No.

Ministry of Agriculture and Rural Development (MARD)
The Government of Vietnam

THE PREPARATORY SURVEY ON THE PROJECT FOR REFORESRATION AND SUSTAINABLE MANAGEMENT OF PROTECTION FORESTS IN THE SOCIALST REPUBLIC OF VIETNAM

FINAL REPORT

Volume I: Main Report

APRIL 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

Nippon Koei Co., Ltd.

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THE PREPARATORY SURVEY ON THE PROJECT FOR REFORESTATION AND SUSTAINABLE MANAGEMENT OF PROTECTION FOREST IN THE SOCIALIST REPUBLIC OF VIETNAM

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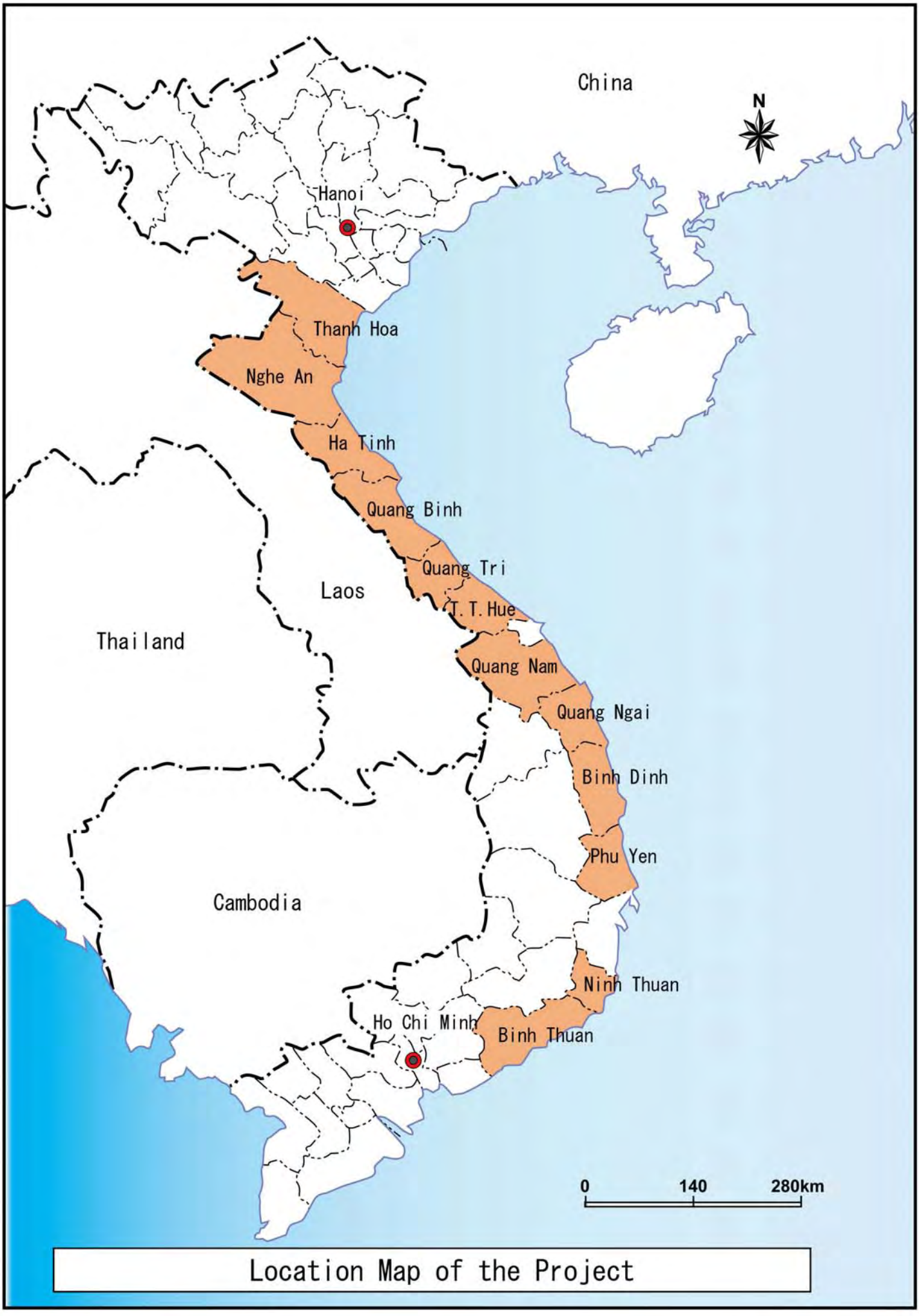
Composition of Final Report

Volume I Main Report

Volume II Annexes



Location Map of the Project

Photographs taken during the Survey on
The Project for Restoration and Sustainable Management of Protection Forests in the Socialist Republic of Vietnam

1. Conditions of the protection forests in the target provinces: watersheds and coastal area

Huong river and watershed protection forest in the upstream mountains in T.T.Hue province

Watershed protection forest in the upstream mountains in T.T.Hue province

Watershed protection forest surrounding the irrigation dam in T.T.Hue province

Watershed protection forest (bare land) in Huong Hoa district in Quang Tri province

Plantation developed by SPL3 project and land mark (red circle) set up on its boundary in T. T. Hue province

Sandy hills in the coastal area in Binh Thuan province

Photographs taken during the Survey on
The Project for Restoration and Sustainable Management of Protection Forests in the Socialist Republic of Vietnam

1. Conditions of the protection forests in the target provinces: watersheds and coastal area

Proposed site for afforestation in the coastal sandy area in Quang Binh province

Casuarina plantation in the coastal sandy area in Binh Thuan province

Neem plantation in the coastal sandy area in Ninh Thuan province

Plantation in the coastal sandy area in Binh Thuan province

Pinus plantation in Nghe An Province proposed for improvement of the existing plantation.

Nursery maintained by Le Hong Phong Protection Forest Management Board (PFMB) in Bac Binh district in Binh Dinh province

Photographs taken during the Survey on
The Project for Restoration and Sustainable Management of Protection Forests in the Socialist Republic of Vietnam

1. Conditions of the protection forests in the target provinces: watersheds and coastal area

Sprouts of Hybrid acacia ready to be transplanted in the seed pots in the nursery (T.T. Hue province)

The office of the Protection Forest Management Board (Binh Dinh Province)

2. Conditions of small scale infrastructure in the target provincé

Water canal for rice irrigation. This type of canal is proposed to be the site for irrigation system construction. (Ninh Thuan province)

Cemented water canal and barrage for rice irrigation. This type of irrigation system will be constructed as “small scale infrastructure” (Ninh Thuan province)

3. JICA Survey Team in the target provinces

Kickoff meeting with the DARD in T.T. Hue province.

JICA survey team working with the forestry staff of DARD in Nghe An province

Final Report
for
the Preparatory Survey
on the Project for Restoration and Management of Protection Forests
in the Socialist Republic of Vietnam

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Abbreviations:

ADB	Asian Development Bank
ANR	Assisted Natural Regeneration
ASL	Above Sea Level
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CPC	Commune People's Committee
CPCU	Central Project Coordination Unit
CPMU	Central Project Management Unit
DARD	Department of Agriculture and Rural Development
DIUs	District Implementation Units
DOF	Department of Forestry under MARD
DOFP	Department of Forest Protection under MARD
DONRE	Department of Natural Resources and Environment
DPC	District People's Committee
EIA	Environmental Impact Assessment
FIPI	Forest Inventory and Planning Institute
FLITCH	Forest for Livelihood Improvement in the Central Highlands Sector Project
FPsD	Forest Protection sub-department under DARD
FsD	Forestry sub-department under DARD
FSIV	Forest Science Institute of Vietnam
FSSP	Forest Sector Support Program and Partnership
GDP	Gross Domestic Product
GFO	General Forestry Office
GHG	Green House Gas
GOV	Government of Vietnam
GSO	General Statistical Office
GTZ	German Agency for Technical Cooperatio
HHs	Households
FAO	Food and Agriculture Organization of the United Nations
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt fuer Wiederaufbau (German Bank for Reconstruction)
KPI	Key Performance Indicators
M&E	Monitoring and Evaluation
MARD	Ministry of Agriculture and Rural Development
MBFPs	Management Board of Forestry Projects
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
NFS	National Forestry Strategy
NAFEC	National Agriculture and Fishery Extension Center
NPSC	National Project Steering Committee
NTFP	Non Timber Forest Products
NTP	National Target Program (to climate change)
O&M	Operation & Maintenance
ODA	Official Development Assistance
PC	People's Committee
PFMB	Protection Forest Management Board
PM	Prime Minister
PPC	Provincial People's Committee
PPSC	Provincial Project Steering Committee
PSC	Project Steering Committee
PPMU	Provincial Project Management Unit
SEDP	Socio-economic Development Plan
SFE	State Forest Enterprise
SIDA	Swedish International Development Agency
SPL-III	Special Loan Project III funded by JBIC

UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
VFU	Vietnam Forestry University
WB	World Bank
WFP	World Food Program
5MHRP	Five Million Hectare Reforestation Program

Exchange Rate

Currency
US$ 1.0 = ¥ 89.60 = 16,968 VND **(as of December 2010)**
US$ = United State Dollar
¥ = Japanese Yen
VND = Vietnamese Dong
Source: US $ = ¥: Bank of Japan (as of December 2009) US $ = VND: International Financial Statistics (as of July 2009)

Unit

km^2	Square kilometer
Ha	Hectare
m2	Square meter
m3	Cubic meter

Part I

Chapter 1 Executive Summary

Preparatory Survey
on the Project for Restoration and Sustainable Forest Management of Protection Forests

Final Report
Executive Summary

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Outlines of the Executive Summary

1. Background of the Survey
2. Structure of Final Report
3. Present Conditions of the Forestry Sector
4 Project Area Selection
5. Description of the Project Areas
6. Objectives and Rationale of the Project
7. Project Plan (Components, Institutional Arrangement, Implementation methods, Implementation Schedule)
8. Project Cost
9. Project Evaluation
10. Operation and Effect Indicators

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1. Background of the Survey

1.1 Background of the Survey

- MARD had successfully implemented SPL-III Afforestation Project from 2002-2008 with financial assistance from JBIC
- MARD submitted a project proposal of a succeeding project named "the Project for Reforestation and Sustainable Management of Protection Forests" for further assistance from JICA in 2008.
- MARD and JICA agreed to conduct a preparatory survey for the new project in March 2009.
- JICA dispatched the Preparatory Survey Team to Vietnam in July 2009.

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1.2 Objective of the Survey

- To facilitate the formulation of a project implementation plan on "the Project for Restoration and Forest Management of Protection Forests" by reviewing relevant data and examining the proposed project components in 12 provinces.

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1.3 Scope of the Survey

(1) Survey Area:

12 Provinces: i) Thanh Hoa, ii) Nghe An, iii) Ha Tinh,

iv) Quang Bunh, v) Quang Tri, vi) T.T.Hue, vii) Quang Nam, viii) Quang Ngai,

ix) Bubh Dinh, x) Phu Yen, xi) Ninh Thuan, and xii) Binh Thuan

(2) Work Schedule:

Around 10 months (June 2009 to April 2010)

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2. Structure of Final Report

Volume I: Main Report

Part 1: Executive Summary

Part 2: The Study

- Study on the forest sector in Vietnam and the target provinces
- Review of SPL-3 and lessons learned from similar projects
- Study on scope of the proposed project

Part 3: Implementation Program

- Present conditions of the project areas
- Project rationale
- Project components and institutional arrangements
- Project cost and project evaluation

Volume 2: Annexes – Detailed data and study results

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Volume I: Main Report

Part 2: The Study

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3. Present Conditions of the Target Provinces

3.1 Forest Classification in the Provinces

(Unit: Ha)

Province	Special Use Forest	Protection Forest	Production Forest	Total of Forest Land	Total Land
1. Thanh Hoa	81,504	191,944	355,651	629,099	1,113,500
2. Nghe An	170,004	395,146	613,032	1,178,182	1,649,900
3. Ha Tinh	74,641	120,390	170,546	365,557	602,600
4. Quang Binh	125,498	174,482	321,076	621,056	806,500
5. Quang Tri	68,790	95,794	165,542	330,126	474,400
6. T.T. Hue	88,317	88,129	131,425	307,871	506,500
7. Quang Nam	133,772	327,711	216,300	677,783	1,043,800
8. Quang Ngai		130,499	165,588	296,087	515,300
9. Binh Dinh	33,844	155,148	131,148	320,140	604,000
10. Phu Yen	19,160	101,110	129,730	250,000	506,000
11. Ninh Thuan	42,327	115,864	40,987	199,169	335,800
12. Binh Thuan	32,485	151,117	186,410	370,012	781,000
Total of 12	870,341	2,047,334	2,627,427	5,545,102	8,939,400

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3.2 Land Use and Forest Cover in Forest Lands

(Unit: Ha)

