rate of return is very dependent on the local circumstances and the cost of infrastructure relative to the area irrigated.

Source: ADB staff estimates.

**Table A12.7: Internal Rate of Return for Fast Growing Species Cultivation**

Year	Item	Acacia ( Hai Thai - 90 ha)			Litsea ( Ha Ra - 68.6 ha)			Acacia (Son Giang - 24.3 ha)			Overall Average – 180.9 ha		
		Expenditure	Revenue	Net Revenue	Expenditure	Revenue	Net Revenue	Expenditure	Revenue	Net Revenue	Expenditure	Revenue	Net Revenue
0	Planting	26,851		(26,851)	20,466		(20,466)	7,250		7,250	54,567		(54,567)
1	Tending	6,191		(6,191)	6,816		(6,816)	1,672		(1,672)	14,679		(14,679)
2	Tending	3,268		(3,268)	2,491		(2,491)	882		(882)	6,640		(6,640)
3	Tending	860		(860)	655		(655)	232		(232)	1,747		(1,747)
4	Tending	860		(860)	655		(655)	232		(232)	1,747		(1,747)
5	Tending	860		(860)	655		(655)	232		(232)	1,747		(1,747)
6	Harvesting	860	67,742	66,882	3,399	79,665	76,265	232	10,452	10,219	4,491	157,858	153,367
	Average			10%			17%			(1%)			12%

( ) = negative, ha = hectare.

Notes:

1. The expenditure includes the investment by the project in the plantations according to the cost norms plus the estimated beneficiaries' contribution for establishing and tending the crop and \$40 per ha for harvesting.
2. The revenue stream is based on the gross revenue reported by beneficiaries or commune officials, assumed to be the farm-gate price, and the harvesting costs are added to the expenditure

Source: ADB staff estimates.