Province	Total Forest Land	Natural Forest	Plantation 1)	Bare land and others	Ratio of Bare Land (%)
	(a = b +c+d)	(b)	(c)	(d)	(d /a)
1. Thanh Hoa	629,099	388,782	151,871	88,446	14
2. Nghe An	1,178,182	688,941	137,253	351,988	30
3. Ha Tinh	365,557	210,485	112,391	42,701	12
4. Quang Binh	621,056	457,383	95,488	68,185	11
5. Quang Tri	330,126	135,059	87,108	107,959	33
6. T.T. Hue	307,871	203,763	103,725	383	0
7. Quang Nam	677,783	387,063	78,484	212,236	31
8. Quang Ngai	296,087	105,564	143,324	47,199	16
9. Binh Dinh	320,140	187,188	87,505	45,447	14
10. Phu Yen	250,000	126,233	41,228	82,539	33
11. Ninh Thuan	199,169	141,201	6,159	51,809	26
12. Binh Thuan	370,012	257,351	27,183	85,478	23
Total of 12	5,545,102	3,289,013	957,135	1,298,954	23
Whole country	16,247,492	10,348,591	13,461,503	2,785,989	17

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3.3 Review of SPL-3 Afforestation Project

(1) Investment Components of SPL-3 Project

Components	Contractors
Afforestation	SFEs, PFMBs, etc.
Protection of natural forest	SFEs, PFMBs, and groups of households
ANR	- ditto -
Forest infrastructure (watch tower, nursery, fire break line, access road, guard station	PFMBs and forest related companies
Small scale infrastructure	- ditto -
Agriculture and forestry training and extension	Agriculture and extension centers, Universities, etc.
Forest fire prevention	Forest protection center

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(2) Lessons Learned from SPL-3 Project

a. Information on the project and project policies should be disseminated to local governments and people before planning.
b. Detailed planning should be carried out in a participatory manner.
c. Training and extension activities as well as livelihood support are essential for the participatory forest project.
d. Cost norm of the project components should be prepared prior to the project and specified in the project regulations.
e. Public institutions have more experience and capability for implementing the project activities, especially those related forest development.
f. Duration of the forestry project should be at least 10 years.
g. The ceiling of management fee (6%) of the contractors should be reconsidered to ensure the quality of the outputs.
h. Ceiling of the budgets for infrastructure construction and agriculture and forestry extension should be increased, since they are essential to livelihood development.

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4. Project Area Selection

4.1 Selection Criteria

Minimum Requirements	High ratio of bare land Land suitability for forestry development No overlap with other projects No social / political conflict over land use No land conversion planned/expected No resettlement/land acquisition required
Evaluation criteria	Capacity of forest owner (PFMB is prioritized.) Contiguity (The area should be more than 100 ha.) Size of reforestation (It should be less than 1500 ha.) Importance of the area (Extremely important watershed should be prioritized.) Location of the area (The area should be located in the strategic point.) Accessibility (The area should be easy to access.) Poverty level (Poverty commune is prioritized.)

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4.2 Selected Project Areas by Province

Province	Watershed Protection Forest (ha)			Coastal Protection Forest (ha)			SPL-3 site (ha)
	Affo.	ANR/Improve	Protection	Affo.	ANR/Improve	Protection	
Tanh Hoa	1,270	2,300	6,600	0	0	0	0
Nghe An	2,300	900	4,100	0	0	0	0
Ha Tinh	1,960	1,000	8,510	0	0	0	0
Q. Binh	1,600	800	3,000	400	800	0	0
Q. Tri	2,900	2,750	4,000	0	0	0	3,610
TT Hue	3,000	2,500	8,000	0	0	0	4,100
Q. Nam	970	3,200	7,000	0	0	0	1,550
Q. Ngai	3,500	3,300	3,200	0	0	0	3,790
Binh Dinh	2,480	4,700	3,710	0	0	0	0
Phu Yen	1,500	900	4,350	0	0	0	2,620
Ninh Thuan	1,610	2,700	7,900	50	0	0	0
Binh Thuan	0	4,200	3,600	1,100	1,600	0	0
Total	23,090	29,250	63,970	1,550	2,400	0	15,670

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Part 3: Implementation Program

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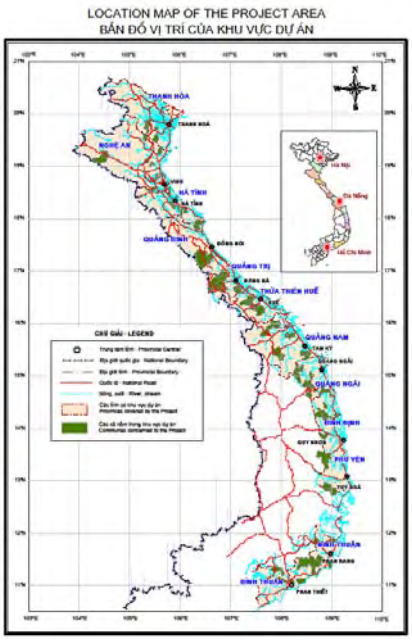
5. Project Areas

Province	No. of Communes	No. of HHs
1. Thanh Hoa	12	14,340
2. Nghe An	39	55,821
3. Ha Tinh	18	11,701
4. Quang Binh	15	16,334
5. Quang Tri	17	12,573
6. T.T. Hue	8	7,824
7. Quang Nam	19	22,988
8. Quang Ngai	9	6,356
9. Binh Dinh	10	16,051
10. Phu Yen	4	2,417
11. Ninh Thuan	7	9,244
12. Binh Thuan	9	12,714
Total	167	188,363



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5.1 Present Forest Conditions in the Target Communes

Province	Natural Forest	Plantation	Bare land (Ia+Ib)	Bare land (Ic & others)	Total
1. Thanh Hoa	13,080	5,678	1,170	1,220	21,149
2. Nghe An	25,530	5,282	10,443	3,117	45,371
3. Ha Tinh	2,284	9,301	4,658	1,376	17,619
4. Quang Binh	28,382	11,147	1,749	6,712	47,990
5. Quang Tri	44,825	24,040	27,252	9,466	105,582
6. T.T. Hue	7,589	1,537	n.a.	84	9,210
7. Quang Nam	42,825	9,188	7,689	29,952	89,654
8. Quang Ngai	25,907	1,512	5,429	5,423	38,271
9. Binh Dinh	26,991	1,137	7,485	3,527	39,138
10. Phu Yen	24,872	3,936	8,999	4,495	42,302
11. Ninh Thuan	25,307	1,911	13,813	17,266	58,298
12. Binh Thuan	61,979	628	4,984	9,574	77,165
Total	330,570	75,925	93,671	92,212	591,749

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5.2 Poverty Situation in the Target Communes

Provinces	Number of households bellow poverty line	
	No.	%
Thanh Hoa*	2,408	18 %
Nghe An*	9,181	18 %
Ha Tinh*	1,643	14 %
Quang Binh*	3,681	23 %
Quang Trii	3,512	28 %
T.T. Hue*	415	10 %
Quang Nam	6,063	26 %
Quang Ngai	3,775	59 %
Binh Dinh	2,570	16 %
Phu Yen	1,114	46 %
Ninh Thuan*	2,198	24 %
Binh Thuan	1,105	9 %
Target area total	37,666	21 %

* Data of some communes were not available.

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6. Objectives and Rationale of the project

6.1 Goals and Objectives of the Project

Goals/Long-term Objectives of the Project

- Enhancement of the function of watershed and coastal protection forests
- Restoration and conservation of biodiversity
- Poverty reduction in mountainous area

Objectives of the Project

- to restore and improve watershed and coastal protection forests
- to strengthen the capacity of the local governments and the owners of protection forests
- to improve the livelihood of communities who would manage protection forests

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6.2 Project Rationale

Viewpoint	Outlines
Contribution to the existing policies	- Contribution to the Forestry Development Strategy (2006-2020) and Socio-economic Development Plan (2006-2010) - Fulfillment of the requirements set under the international conventions, such as UNFCCC, CBD, and UNFCCD.
Necessity of the project interventions	- Maintenance of the momentum of forest development and protection achieved by 5MHRP. - Continuation of restoration and improvement of protection forests to improve its protective functions and economic values
Necessity of JICA's Assistance	- Long experiences of assisting several forestry projects - One of the largest donors in the forestry sector in Vietnam

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6.3 Basic Approaches

a. Facilitation of community participation in the project

b. Collaborative forest management or Co-management of Protection Forests

c. Integrated development including livelihood development and support

d. Capacity building of the government staff and local communities

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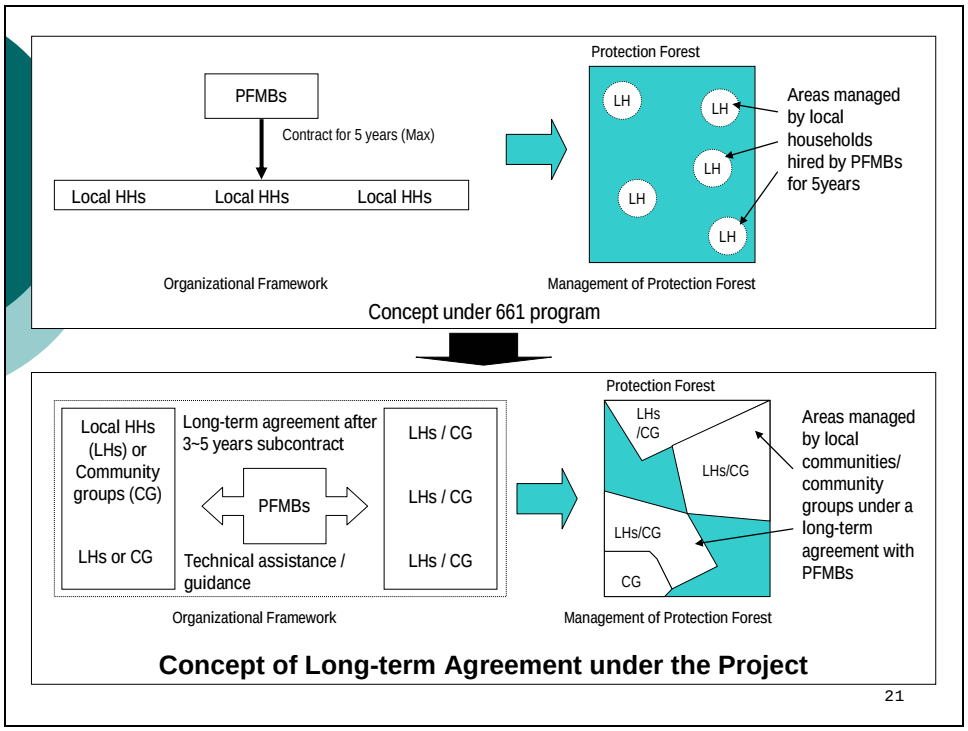
Protection Forest
PFMBs
Contract for 5 years (Max)
Local HHs
Local HHs
Local HHs
LH
LH
LH
LH
LH
Areas managed by local households hired by PFMBs for 5years
Organizational Framework
Management of Protection Forest
Concept under 661 program
Protection Forest
Local HHs (LHs) or Community groups (CG)
LHs or CG
Long-term agreement after 3~5 years subcontract
PFMBs
Technical assistance / guidance
LHs / CG
LHs / CG
LHs / CG
LHs /CG
LHs/CG
LHs/CG
CG
Areas managed by local communities/ community groups under a long-term agreement with PFMBs
Organizational Framework
Management of Protection Forest
Concept of Long-term Agreement under the Project
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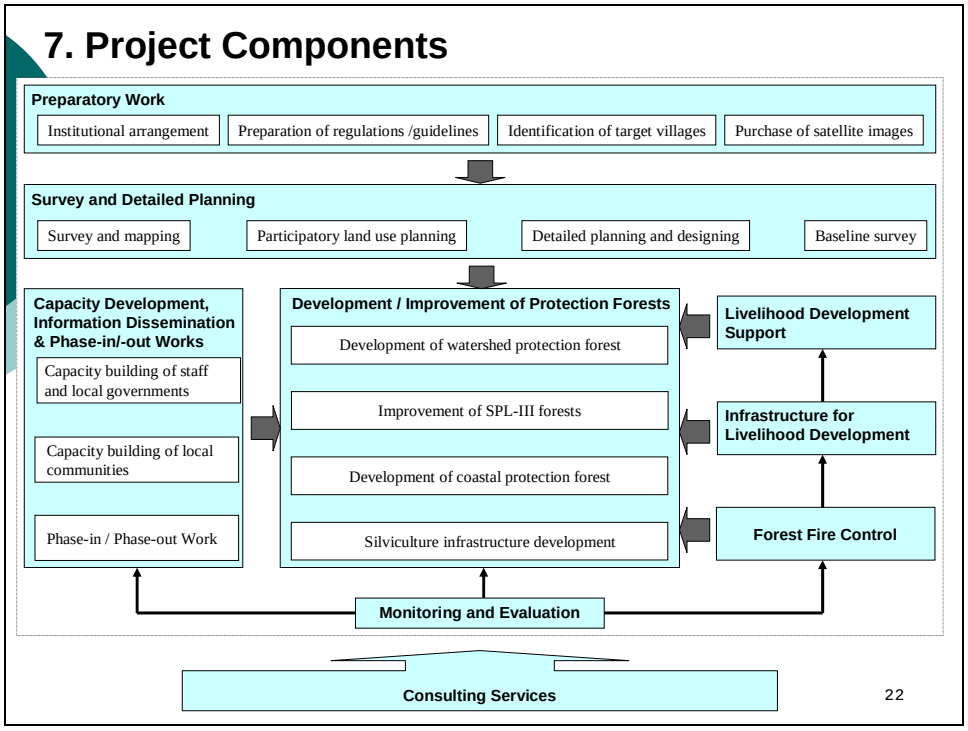
7. Project Components
Preparatory Work
Institutional arrangement
Preparation of regulations /guidelines
Identification of target villages
Purchase of satellite images
Survey and Detailed Planning
Survey and mapping
Participatory land use planning
Detailed planning and designing
Baseline survey
Capacity Development, Information Dissemination & Phase-in/-out Works
Capacity building of staff and local governments
Capacity building of local communities
Phase-in / Phase-out Work
Development / Improvement of Protection Forests
Development of watershed protection forest
Improvement of SPL-III forests
Development of coastal protection forest
Silviculture infrastructure development
Livelihood Development Support
Infrastructure for Livelihood Development
Forest Fire Control
Monitoring and Evaluation
Consulting Services
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7.1 Preparatory Works

Sub-Component	Major Works/Activities
Institutional arrangement of PMUs	○ One Central PMU and 12 PPMUs will be created. ○ Deployment and employment of the project staff ○ One Central Steering Committee and 12 Provincial Steering Committees will be established.
Finalization of implementation guidelines /regulations	○ Project Implementation Guidelines for PMUs covering the topics of project management, M&E, billing and fund management, preparation of forest development, silvicultural and rural infrastructure development, collaborative forest management, community development and livelihood development, forest fire control, etc. ○ Development of monitoring forms/formats and TOR of the contractors
Development of format and TOR	○ Development of regular monitoring forms/formats ○ Development of TOR for the contractors to be hired in the implementation of project components
Procurement	○ Procurement of equipments for CPMU and PPMUs including vehicles and motorbikes

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7.2 Survey and Detailed Planning

Sub-Component	Major Works/Activities
Survey and Mapping	○ Update of the existing land use and forest classification map covering about 120,260 ha by satellite image analysis and ground truth survey ○ Preparation of photo-like satellite images covering the project areas of 120,260 ha ○ Preparation of land use plans of 120,260 ha together with local communities in 167 communes (New sites only) ○ Demarcation of boundaries of the project areas on the ground
Detailed planning and Designing	○ Preparation of detailed designs of forest development and improvement component ○ Detailed designs shall include: i) general information of target area, ii) lists of parcels with location map, iii) standard designs, iv) unit costs of the standard designs, v) total costs for the respective contract package, and vi) list of participating villagers
Baseline survey	○ Household interview survey in 167 communes (new sites only)

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7.3 Capacity Development, Information Dissemination and Phase-in/-out Works

Sub-Component	Major Works/Activities
Capacity Development of Government Staff	○ Orientation of project outlines, guidelines, and schedule for 12 CPMU staff members and 149 PPMU staff members ○ Capacity development of the staff of 12 PPMUs, 12 DARDs, 57 PFMBs, DPCs and CPCs concerned ○ Project review meetings at central, provincial and district levels
Information Dissemination to local communities	○ Awareness raising about forest protection and orientation of the project (concepts, outlines, and procedures) at 167 communes (new sites) and 35 communes (SPL-3 sites) ○ Guidance on collaborative forest management ○ Formation of forest management groups at 167 communes (new sites) and 35 communes (SPL-3 sites) ○ Strengthening of forest management groups by development of by-laws of the group
Phase-in a/ Phase-out works	○ Assistance in hand-over of forest ownership from PPMU to PFMB ○ Guidance to local stakeholders on collaborative management, benefit sharing, and forest management plan

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7.4 Development and Improvement of Protection Forests

Sub-Component	Major Works/Activities
Development of watershed protection forest	○ Afforestation/Reforestation: 23,090 ha ○ Improvement of existing forests: 3,300 ha ○ ANR with and without enrichment: 25,950ha ○ Protection of natural forests: 63,970 ha ○ Silviculture Infrastructure development
Improvement of SPL-3 sites	○ Enrichment: 1,000 ha ○ Clearing and thinning: 10,220 ha ○ Forest protection: 4,450 ha
Development of coastal protection forest	○ Afforestation/Reforestation: 1,550 ha ○ Improvement of existing forests: 800 ha ○ ANR / Enrichment: 1,600 ha ○ Silviculture Infrastructure development

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7.5 Livelihood Improvement Assistance

Sub-Component	Major Work Quantity
Needs Assessment	○ Assessment of livelihood development needs at 167 communes ○ Detailed survey for income generating activities for 167 communes
Introduction and development of demonstration plot/livelihood development models	○ Introduction and development of demonstration models/plots for potential livelihood activities in 167 communes (new sites) and 35 communes (SPL-3 sites) ○ Periodical coaching to local communities by the contractors in 167 communes (new sites) and 35 communes (SPL-3 site)
Technical assistance in livelihood development	○ Training on potential livelihood activities and fund management at 167 communes (new sites) and 35 communes (SPL-3 sites) ○ Periodical coaching to local communities by the contractors in 167 communes (new sites) and 35 communes (SPL-3 site)
Inter-province cross field visit	○ Inter-province cross field visit for the participating household in 167 communes (new sites) and 35 communes (SPL-3 site)

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7.6 Small Scale Infrastructure Development

Activities	Major Work Quantity
Identification of development needs	○ Identification of development needs related to small scale infrastructure with local communities at 167 commune
Detailed designing and tender	○ Survey and detailed designs of small scale infrastructure at 167 communes
Indicative targets	○ Rural road: 186 km ○ Irrigation (check dam, irrigation canal & culvert): 558 ha ○ Water supply system: 8 units
Operation and Maintenance	○ Hand-over of infrastructure to CPCs concerned ○ Assistance in development of O&M plans

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7.7 Forest Fire Prevention/Control

Sub-Component	Major Work Quantity
Provision of equipment	○ Procurement and distribution of forest fire extinction equipment/tools, i.e., pump, grass cutter, wind blower, chainsaw, potable water container, etc., to 57 PFMBs
Training for PPMU and PFMB staffs	○ Training on forest fire control including forest fire extinction drills for 12 DARDs, 57 PFMBs and 55 DPCs as well as local communities

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7.8 Monitoring and Evaluation

Sub-Component	Major Work Quantity
Progress monitoring	○ Monthly, quarterly, bi-annual and annual monitoring and review at Central and Provincial levels
Evaluation	○ Initial evaluation Reviews of framework, baselines and relevance of the project ○ Mid-term evaluation Field valuation of 400 ha of reforestation and 200 ha forest protection areas (ANR/Protection), Identification of No. of forest management groups and the number of members/households ○ Terminal evaluation Purchase of latest high resolution satellite images, Forest inventory survey of 750 ha of reforestation and 400 ha of protection, Household interview survey to evaluate the impact on socio-economic conditions of the area,

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7.9 Consulting Services/Technical Cooperation

Sub-Component	Major Work Quantity
International consultants: 147 MM	○ Team leader: 52 MM ○ Forest Development Planning and Monitoring : 65 MM ○ Community / Rural Development: 21 MM ○ Satellite Image Analysis/GIS: 9 MM
National consultants : 253 MM	○ Forest Development and Management: 74 MM ○ Community Organizing: 48 MM ○ Livelihood Development: 59 MM ○ Institutional/Capacity Development: 10 MM ○ NTFP Development: 33 MM ○ GIS: 29 MM

There is a possibility that a part of the consulting services might be replaced by a technical cooperation project, especially for the works planned in the first two years, namely “Preparatory Works” and “Survey and Mapping.”

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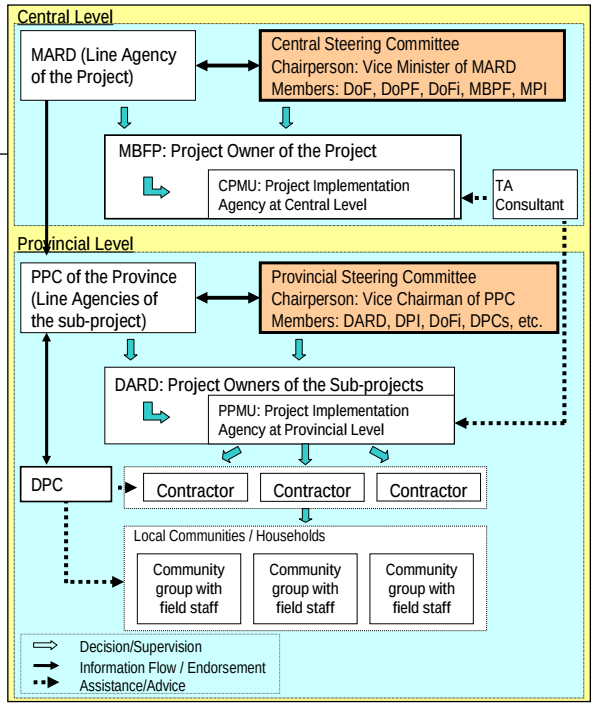
7.10 Institutional Arrangement

(1) Organizational Set-up



(2) Examination of possibility of establishment of a sub-CPMU

a. Effectiveness:

- CPMU can easily communicate with DARDs and PPMUs
- Close communication may lessen the misinterpretation of the project guidelines.
- A sub-CPMU could assist nearby DARDs and PPMUs in a timly manner.

b. Disadvantages:

- MARD will incur additional cost for operations of a sub-CPMU.
- Only one branch is not enough to cover five to six provinces.
- Overlaps in decision making might take place unless clear demarcation in responsibilities is made.
- It seems to be opposite to the current government policy of decentralization.
- It might be difficult for MARD to deploy the staff from Hanoi at the sub-CPMU.

c. Conclusion:

- The project should focus on the capacity development of DARDs and PPMUs along with the institutionalization of a regular and systematic monitoring by CPMU rather than the new establishment of a sub-CPMU.

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(3) Roles and Responsibilities

Stakeholders	Roles and Responsibilities
MARD (Line agency)	Be responsible for ensuring the effectiveness and efficiency of the project, smooth operation of the project including allocation of counter part funds.
Steering Committee at Central Level	Be chaired by vice minister of MARD or Director of DoF and will make final decisions on the key managerial issues/matters relating to project implementation.
MBFP (Project Owner)	Be responsible for ensuring adequate management resources, approval of designs and cost estimates of the sub-projects, management of investment funds, and monitoring and evaluation of the project.
CPMU	Be responsible for, i) development of overall and detailed annual plans, ii) management of the entire project, iii) technical guidance and orientation to PPMUs, vi) coordination with relevant agencies and JICA, vi) monitoring, evaluation and reporting of the project implementation.
TA Consultant	Provide technical and managerial support in the implementation of the project.
PPCs (Line agencies)	Have the same responsibilities with those given to MARD for implementation of the sub-projects in the respective provinces.
Steering Committee at Provincial Level	Be chaired by Vice Chairperson of PPC and responsible for making decisions relating to the sub-projects, approving the project regulations and plans, and monitoring of the sub-projects.
DARDs (Project Owners)	Be responsible for establishment of PPMU, technical guidance to PPMU, approval of contracts with implementers, monitoring and supervision of the sub-project, and management of the project fund.
PPMU	Be responsible for implementation of the sub-projects, which similar to CPMU. In the concrete, PPMU shall: i) prepare annual plans, ii) procure and liquidate contracts, iii) implement and monitor the sub-projects, iv) prepare and submit progress reports, and v) coordinate with local governments.
DPC	Function as a supporter at the field level, especially in the monitoring of the project activities, and information dissemination and agriculture and forestry extension to local communities.
Implementers	Be the actual implementers for the sub-project activities on a contract with PPMUs.
CPC	Cooperate with PPMU and the implementers on the implementation of the sub-project.
Local Communities	Take part in the forest development activites as a sub-contractor. They shall be treated as future managers of the project area, and therefore be involved in planning / designing of the project.

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(4) Structures of Steering Committees

a. Central Steering Committee

Composition	Responsible organization
Chair person	Vice Minister of MARD
Secretariat	CPMU/MBFP
Members	Dept. of Forest, Dept. of Forest Protection, Dept. of Finance, Dept. of Planning, Dept. of Construction and Management, Dept. of Legislation, MBFP

b. Provincial Steering Committee

Composition	Responsible organization
Chair person	Vice Chairperson of PPC
Secretariat	PPMU/DARD
Members	Vice Director of DARD, Vice Director of DPI, Vice Director of DoFi, Vice Chairpersons of DPCs, Directors of Sub-depts. of Forestry, Forest Protection ,and Rural Development, and Director of Planning and Finance Section

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(5) Composition of the staff in CPMU and PPMU

Type	No. of Unit	Remark
CPMU	1	One (1) unit will be created within MBFP. - 1 Director - 1 Vice Director - 1 Planning (financial) - 3 Technical Staffs - 3 Accountants - 3 Administration Staffs (including drivers)
PPMU	12	One (1) unit will be created within DARD - 1 Director - 1 Vice Director - 1 Planning (financial) - 5 Technical Staffs - 2 Accountants - 2 Administration Staffs (including driver)

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7.11 Procurement Method (1)

Components	Potential Executers/ Contractors	Procurement method
Preparatory work - Institutional arrangement - Organizational set-up	MARD, DARD, CPMU, PPMUs, Consultant	Direct undertaking
Survey and Detailed Planning - Forest inventory and mapping - Site selection - Participatory land use planning - Detailed planning and designing - Socio-economic Baseline survey	FIPI PFMBs with facilitators -ditto- Design centers NAFEC	Local bidding/Direct appointment
Capacity development, information dissemination	NAFEC/PAFECs	Direct appointment
Development & improvement of protection forests	PFMBs	Direct appointment
Livelihood improvement	PAFECs/Universities	Local bidding/Direct appointment

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7.11 Procurement Method (2)

Components	Potential Executers / Contractors	Procurement method
Small Scale infrastructure dev. - Needs assessment/Selection - Planning - Survey and detailed design - Tender - Construction - Operation and maintenance	PAFECs Design centers - Ditto – PPMUs Contractors CPC/Local communities	Direct appointment Direct undertaking Local bidding
Forest fire prevention/control -Procurement of tools -- Training	PPMUs/Suppliers Forest Protection Agency	Direct undertaking Local bidding
M&E - Development of monitoring format - Progress of monitoring - Mid-term evaluation - Terminal evaluation	CPMU/Project consultant - Ditto - FIPI/NAFEC FIPI/NAFEC	Direct undertaking Direct Appointment
Consulting Services	International and local consulting firms	International bidding

7.12 Implementation Schedule

Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11
Project Period											
1. Preparatory Works											
2. Survey and Detailed planning											
3. Capacity Development, Information Dissemination, and Phase-in/-out Works											
4. Development of Protection Forest											
5. Livelihood Development											
6. Small Scale Infrastructure for Livelihood Development											
7. Forest Fire Control											
8. Monitoring & Evaluation											
9. TA / Consulting Services											

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8. Estimated Project Cost

Components	Local Currency	Foreign Currency	Total (Mil. VND)
1. Preparatory Works		15,432	15,432
2. Survey and Mapping	20,750	0	20,750
3. Cap Dev., Info Dissemination & Phase-in/out	53,160	0	53,160
4. Development of watershed PF	845,441	0	845,441
5. Improvement of SPL sites	38,927	0	38,927
6. Development of coastal PF	61,732	0	61,732
7. Livelihood development assistance	75,127	0	75,127
8. Infrastructure for livelihood development	231,158	0	231,158
9. Forest fire control	5,274	0	5,274
10. Monitoring and evaluation	15,661	0	15,661
Direct Project Cost	1,347,230	15,432	1,362,662
Project Management	113,580	0	113,580
11. Price contingency	932,889	696	933,584
12 Physical contingency	119,685	806	120,491
13. Consulting services	44,678	116,124	160,802
14. Taxes and Duties	235,034	23,450	258,484
Grand Total in VND Million	2,769,256	156,508	2,949,603

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8.2 Cost Schedule

Unit: VND Billion

Year	Direct Cost	Admin cost	Price Cont.	Physical Cont.	Consul. Services.	Taxes & Duties	Total
1st yr	0	2.8	0	0.1	0	0	3.0
2nd yr	15.3	11.4	1.3	0.7	10.0	12.7	52.6
3rd yr	23.3	11.4	7.5	2.1	23.6	5.3	73.3
4th yr	188.3	11.4	68.3	13.4	23.6	28.9	333.7
5th yr	342.2	11.4	169.7	26.2	25.0	55.7	630.1
6th yr	386.9	11.4	251.9	32.5	21.4	68.7	774.7
7th yr	243.5	11.4	204.0	22.9	17.1	47.7	546.6
8th yr	104.8	11.4	114.6	11.5	14.2	23.3	279.7
9th yr	38.8	11.4	59.7	5.5	11.6	10.0	137.0
10th yr	18.1	11.4	41.7	3.6	14.4	6.0	95.1
11th yr	0	8.6	14.2	1.1	0	0	23.8
Total	1,362.7	113.6	933.6	120.5	160.8	258.5	2,949.6

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8.3 Financial Plan (The Whole Project)

Components	Loan (Mil. VND)	C/P fund (Mil. VND)	Total (Mil. VND)
1. Preparatory Works	15,432	0	15,432
2. Survey and Mapping	20,750	0	20,750
3. Cap Dev., Info Dissemination & Phase-in/out	53,160	0	53,160
4. Development of watershed PF	845,441	0	845,441
5. Improvement of SPL sites	38,927	0	38,927
6. Development of coastal PF	61,732	0	61,732
7. Livelihood development assistance	75,127	0	75,127
8. Infrastructure for livelihood development	231,158	0	231,158
9. Forest fire control	5,274	0	5,274
10. Monitoring and evaluation	15,661	0	15,661
Direct Project Cost	1,362,662	0	1,362,662
Project Management	0	113,580	113,580
11. Price contingency	849,336	84,248	933,584
12 Physical contingency	110,600	9,891	120,491
13. Consulting services	160,802	0	160,802
14. Taxes and Duties	0	258,484	258,484
Grand Total in VND Million	2,483,400	466,204	2,949,603

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9. Project Evaluation

1. Estimated Project Benefit (Cumulative Benefits)
   - Benefit from tree harvest: VND 15,799 billion
   - Benefit from AR-CDM: VND 646.8 billion
   - Benefit from REDD: VND 4,422 billion
   - Benefit from incremental production VND 0.9 billion
   - Benefit from VOC savings VND 316.4 billion

2. Cost Benefit Analysis
   - NPV (@ 10 % Discount rate): VND 478 billion
   - EIRR: 13.3 %

3. Impact on Household Economy (one household)
   - HH who engages in 2 ha of reforestation: VND 11.4~13.2 million/yr of additional income for 25 years
   - HH who engages in 20 ha of protection: VND 11.4~22.6 million/yr of additional income for 25 years

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10. Operation and Effect Indicators

10.1 Operation Indicators

For Overall Goal of the Project:

a. Proportion of Group IV forest in protection forest in 2040
b. Increase in income level of local communities in 2030

For Project Purpose:

a. Forest cover in the project area in 2020
b. Improvement of quality of vegetation/forest covers in 2020
c. Incidence of forest fires
d. Area of protection forest under co-management with FMGs
e. Number of FMGs
f. Increase in income level of the members of FMGs in 2020

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10.2 Effect Indicators

a. Issued regulations and circulars
b. Updated land use and forest classification maps
c. 57 detailed plans of 57 PFMBs concerned
d. Number of government staff trained
e. No. of community members organized into the FMGs
f. Area planted by afforestation
g. Areas improved by Improvement of existing plantations
h. Area applied ANR with / without enrichment
i. Natural forest protected
j. Number of livelihood development models / options introduced
k. Number of local households who participate in training
l. Numbers of small scale infrastructure facilities developed
m. Number of staff and local households who participate in training on forest fire control

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END

Thank you for your kind attention!

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Part II

Chapter 1 Introduction

1.1 Background

From 1945 to 1990, the forest cover in Vietnam had drastically decreased from 43% to 23%. Extensive deforestation has posed significant threats to the economy, environment and to the peopleôs lives in the country. To resolve this very significant concern, the Government of Vietnam (GOV) has been implementing two notable nationwide afforestation programs, namely; i) Program 327 from 1993 to 2000, and ii) Program 661 or ñthe Five Million Hectare Afforestation Program (5MHRP)ò from 1998 to 2010, aiming to increase the forest area and improve the living conditions of the local communities. It is through the remarkable nationwide efforts that the forest cover of Vietnam has increased and recovered to about 39% of the total land area or about 12.7 million hectares in 2006. Although the forest area in the country has increased, the target level of forests quality has not yet been restored. The forest degradation has been continuing due to the changes in land use, illegal logging, and slash-and-burn farming practices. Hence, there is a need to promote afforestation, sustainable forest management and conservation of allocated forestland, especially in the remote mountainous areas where ethnic minorities largely depend on the forest resources for their livelihood.

In order to enhance the functions of the forest and eventually contribute to poverty alleviation and environmental protection in the country, the GOV formulated in 2007 the Vietnam Forestry Development Strategy (2006 ï 2020). It provides the long-term development orientation of the forestry sector and promotes three development programs consisting of: i) Sustainable forest management and development program, ii) Forest protection, biodiversity conservation and environmental services development program, and iii) Forest products processing and trade program, so that stakeholders in the sector could collaboratively make the efforts to achieve sustainable forest management in the country.

Japan International Cooperation Agency (JICA), as a member of the Forest Sector Support Partnership (FSSP), has been supporting the GOV in addressing deforestation and forest degradation through the implementation of several Japanese ODA projects, such as the Rural Infrastructure Development and Living Standard Improvement Project III/ Afforestation Sector Component (SPL III Afforestation Project), and the Project for Afforestation on the Coastal Sandy Area in Southern Central Vietnam. The former project reforested more than 20,000 ha, mainly for forest protection ,and provided training on forest management to about 8,000 people, while the latter afforested over 3,000 ha of littoral forests as wind- and sand-shielding protection forests. While the other donors and development agencies have assisted the GOV in the afforestation and management of production forests, JICA has focused its effort on the protection forests in the country and yielded fruitful results thus far.

The GOV highly appreciated the achievements made by JICA, particularly the SPL III Afforestation Project, and decided to seek the continuous support from JICA in the restoration of the degraded forests and the development of sustainable forest management in the country. Under the circumstances, the GOV officially requested JICA in January 2008 to carry out a preparatory survey for a new forest development and protection project entitled ñThe Project for the Restoration and Sustainable Management of Protection Forestsò. In response to the official request of the GOV, JICA dispatched a mission to Vietnam in March 2009. Through a series of discussions, the GOV and JICA mission agreed on the scope of work and the implementing arrangements for the preparatory survey on April 9, 2009. In June 2009, a survey team was organized and started its works.

1.2 Objectives of the Survey

The main objective of the survey is to expedite the formulation of the proposed project by collecting and analyzing relevant data/information and examining the proposed project components in 12 provinces.

1.3 Scope of the Survey

1.3.1 Survey Areas

The survey covers the following 12 provinces: i) Thanh Hoa, ii) Nghe An, iii) Ha Tinh, iv) Quang Bunh, v) Quang Tri, vi) T.T.Hue, vii) Quang Nam, viii) Quang Ngai, ix) Bubh Dinh, x) Phu Yen, xi) Ninh Thuan, and xii) Binh Thuan. The location of the survey areas is presented in the location map as shown on the top of Volume I.

1.3.2 Scope of the Survey

The scope of the survey covers the following activities.

TOR 1: Examination of the necessity and background of the proposed project:
- Review and analyze key policies and related regulations for the forest sector in Vietnam;
- Review and analyze the results, issues and lessons of the project in the forest sector in Vietnam; and
- Review good practices and lessons learned in SPL-III Afforestation Project.

TOR 2: Review of the current situations and issues of the forest sector in the target provinces and selection of target areas:
- Review current situations and issues of the forest sector in the target provinces and areas;
- Propose selection criteria of target areas; and
- Conduct socio-economic survey in sample communes in the target provinces.

TOR 3: Proposal of a project implementation plan:
- Examine and propose the project components;
- Examine the estimated project costs of the target provinces;
- Propose a project implementation schedule;
- Study the methodologies and approaches for the project implementation; and
- Formulate a feasibility study based on the format stipulated in Decree No.48 and the project implementation guidelines for the reference of the target provinces.

TOR 4: Examination of institutional arrangements for the project implementation, operation, and maintenance:
- Study roles and responsibilities of each stakeholder in the forest policies;
- Analyze issues in institutional arrangements for the project implementation and operation and maintenance of the SPL-III Afforestation Project and other donorsô projects and propose plans for improvement;
- Formulate a project implementation plan including organizational, technical and financial arrangements and an operation and maintenance plan.

TOR 5: Study on the project monitoring and evaluation system:
- Analyze issues in the monitoring and evaluation system of SPL-III and other donorsô projects and propose an improvement plan, including guidelines;

- Review qualitative and quantitative data for the monitoring indicators in each target province; and
- Set baselines and targets of monitoring indicators for the project.

TOR 6: Review of environmental and social considerations:

- Implement environmental screening of the target project sites and prepare an environmental checklist in accordance with the Japan Bank for International Cooperation (JBIC) Guidelines for Confirmation of Environmental and Social Considerations (April 2002);ò
- Propose a monitoring system, including an environmental monitoring form;
- Confirm if any national parks and/or protected areas are located within or near the target project sites of the project;
- Study the tree species selected by the target provinces considering the ecosystems of the target project sites as well as the purpose of the plantations;
- Consider the potential water pollution sources and underground water contamination caused by the application of agrochemicals and/or fertilizer for the project and mitigation measures, if necessary; and
- Study the current livelihood and lifestyle of the local communities, analyze issues on, or difficulties in, the involvement of the local communities in forest protection activities, and propose solutions in case the ethnic minorities and poor households would be the potential beneficiaries of the project.

1.4 Overall Framework of the Survey

1.4.1 Composition of the Survey Team

The survey team is composed of the following experts:

Composition of the Survey Team

Position	Name
Team Leader / Forest Planning and Management (1) Expert	Yoji Mizuguchi
Co-Team Leader / Silviculture Expert	Hiromi Yasu
Forest Planning and Management (2) / Institutional Expert	Akihiko Sasaki
Rural Infrastructure Expert	Shigeki Yamaoka
Rural Development Expert	Michiko Ebato
Marketing / Project Evaluation Expert	Magdalena Lukowska
Environment and Social Consideration Expert	Junko Fujiwara
Coordinator	Yukiko Watanabe

The survey team further employed 12 local staffs and two sub-contractors for the survey.

1.4.2 Counterpart Agency

The International Cooperation Department and Management Board of Forestry Project, MARD are the focal points at the central level, while DARDs of the target provinces, especially the Forestry Sub-department of DARD, have actively co-worked with the survey team at the provincial level.

1.4.3 Work Schedule of the Preparatory Survey

The survey is to be carried out in accordance with the following schedule:

Work schedule

Working Stage	Period	Major Output
1. Preparatory work in Japan	June 2009	Inception Document
2. First Field Work in Vietnam	June.28-October 3, 2009	Interim Report Draft Final Report
3. First Home Work in Japan	October , 2009	Draft Final Report
4. Second Field Work in Vietnam	October , 2009	Presentation of Draft Final Report
5. Second Home Work in Japan	November , 2009	Final Report

1.5 Structure of the Final Report

The final report consists of two volumes, namely, Volume I: Main Report, and Volume II: Annexes. The main report is composed of three parts, Part I: Executive Summary, Part II: Study Report, and Part III: Implementation Program.

Part I summarizes Part II - Study Report and Part III - Implementation Program.

Part II discusses the results of the study conducted during the preparatory survey. The study covers the review of the forest sector in the country, descriptions of the present conditions of the target provinces, review of SPL-3 Afforestation Project as well as other similar forestry projects, and study on the project components and institutional framework for efficient and smooth project implementation.

Part III illustrates the revised project plan of the project for the restoration and sustainable management of protection forest. The implementation program contains the rationale for the project, narrative summary of the project goals and strategies, description of the project area, explanation of project components and activities, institutional framework for project implementation, the project implementation and procurement methods, implementation schedule, estimated project cost, economic and financial evaluation of the project, proposed operation and effect indicators, and the project risks.

The feasibility study (F/S) report of the project is also included in Part III as an attachment to the report. The F/S report was prepared in accordance with Prime Minister Decision No. 48/2008/QD-TT, and the General Guidelines on Feasibility Study Reports of Projects using ODA Funds of the 5-bank Groups.

Chapter 2 Forest Sector in Vietnam

2.1 Forest Situation in Vietnam

About 25 million of Vietnamese population are living in or near forests and depend on the forest resources. Forestry is not only the generation of forest products as commodities and the services contributing to the national economy but it also plays an important role in the environmental protection, such as the protection of watershed and coastal areas, soil and water conservation, mitigation of climate change, contributes to the national security, livelihood improvement, and poverty alleviation in the rural and mountainous areas. [1]

The forest cover in Vietnam has decreased until 1990 and has increased since then mainly due to the afforestation and forest protection efforts of the government. Although the forest area is increasing, the quality of the forests is still poor and it is not progressing to the approved quality level. The present ratio of forest area per capita in Vietnam is about 0.15 ha/person, which is very low compared to the average ratio in Southeast Asian countries of 0.37 ha/person, and worldwide of 0.63 ha/person.[2]

2.1.1 Forest Classification

Pursuant to the Prime Minister Decision No. 1267/QD-BNN-KL dated 05/5/2009, Vietnam had a forest area of 13.1 million ha in 2008, comprising the 10.3 million ha of natural forest (78.6%) and 2.8 million ha of plantation forest (21.4%). The ratio of national forest cover was 38.7 %.

Forests are classified into three types, namely; special-use, protection, and production forests. In 2008, Vietnam had 2.1 million ha of special-use forests (15.7%), 4.7 million ha of protection forests (36.1%), and 6.2 million ha of production forests (47.3%). Special-use forests are divided into (a) national parks, (b) natural reserves and flora and fauna habitat reserves, and (c) historical, cultural and environmental relics or landscape protected area. Protection forests are developed to protect watersheds, prevent soil erosion, and mitigate natural disasters. The major purpose of production forests is to supply timber and non-timber forest products (NTFPs), however, these also provide environmental protection.

Area by Forest Types in Vietnam in 2008 (1,000 ha)

	Total	Forest Classification			Others
		Special-use	Protection	Production	
Total Forest Area	**13,117**	**2,062**	**4,739**	**6,199**	**119**
A. Natural Forest	**10,349**	**1,985**	**4,168**	**4,170**	**26**
1. Timber forest	8,221	1,542	3,297	3,366	16
2. Bamboo forest	641	61	184	393	3
3. Mixed forest	687	128	233	324	3
4. Mangrove forest	60	14	41	4	0
5. Rocky mountain forest	739	240	412	84	4
B. Plantation Forest	**2,770**	**77**	**571**	**2,029**	**93**
1. Plantation with standing volume	1,305	47	324	919	16
2. Plantation without volume	1,155	26	210	879	40
3. Bamboo	90		6	83	0
4. Special trees	207	3	24	147	33
5. Wetlands trees, alum	13	1	7	1	4

Source: MARD Ministerôs Decision No. 1267/QD-BNN-KL dated 05/5/2009

1. Vietnam Forestry Development Strategy (2006-2020), Decision No. 18/2007/QD-TTg dated 5 February 2007, by the Prime Minister
2. State of World Forest 2007, FAO

2.1.2 Forest Owners

Forest and forest land allocation policies have been implemented since 1983 and strengthened after the promulgation of the 1993 Land Law and Decree No.2/CP on forest land allocation. The revised Land Law of 2003 defines the rights of land users in terms of land use, transfer, concession, lease, and mortgage. The revised law also stipulates that households and individuals are allocated production and protection forest at 30 ha and for a maximum period of 50 years.

The status of forest area by owner is shown below. The management boards of protection and special-use forests are allocated to the largest forest area of 39%, followed by the family households of 24%. The state enterprises, particularly the state forest enterprises still manages a large area of forest of 16%. About 19% of the forest are still not allocated and temporally managed by the Commune Peopleôs Committee (CPC).

Forest Area of Vietnam by Owner (1,000 ha)

	Total	State Enterprises	Forest Management Boards	Other Economic Org.	Family Households	Commu-nity	Other Org.	Armed Units	CPC
Total	**13,117**	**2,105**	**4,399**	**86**	**3,150**	**141**	**460**	**241**	**2,537**
	(100%)	*(16%)*	*(33%)*	*(1%)*	*(24%)*	*(1%)*	*(4%)*	*(2%)*	*(19%)*
Natural Forest	**10,349**	**1,635**	**3,900**	**24**	**1,903**	**112**	**415**	**196**	**2,163**
	(100%)	*(16%)*	*(38%)*	*(0%)*	*(18%)*	*(1%)*	*(4%)*	*(2%)*	*(21%)*
Planted Forest	**2,770**	**471**	**499**	**61**	**1,248**	**28**	**45**	**44**	**375**
	(100%)	*(17%)*	*(18%)*	*(2%)*	*(45%)*	*(1%)*	*(2%)*	*(2%)*	*(14%)*

Source: MARD Decision No. 1267/QD-BNN-KL dated 5/05/2009

The progress of forest land allocation is slow. One of the reasons for the slow implementation is the reassignment of forest land allocation responsibility from MARD to the Ministry of Natural Resource and Environment (MONRE). Another constraint factor is that the communities are hesitant to receive forest land because of the strict conditions imposed on the allocation such as the restriction of crop production.[3]

2.1.3 Changes in Forest Cover

Vietnam had 14.3 million ha of natural forests in 1943, corresponding to 43.2% of the countryôs land area. The forest area had significantly decreased particularly from 1976 to 1990. During the period, about 98,000 ha were contracted for logging annually mainly by state organizations. Other causes of deforestation include, among others:

a) Conversion of forest land into farm land by the government policy to increase food production;

b) Devastation by two wars during 1945-1954 and 1961-1975.

c) Forest fires

d) Illegal logging by individuals and units.[4]

[3] Forest Rehabilitation in Vietnam: Histories, realities and future (2006)
[4] ibid

Changes in Forest Cover in Vietnam (1,000 ha)

	1943	1976	1980	1985	1990	1995	2000	2004	2008
Total forest area	14,300	11,169	10,608	9,892	9,176	9,302	10,916	12,307	13,117
Natural forest		11,077	10,016	9,308	8,431	8,253	9,444	10,088	10,349
Planted forest		93	422	583	745	1,048	1,471	2,219	2,770
Forest cover (%)	43.2%	33.7%	32.0%	29.9%	27.7%	28.1%	33.0%	37.2%	39.6%

Source: Forest Rehabilitation in Vietnam: Histories, realities and future (2006) and MARD Ministerôs Decision No. 1267/QD-BNN-KL dated 05/5/2009

Since 1990, the forest area has increased mainly as a result of the governmentôs afforestation efforts, notably 327 and 661 programs. Between 1990 and 2008, the natural forest has increased by 1,918 thousand ha through the rehabilitation, while planted forest increased by 2,025 thousand ha. Despite of the increase, the quality of rehabilitated natural forest is still low. It was estimated that the poor quality of natural forest with a forest stock of less than 80 m^3/ha occupied up to 80% of the natural forest area.[5] Similarly, forest plantations without standing tree volume occupied about 42% of the total planted forest in 2008.

2.1.4 Contribution of Forestry Sector to the National Economy

(1) GDP of Forestry Sector

The gross domestic product (GDP) of the forestry sector comprises just over 1% of the total national GDP in the statistics. It is recognized that the figure underestimates the true value of the sector because it has been calculated as the value of official production activities as planned, without including the values of forest products exploited, processed and marketed by the people. Particularly, the value of the industry for processing forest products is not yet included. Significant impacts of forests, such as protection functions for watershed, coastal and urban environment, values for biodiversity conservation, conservation of gene sources, and ecotourism have not been accounted for in the GDP of forestry. This leads to insufficient understanding on the efficiency of the forestry sector which manages almost half of the national land area and where 25 million people live.[6] This insufficient awareness could affect the development and investment for the forestry sector.[7]

The gross outputs of forestry between 2000 and 2008 are shown below. Among the regions, the northern midlands and mountainous areas have produced the largest outputs, followed by northern central and central coastal regions where the target provinces are located.

Gross Outputs of Forestry at 1994 Constant Price

Unit: billion dong

Region / Year	2000	2004	2005	2006	2007	2008
Total	**5,901.6**	**6,282.4**	**6,315.6**	**6,408.4**	**6,603.1**	**6,752.0**
Red River Delta	345.7	348.4	326.7	339.7	348.4	355.4
Northern Midlands and Mountain Areas	2,394.2	2,426.4	2,440.6	2,469.4	2,542.8	2,611.6
North Central and Central Coastal regions	1,591.5	1,768.4	1,797.2	1,828.0	1,883.4	1,916.0
Central Highlands	404.5	456.2	450.9	437.1	449.9	459.7
South East region	283.1	310.2	313.7	334.6	357.8	367.5
Mekong River Delta	882.6	972.7	986.5	999.6	1,020.8	1,041.8

Source: Statistical Yearbook of Vietnam, 2008. Values for 2008 are only based on estimates.

[5] ibid
[6] ibid
[7] Vietnam Forestry Development Strategy (2006-2020)

(2) Production of Forest Products

Vietnam is a producer of timbers and forest products, but at the same time, it is one of the worldôs largest importer of timber, and a growing exporter of wooden products. Domestic production of wood from natural forests and plantations has been increasing by 50% during 2000 up to 2008 and reached 3.6 million m^3 in 2008. The northern midlands and mountain areas, and northern central and central coastal regions have produced 33% and 30% respectively of the countryôs total production.

Production of Wood by Region

Unit: thousand m^3

Region / Year	2000	2004	2005	2006	2007	2008
Total	**2,375.6**	**2,627.8**	**2,996.4**	**3,128.5**	**3,461.8**	**3,562.3**
Red River Delta	148.1	116.4	157.0	163.5	178.8	186.1
Northern Midlands and Mountain Areas	719.5	786.5	996.7	1,063.6	1,185.8	1,184.9
North Central Area and Central Coastal Area	558.9	752.4	833.2	870.8	991.1	1,057.2
Central Highlands	372.8	324.1	309.3	328.7	352.5	373.6
South East	114.0	79.3	90.4	100.9	127.4	128.4
Mekong River Delta	462.3	569.1	609.8	601.0	626.2	632.1

Source: Statistical Yearbook of Vietnam, 2008. The figure of 2008 is only the estimation.

The import of timbers for the furniture industry has increased more rapidly than the domestic production. Timber produced locally accounts for only 20% of the total demand of the domestic processors. In 2005, the import of timber (round wood equivalent) had reached to about 2.4 million m^3. The total export turnover of wood and wooden products in 2008 was estimated at about US$2.8 billion, an increase of 16.7% over 2007.[8]

With the growing population and economy of Vietnam, it is projected that the demand of timbers and forest products will constantly increase. The projected timber production is about 20-24 million m^3/year of domestic harvested timber volume, including 10 million m^3/year of large timber by 2020. Substantial efforts will be necessary for the expansion of plantations as well as the improvement of natural forests to meet the future demand. The Vietnam Forestry Development Strategy 2006-2020 provides the projection of timber and forest product demand as shown below.

Projection of Demands of Forest Products

	Unit	2003	2005	2010	2015	2020
Timber: domestic consumption and export	**1,000 m^3**	**7,420**	**10,063**	**14,004**	**18,620**	**22,160**
1. Large timber for industry and civil construction	1,000 m^3	4,561	5,373	8,030	10,266	11,993
2. Small timber for wood-based panels and wood chips	1,000 m^3	1,649	2,032	2,464	2,922	1,682
3. Small timber for pulp production	1,000 m^3	1,150	2,568	3,388	5,271	8,283

Source: Vietnam Forestry Development Strategy 2006-2020, MARD

2.2 Forest Administration

2.2.1 At the Central Level

The Ministry of Agriculture and Rural Development (MARD) is the main responsible state agency for the administration of agriculture, forestry, salt industry, water resources and rural development in the

[8] Processing, Trade and Marketing of Forest Products in Vietnam (http://www.ptm.org.vn/)

whole country, pursuant to the Decree No. 01/2008/Nđ-CP dated 3/01/2008 of the government. MARDôs responsibilities on forest management include the following:

a) Periodic inventory, re-checking, forest classification, develop the statistics database of the area and volume of forest, and prepare the nationwide forest and forestry land maps of Cambodia.

b) Prepare the countryôs long term framework plan for forests development and protection, and to present to the government for approval.

c) Submit to the government the total annual volume of timber permitted to be exploited and consumed by the country from the natural forests. Evaluate synthetic documents for the design and exploitation of natural forests and decide to open the forest gates to the provinces and cities for exploitation.

d) Propose to the government to establish national parks, nature reserves, national seed orchards and protected areas with national importance or in the territory shared by many provinces, and assign agencies of MARD and other relevant sectors or the Provincial PeoplesôCommittees (PPC) to manage, protect and develop these forest areas.

e) Formulate by-law documents to submit to the government and promulgate policies, regimes, rules, procedures, and technical manuals relating to the management, protection, development and use of the forest and forest land in the whole country.

f) Organize and cooperate with the State Inspectorate to carry out monitoring and checking of the state administration authorities of all levels. Inspect the execution of forest laws of organizations, households, and individuals with allocated forest and forestry land.

g) Settle disputes over forest, coordinate with the general department of land management to solve disputes on forest land among the forest owners in the different provinces, and commend and reward the organizations, households and individuals who have outstanding achievements.

The two agencies under MARD which are commissioned to handle forest administration are the Department of Forestry (DOF) and the Department of Forest Protection (DOFP). DOF functions as the state administrator for the forest activities in the whole country, focusing on forest management, development, utilization, and seed work.[9] On the other hand, DOFP undertakes the function of state administrator for forest management and protection, ensuring the legal enforcement of forest protection and development.[10]

Besides DOF and DOFP, the Department of Processing and Trade for Agro-forestry - Fisheries Products and Salt Production under MARD is administrating the forest product processing sector. Likewise, the Forest Inventory and Planning Institute (FIPI) regularly organizes, implements and manages forest inventory and planning work aimed to support the state forest management and strategies for forest development.

Currently MARD is planning the establishment of the General Forestry Office (GFO) aiming to better consolidate and arrange the organization of forestry-related state administration agencies under MARD. In the plan, GFO will work under MARD and carry out the state administrative functions on

[9] MARD Ministerôs Decision No.21/2008/QD-BNN dated 28/01/2008 defining functions, tasks, authority and organizational structure of the Department of Forest

[10] MARD Ministerôs Decision No.22/2008/QD-BNN dated 28/01/2008 defining functions, tasks, authority and organizational structure of the Department of Forest Protection

forestry and forestry-related public services. At the district level, a pilot project which is to unify all existing forest agencies into one District Forest Office has been implemented in Thai Nguyen Province through the assistance of GTZ, based on the Prime Minister Decision No. 1134/QD-TTg dated 21/08/2008.

2.2.2 At the Local Level

(1) At the Provincial Level

The two forest administration agencies at the provincial level are under the PPC. The Forestry sub-department (FsD) is under DARD, which operates as a special agency to assist the director of DARD in forestry activities. The Forest Protection sub-department (FPsD), which moved to DARD in 2008, serves to advise the provinces about forest protection and enforce the Forest Protection and Development Law.

DARD is under the guidance and management of the PPC as well as under the directions and control of MARD. Pursuant to MARD Circular No. 94/2001/TT-BNN-TCCB dated 21/9/2001, the functions and tasks of DARD are defined as follows:

- Organize to survey and classify the area and volume of forest types, prepare maps, identify boundaries and demarcate forest types and forestry land in the provinces following the guidelines of MARD.

- Assist PPC in preparing the long-term, medium-term and short-term plans on the development and utilization of forests and forestry land of the localities for submission to the competent authorities for their approval.

- Appraise and present to PPC for their decision, or submit to the decisive agencies for the establishment of protection and special use of forest areas in the province according to the current stipulations of the government.

- Guide the DPCs to make plans for the management, use and development of forests for the appraisal of the decisive agency; synthesize the planning and plans submitted by the DPC for approval of PPC; and direct and organize the implementation whenever plans are approved by the PPC.

- Organize the councils for assessment and sum-up designs for the exploitation of natural forest by forest owners to submit to PPC for approval and to give the details to MARD; upon receipt of the appraisal and decision of MARD for the forest exploitation, assist PPC to issue permits of natural forests exploitation to the forest owners and check the progress and exploitation activities of the forest owners; and assist PPC in preparing the development plans and management of forest product processing activities in the province.

- Formulate and present to PPC or issue such documents within its competence and guide DPCs and CPCs, organizations, households and individuals in the province for the implementation of policies, regimes, and rules of the government on management, use and development of forests.

- Manage and steer the seed works (seed collection and management) in the forestry and forestry extension works in the province.

- Annually check the implementation of procedures and regulations for the exploitation of timber, forest products and forest use.

- Organize and steer the implementation of projects for production and protection forests, social forestry, and rural development in mountainous areas.

(2) At the District Level

At the district level, the Economics Division on Agricultural and Rural Development under the control of the District Peopleôs Committee (DPC) employs one or two forestry staff responsible for the monitoring of the forestry activities. In the districts where forests exist, a Forest Protection Unit attached to the FPsD operates and Forest Protection Stations are also established.

(3) At the Commune Level

In each commune, one member of the Commune Peopleôs Committee (CPC) is responsible for preparing the plan on agriculture, forestry, water resources and rural development. The Forest Protection and Development Law requires communes with forests to recruit forest staff. However, most of communes have so far failed to employ commune forestry staff due to budget constraints. They assign one forest ranger to work in one commune where the forest protection unit operates. In some communes, Commune Forestry Boards are set up under the leadership of the CPCôs Chairman and under the professional guidance of the Forest Protection Station.

(4) Protection Forest Management Boards

As public service agencies belonging to DARD or DPC, the Protection Forest Management Boards (PFMBs) also play an important role in the protection and management of protection forests. According to Decree No.23/2006/ND-CP dated 3/03/2006 on the implementation of the Law on Forest Protection and Development, PFMBs shall be established for headwater protection forests with areas of more than 5,000 ha or for important protection forests, even with areas of less than 5,000 ha, in terms of their protection function. Decree No. 200/2004/ND-CP dated 3/12/2004 defines that PFMBs can also operate as profit-making public service agencies.

2.2.3 Forest Research and Extension

(1) Forestry Research

The Forest Science Institute of Vietnam (FSIV) is the main research organization for forestry and is under the direct guidance of the MARD. It was established from merging the three research institutes, namely the: Forest Research Institute, Forest Industry Institute and Forest Economics Institute. The tasks and functions of FSIV are as follows:

1) To organize and implement the scientific and technological researches on silviculture, forest industry, forest economics, forestry organization and management, serve the requirements in the development of the branch, and develop a tropical forest science of Vietnam;

2) To elaborate and implement forest socio-economic, scientific and technical programmes and develop a mechanism for economic management, technical procedures and economic and technical standards;

3) To train researchers in the various fields of forest science, fostering and upgrading the scientific knowledge of scientists, technicians and the managerial personnel in the forestry branch;

4) To carry out international cooperation programmes; and

5) To provide consultancy services for forestry investments.

The FSIV has its main office in Hanoi with seven research divisions and three research centers. The South Vietnam Forest Science Sub-Institute and eight regional centers are units with the task of research and experimental production in the main forest ecological zones, aimed to apply the research results of the institute in their respective regions.

(2) Forest extension

At the central level, the National Agriculture - Fishery Extension Center (NAFEC) is a delivery service organization under MARD and has a forestry extension division. NAFEC develops policies, plans of long-term, five-year and annual programs and projects of agriculture and fishery extension. NAFECôs functions include information dissemination, propaganda campaign, technical training, technology transfer of agriculture, and support for the farmers all over the country in the fields of agriculture, forestry, fishery, animal husbandry, and rural industry.

At the provincial and district levels, agriculture and forestry extension is one of the tasks of the provincial and district agriculture extension centers. Throughout the country, there are 2,700 extension officers at the provincial level, 4,600 at the district level, and 10,600 extension staff at the commune level. Moreover, there are 15,800 extension workers who are working at the villages and hamlets.[11] However, the number of extension workers on forestry is only about 10%. In some provinces, forest rangers have taken part in forestry extension activities. Apart from the formal extension system, the PFMBs, state forest enterprises, and forest companies have provided forest extension services focusing on forestry technique.

2.3 Forestry Sector Support Partnership (FSSP)

Donors and the Vietnamese Government agreed to establish a partnership support program for the 5MHRP at the consultative group meeting which was organized in Paris in December 1998. Based on the agreement, the Forest Sector Support Program and Partnership (FSSP&P) was established on 12 November 2001 under the Memorandum of Agreement (MOA) signed between the Vietnam Government and 19 international partners. In June 2006, it was agreed that the partnership would reorient its institutions to more effectively support the Vietnam Forestry Development Strategy 2006-2020. The partnership was also renamed to the Forest Sector Support Partnership (FSSP, or the Forestry Partnership). At present, there are 25 signatories including JICA.

The general objective of the partnership is to maximize effectiveness and efficiency in the use of all resources applied to the sector, including those of the government and donors, through better harmonization of policies and programs in the context of shared objectives for the sector. The main tasks of the partnership are:

1) To promote information sharing and policy dialogue on key sectoral issues, focusing on the implementation of the Vietnam Forestry Development Strategy; and

2) To promote collaboration on the mobilization of resources and conduct activities to implement the strategy.

The partnership will encourage and promote the involvement of the private sector, both domestic and foreign direct investments, in the promotion of forest sector objectives.

[11] Brochure of NAFEC, 2008

2.4 Forest-related Government Plans, Policies and Laws/Regulations

2.4.1 Five-Year Socio-economic Development Plan 2006-2010

The five-year Socio-economic Development Plan 2006-2010 specifies the directions and tasks based on the accomplishments and assessment of the previous five-year (2001-2005) plan.

The country maintained significant economic growth in the previous five years from 2001 to2005. The estimated average annual growth rate of GDP during the period was 7.5%, reaching the target set for the five-year plan of 2001-2005. In the agriculture, forestry and fishery sectors, the growth in the production value is 5.5% during the five-year period (2001-2005) was higher than the planned target of 4.8%. More specifically, the production value of agriculture went up by 4.2%, forestry up by 1.3%, and fishery up by 12.2%. However, the average annual growth rate of GDP in the sector (3.8%) was lower than that of production value (5.5%) due to high production costs.

The growth rate of production value in the forestry sub-sector was lower compared with the other sub-sectors mainly because the government focused its attention on afforestation and the preservation of natural forests in 2001-2005. Although the contribution to the national economy was small during this period, forest coverage rose from 33.7% in 2000 to 37.4% in 2005. The latter is nearing the target of 38-39%. There was also a gradual shift in forest management and development from state management to the participation of various economic sectors.

There was a shift in the labor structure along with the shift of economic structure to industrialization and modernization. The ratios of the industry and construction sector in the economic and labor structures in 2005 have increased to about 41% and 17.9%, respectively, while the ratios of the agriculture, forestry, and fishery sector in the same structures have decreased to about 20.9% and 56.8%, respectively.

Selected Economic Indicators (%)

Indicators	1995	1996-2000	2001-2005	2006-2010 (target)
1. Economic growth rate (GDP)	-	6.9	7.5	7.5-8.0
Agriculture, forestry and fishery	-	4.4	3.8	-
Industry and construction	-	10.6	10.2	-
Services	-	5.7	7.0	-
2. Growth rate in production value				
Agriculture, forestry and fishery	-	5.8	5.5	-
Industry	-	13.9	15.9	-
Services	-	6.8	7.6	-
Indicators	1995	2000	2005	2010 (target)
3. Economic structure (GDP)	100.0	100.0	100.0	100.0
Agriculture, forestry and fishery	27.2	24.5	20.9	15-16
Industry and construction	28.8	36.7	41.0	43-44
Services	44.0	38.8	38.1	40-41
4. Labor structure	100.0	100.0	100.0	100.0
Agriculture, forestry and fishery	71.1	68.2	56.8	50.0
Industry and construction	11.4	12.1	17.9	-
Services	17.5	19.7	25.3	-

Source: The Five-Year Socio-Economic Development Plan 2006-2010, MPI (March 2006)

The five-year plan (2006-2010) provides the following development orientations in the forestry sector:

a) Reform the forestry sector fundamentally, with stronger links between protective and economic functions;

b) Reduce forest areas that are directly managed by the state agencies;

c) Develop more forest areas to increase forest coverage to 43% and establish raw material supply areas for paper mills and artificial plank factories, process wood into export products, enabling forestry workers to benefit from forest protection and development,

d) Organize the examination and inspection of product quality to protect the consumers and guarantee the prestige of exported Vietnamese agricultural and forestry products,

e) Improve the 5MHRP in the orientation of multi-purpose afforestation for both wood and protection of the ecological environment, and;

f) Complete the land and forest allocations, mainly for the people and other economic sectors.

2.4.2 Law on Forest Development and Protection

The revised Law on Forest Protection and Development was approved by the National Assembly in November 2004. It provides the overall framework for the shift towards more social and community-based forestry. For the first time, it recognizes the forest use rights of households, communities and other sectors as well as their ownership of plantation forests. It provides a framework for the multiple use of the vast areas of protection forest in the uplands and for exploitation rights in these areas, which together could lead to new management systems that combine protection with production.

With regards to safeguard, development and use of protection forests, the following provisions are relevant to the proposed project:

a) The state shall assign protection forests to the PFMBs, economic organizations, peopleôs armed force units, households and individuals living therein (Article 24).

b) Concentrated headwater protection forests covering an area of 5,000 ha or more or under 5,000 ha but having important protection function and important coastal preventive forests must have management boards (Article 46).

c) It is allowed to exploit forest products as shown below (Article 47):

   - Dead and diseased trees in the natural protection forest.

   - Trees standing in the area with a density higher than that prescribed in the forest management regulations, except for endangered, precious and rare species.

   - NTFP in natural protection forests, except for endangered and rare species.

   - Planted protection forests according to forest management regulations.

d) PFMBs can assign forests to households, individuals, village communities and organizations under package contracts

Decree No. 23/2006/ND-CP dated 3/3/2006 provides the regulations regarding forest protection, development and use. Among others, Decree No.23 prescribes the organization of protection forest management as follow:

a) PFMB shall be established to manage:

- Headwater protection forests with areas of 5,000 ha or more.

- Headwater protection forests with areas under 5,000 ha but are important in terms of protection function such as wind and sand shielding, protection forest for wave breaking or anti-sea encroachment as well as inter-regional and concentrated ones.

b) Protection forests other than item a) shall be assigned or leased by PPC to other organizations, or by DPC to households, individuals or village population communities

c) Protection forests which have not been assigned or leased based on the planning already approved by competent authorities shall be assigned to CPC by PPC. CPC shall elaborate the protection schemes, forest assignments and lease schemes to be submitted to DPC in order to put forests to efficient use.

2.4.3 Five Hundred Hectare Afforestation Program (1998-2010)

The 5MHRP has been implemented since 1998 to achieve three major objectives as follows:

a) To speed up the forest plantation; re-green bare land, protect existing as well as new forests; increase the protective function of the forests and protect the environment and biodiversity; create favorable conditions for sustainable national development; and increase the forest cover to 43% of the national territory;

b) To create raw material areas needed for the development of the forest product processing industry;

c) To create employment and increased income for the local people, thus contributing to hunger elimination and poverty alleviation; develop production and create conditions for secure livelihood, and ensure national defense and security.

The specific target of 5MHRP up to 2010 was to establish:

a) About 2.0 million hectares of protection and special use forests, composed of 1.0 million hectares each of newly established and rehabilitated forests,

b) About 2.0 million hectares of new production forests, and

c) About1.0 million hectares each of industrial trees and fruit trees.

The 5MHRP has been implemented mainly by the management boards established at the provincial and district levels. These management boards have prepared plans and detailed designs, and contracted out project activities to state forest enterprises, management boards of protection forests, forest companies, communities and individuals. By the end of 2008, 5MHRP has achieved 2.95 million ha of forest protection contracts, 1.14 million ha of assisted natural regeneration, 1.93 million ha of afforestation, and 0.11 million ha of industrial and fruit plantations. Forest coverage has increased from 33.2% in 1999 to 38.7% in 2008. The achievements of afforestation under 5MHRP are shown below.

Target and Accomplishment of Afforestation under 5MHRP

(Unit: 1,000 ha)

	Original Target (1998-2010)	Results (1998-2006)	Adjusted Target (2007-2010)	Results (2007-2008)	Results (1998-2008)
Afforestation	3,000 ha	1,485 ha	1,000 ha	444 ha	1,929 ha
Protection/ Special use forest	1,000 ha	705 ha	250 ha	79 ha	784 ha
Production forest	2,000 ha	780 ha	750 ha	365 ha	1,145 ha

Source: DOF, MARD (August 2009)
Prime Minister Decision No.100/2007/QD-TTg dated 6/07/2007

The cost of each contract is determined from the detailed design. The government, however, sets the ceiling cost for each activity. Prime Minister Decision No.210/2006/QD-TTg dated 12/09/2006 indicates the principles of the stateôs investment for 2007-2010. The same decision indicates a slight increase of the ceiling cost for the activities under 5MHRP compared with the previous one: 5.0 million VND per ha for new afforestation in protection and special use forest land, 2.0 million VND per hectare for new afforestation in production forest land, 1.0 million VND per hectare for assisted natural regeneration (ANR) and 100,000 VND per hectare per year for protection of existing forest. The ceiling cost for the afforestation in protection and special use forest land was further increased to about 6.0 million VND/ha and 10.0 million VND/ha by the Prime Minister Decision No. 100/2007/QD-TTg dated 6/07/2007 and Prime Minister Decision No. 164/2008/QD-TTg dated 111/12/2008, respectively, to cope with the difficulties for people with plantation work and management boards.

2.4.4 Vietnam Forestry Development Strategy (2006-2020)

On the 5th of February 2007, the Prime Minister approved the Vietnam Forestry Development Strategy 2006-2020 under Prime Minister Decision No.18/2007/QD-TTg. It provides the long-term development orientation of the forestry sector with new viewpoints to meet the requirements for the improvement of the international economic integration and sustainable development.

The overall objectives of the strategy until 2020 are:

(a) To establish, manage, protect, develop, and use the 16.24-million ha of land planned for forestry in a sustainable manner;

(b) To increase the forest cover ratio up to 42-43% by 2010 and to 47% by 2020;

(c) To ensure wider participation from various economic sectors and social organizations in forest development;

(d) To increase contributions to socio-economic development, environmental protection, biodiversity conservation, and provision of environmental services;

(e) To reduce poverty and improve the livelihoods of the rural mountain people; and

(f) To contribute to national defense and security.

The specific objectives and targets of NFS are shown below:

Specific objectives and targets of NFS

Specific objectives	Targets by 2020
1. **Economic objectives**: Existing natural forests should be well-managed; forest plantations should be expanded and their productivity should be improved; agro-forestry extension should be strengthened; bare land should be used more effectively to develop forest. Processing of timber and NTFP must be more competitive and sustainable to meet domestic and export demands.	♦ Increase 4-5%/year in forest production growth, ♦ Maintain 2.3-2.4 million ha of industrial plantations and 4.0 million ha of natural forest, ♦ Plant 200 million scattered trees/year, ♦ Produce 20 million m^3/year of timbers, including 10 million m^3/year of large timber, ♦ Export US$ 4.0 billion of forest products, including US$3.2 billion of timber products and US$0.8 billion of NTFP, ♦ Improve environmental services for forest (CDM, eco-tourism, erosion prevention, watershed protection, etc.) by US$9.0 billion, and ♦ Certify 30% of the production forest area for sustainable forest management.
2. **Social objective**: Livelihood of forest dependent people should be improved through socialization and diversification of forest activities. Employments should be generated, capacity and awareness of the people should be improved, particularly minority groups, poor households and women in the remote areas, so that step by step, they could basically live in the forest in a sustainable manner and contribute to poverty alleviation, social security and national defense.	♦ Generate 2.0 million of labors, ♦ Improve income and contribute to poverty alleviation, ♦ Completely allocate and lease forest/forest land to forest owners by 2010, and ♦ Increase the number of vocationally trained workers by up to 50%, with special focus on ethnic groups, poor households and women in the remote and isolated areas.
3. **Environmental objective**: Forest protection, nature protection and bio-diversity conservation should be well undertaken to effectively contribute to the protection of watershed, coastal and urban areas, mitigation of natural disasters, prevention of erosion, and protection of water sources while creating income from environmental services (environmental fee, CO_2 market, eco-tourism, etc.)	♦ Increase forest cover by 43% in 2010 by paying attention to forest quality, ♦ Efficiently manage and utilize the 5.7 million ha of protected forest and 2.3 million ha of special use forest, ♦ Minimize forest violations, and ♦ Develop payment mechanisms for environmental services of the forest starting early 2006 to re-invest in forest management and protection.

Summary of Forest Plan for Three Forest Categories (million ha)

Land Categories	2004	2010	2020
Total area planned for forestry	**16.2**	**16.2**	**16.2**
1. Permanent national forests:	12.3	14.0	14.3
a. Protection forest	5.9	5.7	5.7
b. Special use forest	1.9	2.3	2.3
c. Production forest	4.5	6.0	6.3
2. Other production forest areas	-		1.9
3. Non-forested area	3.9	2.2	0
Forest Cover %	**36.7%**	**43%**	**48%**

There are three development programs under the Forestry Development Strategy, namely (a) Sustainable forest management and development program, (b) Forest protection, biodiversity conservation and environmental services development program, and (c) Forest products processing and trade program.

The strategy provides forest development orientations and measures that are relevant to the implementation of the proposed project:

(1) General development orientations

(a) For watershed protection of forests, it is necessary to focus on the investments on project development for the protection and restoration of the forest in the northern mountainous region, northern central region, central coastal region and central highlands.

(b) For tide-shielding, sea encroachment, wind- and sand-shielding, the priority should be focused on the project development of the protection, restoration and improvement of mangrove forests in the northern, north central, central coastal regions and the Mekong River Delta, and to consolidate and develop the system of sand- and wave-shielding forests in the central coastal regions.

(c) By year 2010, all forest areas and forest land shall be basically allocated and leased to the forest owners belonging to the economic entities. The PFMB will manage 70% of the large-scale and important national protection forests. The remaining 30% of protection forests will be managed by private enterprises, communities, cooperatives, households, and individuals as stipulated in the Forest Protection and Development Law.

(d) People's awareness should be changed from purely protection of forest trees to protection of continuous ecosystems as well as to ensure the optimal way of forest regeneration and utilization capacity. Forest protection and conservation must be based on development principles which create conditions for forest owners and local people to engage in forest protection and development activities in order to make legitimate income from forest activities.

(e) Forest protection and conservation is the direct responsibility of the forest owners with the collaboration of local village communities and effective support of the state forestry management agencies and local authorities.

(f) Planting and using the NTFP should be strengthened, focusing on advantageous products such as bamboo, rattan, medicinal herbs, and foodstuff, and the raising forest animals is encouraged.

(2) Orientation of forest development by region

(a) Northern central region (Thanh Hoa, Nge An, Ha Tinh, Quang Binh, Quang Tri and Thua Thien Hue Provinces):

- Concentrate on the establishment and consolidation of protection forest for watershed, coastal protection, sand and wave-shielding, and prevention of erosion and earth crumbling along the sea coast.

- Strengthen community-based forest management modality, especially for protection forests in the scattered watersheds and areas needing sand-shielding and improvement of poor soils.

(b) Southern central coastal region (Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan and Binh Thuan):

- Strengthen the watershed protection forest system, particularly in the steeply sloping mountainous areas, where the forest has been lost, and enhance the establishment of the protection plantations for wind- and sand-shielding, and for the control of coastal erosion and earth crumbling.

- Enhance the protection of the existing forests and develop new forests in the dry areas, such as Ninh Thuan and Binh Thuan, to improve the water sources and cultivated land.

(3) Measures for implementation

(a) Develop and gradually implement the mechanisms for fee collection for environmental services that forestry is making and supplying for the society, such as the watershed protection for the hydro-power plants, irrigation, city environment and coastal protection, ecotourism and outdoor recreation.

(b) Develop small-scale CDM afforestation projects to generate income for the poor people.

(c) Increase the budget from the state allocated for the management, protection and development of special use, protection, and production forests, scientific research, forestry extension, human resource training, development of a modern forest management system, forest inventory and planning, establishment of high-quality forests for seed and nurseries, and adequate investments for the construction of forestry infrastructure similar to agriculture infrastructure.

(d) For special use and protection forests, allocate the annual state budget for the administrative cost of management boards and operational costs for commune and village forest protection groups.

(e) Strengthen the contract-based protection for protection forests, by promoting the provision of direct benefits from forests and other income sources, including payments for environmental services. Sufficient investment will be given to developing agro-forestry and NTFP (concentrated plantations and establishment under forest canopy areas) so as to replace the current contract mechanism, which uses money from the state budget.

(f) Provide seedlings and fertilizer to households, individuals, and village communities especially the poor households, to establish small-scale production plantations. This support can be considered as the stateôs payments for the environmental benefits that these forests provide to society.

2.4.5 Action Plan on Climate Change Mitigation and Adaptation for Agriculture and Rural Development Sector

Vietnam is one of the countries that is most vulnerable to climate change phenomena such as drought, sea level rise, high temperature, and torrential rains. Climate change is caused and worsened not only by the increasing emissions of green house gas (GHG) from the industrial countries but also by unsustainable forest management and deforestation. Sustainable management of forest is an effective tool in mitigating and adapting to climate change.

The Vietnamese Government has worked actively to mitigate and adapt to climate change by ratifying the Kyoto Protocol under the United Nations Framework Convention on Climate Change (UNFCCC). In December 2008, the Prime Minister approved the National Target Program (NTP) to respond to climate change (PM Decision No. 158/2008/QD-TTg dated 2/12/2008). The objectives of NTP are:

(a) To assess climate change impacts on the sectors and regions in specific periods;

(b) To develop feasible action plans to effectively respond to climate change in the short- and long-terms to ensure the sustainable development of Vietnam;

(c) To take opportunities to develop towards a low-carbon economy; and

(d) To join the international community's efforts in mitigating climate change.

The NTP requires ministries to develop their action plans to respond to climate change by 2010 and to implement the action plans by 2015. The budget for implementing the activities of NTP will be sourced from both foreign and domestic capitals. NTP specifies MARD's tasks as follows: (i) to propose measures to develop protection forests (upstream and coastal) in accordance with climate change scenarios; (ii) to propose projects on socio-economic development in commonly dry areas; and (iii) to integrate climate change issues into the development of measures to ensure security of water sources, sea dike system and reservoirs.

In response to the NTP and recognizing the important role of forestry in climate change mitigation and adaptation, DOF has developed an action plan on climate change mitigation and adaptation for the agriculture and rural development sector, in collaboration with the different departments under MARD, and other related ministries and local authorities. It focuses on:

- Sustainable conservation and development of the system of natural forests;
- Establishment and sustainable management of coastal protection forest system, including mangroves; development and pilot implementation of Clean Development Mechanism (CDM) projects in the forestry sector;
- Strengthening of sustainable and pro-poor forest land management initiatives;
- Integration of issues on the implementation of the three Rio Conventions of the United Nations, including the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCCD).

2.4.6 Vietnam Agenda 21

The Prime Minister issued the Strategic Orientation for Sustainable Development in Vietnam (so-called Vietnam Agenda 21) through Decision No.53/2004/QD-TTg dated 17th August 2004. It is aimed at the sustainable development of the country on the basis of close, reasonable and harmonious coordination of economic and social development and environmental protection. It is the framework strategy consisting of broad orientations, which are the legal foundation for the ministries, sectors, localities, organizations and relevant individuals to follow and express Vietnam's commitments to the international community.

Agenda 21 is composed of five parts:

Part 1: Sustainable development, Vietnam's anticipated path

Part 2: Priority economic areas for sustainable development

Part 3: Priority social areas for sustainable development

Part 4: Priority areas in natural resource utilization, environmental protection and pollution control for sustainable development

Part 5: Implementation arrangements for sustainable development

In Part 4, Agenda 21 states clearly that the implementation of measures for mitigating and limiting the negative impact of climate change, and preventing and controlling natural disasters are the priority activities related to UNFCCC. It also states the following priority activities aiming at prevention of land degradation, effective and sustainable utilization of land resources, and forest protection and development:

(i) Continuously promote land and forest allocations to households and communities.

(ii) Formulate, issue and implement policies that attract investment in forest development and protection.

(iii) Protect and develop forest resources with the active participation of the community.

(iv) Assist people in planting and protecting forests using allocated forest land.

(v) Encourage livelihood improvement through sustainable community-based use and management of forests.

Chapter 3 Present Conditions of the Target Province

3.1 Location, Topography and Administrative Divisions

The 12 target provinces cover a total 89,394 km^2 of geographical area, which comprises 27.0 % of the total land of Vietnam. The target provinces lies between latitudes N. 10°35ô- 20°00ôand longitude E. 103°55ô- 109°30ôand are located in the coastal regions, namely North Central Coast, South Central Coast, and South East.

Location and Area of the Twelve Target Provinces

Province	Location (latitudes – longitude)	Area (km^2)
1. Thanh Hoa	N. 19° 20ô- 19° 40ô, E. 104° 20ô- 106° 00ô	11,135
2. Nghe An	N. 18° 35ô- 20° 00ô, E. 103° 55ô- 105° 50ô	16,499
3. Ha Tinh	N. 17° 55ô- 18° 50ô, E. 105° 05ô- 106° 25ô	6,026
4. Quang Binh	N. 16° 55ô- 18° 05ô, E. 105° 40ô- 107° 00ô	8,065
5. Quang Tri	N. 16° 20ô- 17° 10ô, E. 106° 30ô- 107° 25ô	4,744
6. T.T. Hue	N. 16° 00ô- 16° 45ô, E. 107° 00ô- 108° 15ô	5,065
7. Quang Nam	N. 14° 55ô- 16° 15ô, E. 107° 10ô- 108° 45ô	10,438
8. Quang Ngai	N. 14° 35ô- 15° 25ô, E. 108° 15ô- 109° 05ô	5,153
9. Binh Dinh	N. 13° 30ô- 14° 45ô, E. 108° 35ô- 109° 20ô	6,040
10. Phu Yen	N. 12° 40ô- 13° 45ô, E. 108° 40ô- 109° 30ô	5,061
11. Ninh Thuan	N. 11° 20ô- 12° 10ô, E. 108° 35ô- 109° 15ô	3,358
12. Binh Thuan	N. 10° 35ô- 11° 35ô, E. 107° 25ô- 108° 55ô	7,810
Total	**N. 10° 35' - 20° 00', E. 103° 55' - 109° 30'**	**89,394**

Source: Viet Nam Administrative Atlas, Statistical Year Book of Viet Nam 2008.

The target provinces extend from the coastal plain to steep mountain peeks. The highest peaks in the target provinces are generally located along the boundaries with the provinces in the Central Highland region.

The target provinces have 133 districts, 12 cities, 8 towns, and 2,375 communes as shown below.

Number of Administrative Units in the Twelve Target Provinces

Province	Districts	Cities	Towns	Communes
1. Thanh Hoa	24	1	2	586
2. Nghe An	17	1	2	436
3. Ha Tinh	10	1	1	238
4. Quang Binh	6	1		141
5. Quang Tri	8		2	118
6. T.T. Hue	8	1		119
7. Quang Nam	16	2		210
8. Quang Ngai	13	1		166
9. Binh Dinh	10	1		129
10. Phu Yen	8	1		91
11. Ninh Thuan	5	1		45
12. Binh Thuan	8	1	1	96
Total	**133**	**12**	**8**	**2,375**

Source: Statistical Year Book of Viet Nam 2008

3.2 Natural Conditions

3.2.1 Rainfall

The following table shows the mean monthly rainfalls in the target provinces. All the provinces except Thanh Hoa have the highest rainfall in October and November and the least rainfall in June and July. The highest peak rainfall in Thanh Hoa province is recorded in August and the least in February.

Monthly Rain Fall at Meteorological Station in the Target Provinces (mm/month)

Province	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1. Thanh Hoa #	3	21	25	68	196	205	189	313	221	332	12	9	1,595
2. Nghe An	90	23	57	65	141	107	110	205	300	694	119	40	1,952
3. Ha Tinh	101	47	52	77	173	44	29	154	373	1,109	140	176	2,476
4. Quang Binh	53	18	36	14	165	45	12	66	698	682	353	97	2,240
5. Quang Tri	38	49	15	33	142	28	56	41	423	999	394	174	2,392
6. T.T. Hue	118	85	80	74	195	24	26	63	479	1,524	608	510	3,786
7. Quang Nam #	7	225	207	35	150	18	47	225	301	891	1,196	153	3,455
8. Quang Ngai #	197	1	102	48	132	48	41	244	107	797	1,328	78	3,123
9. Binh Dinh	258	26	35	23	80	23	27	76	425	520	851	251	2,596
10. Phu Yen	48	7	82	46	162	14	13	130	101	678	1,428	29	2,789
11. Ninh Thuan	N.A.												
12. Binh Thuan	0	0	0	4	266	164	170	231	201	114	176	2	1,328
Average	83	46	63	44	164	65	65	159	330	758	605	138	2,521

Source: DARDs of 12 province, #: Data in 2007. Other data is for 2008.

3.2.2 Land Use

The present land use in the target provinces is summarized below. In the 12 target provinces as a whole, the forestry land occupies 62% of the total land area, followed by the agricultural land (17%). ñOthersò include the residential area, industrial zone, government offices and facilities, and water bodies. As the forestry land occupies more than 50 % of the land in most of the provinces, its proper management and utilization are essential to sustainable socioeconomic development of the provinces.

Land Use in the Twelve Target Provinces

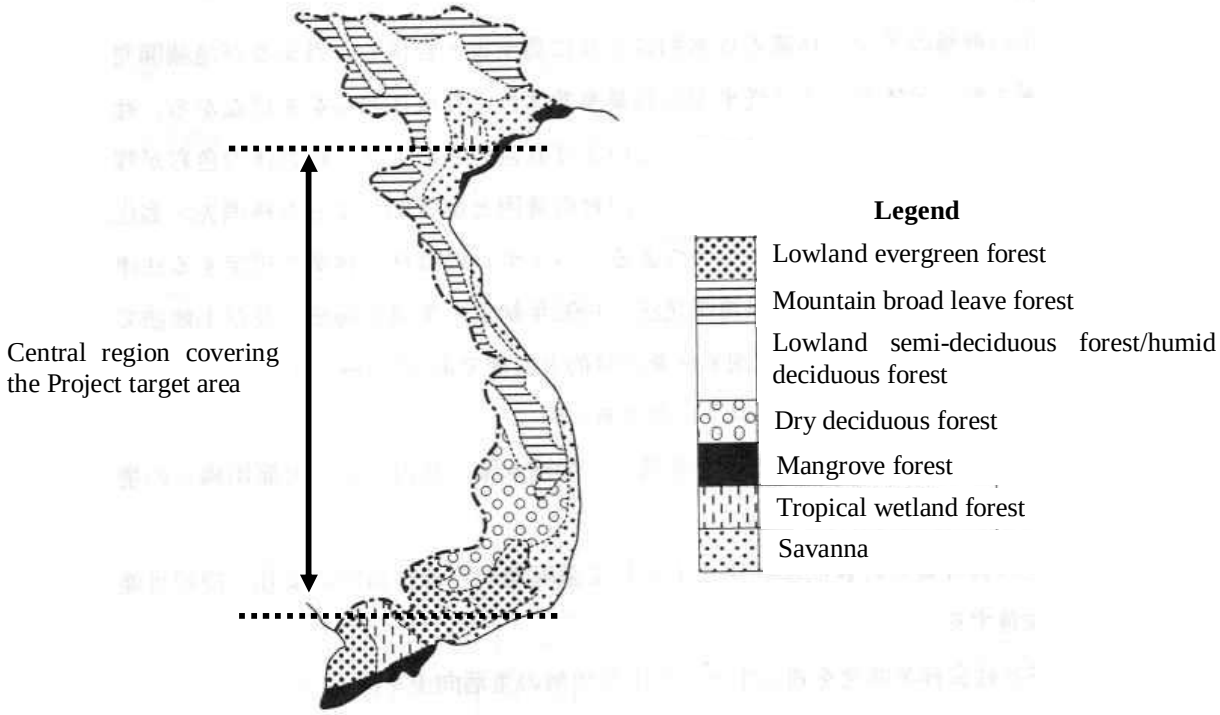
Province	Forestry Land	Agricultural Production Land	Others	Total
1. Thanh Hoa	629,099	246,200	238,201	1,113,500
2. Nghe An	1,178,182	251,700	220,018	1,649,900
3. Ha Tinh	365,577	116,700	120,323	602,600
4. Quang Binh	621,056	68,600	116,844	806,500
5. Quang Tri	330,126	75,000	69,274	474,400
6. T.T. Hue	307,871	53,900	144,729	506,500
7. Quang Nam	677,783	111,900	254,117	1,043,800
8. Quang Ngai	296,087	123,700	95,513	515,300
9. Binh Dinh	320,140	136,400	147,460	604,000
10. Phu Yen	250,000	122,300	133,800	506,100
11. Ninh Thuan	199,169	70,000	66,631	335,800
12. Binh Thuan	370,012	284,000	226,788	781,000
Total	**5,545,102**	**1,560,600**	**1833,698**	**8,939,400**
%	**62 %**	**17 %**	**21 %**	**100 %**

Source: PPC Decision on the survey results of land use planning, 2007
Statistical Year Book of Viet Nam, 2008

3.3 Forest Sector in the Target Provinces

3.3.1 Forest Types

The target provinces extend over from north to south with the altitude from 0 to 2,700 m above sea level (ASL). Thanks to its diverse climate conditions and complicated topography, the central coastal regions have a wide range of vegetation. The forests in the 12 target provinces are broadly classified into five (5) major types of forest: (i) mountain broadleaved forest, (ii) lowland semi deciduous forest / humid deciduous forest, (iii) savanna, (iv) dry deciduous forest, (v) lowland evergreen forest.



Source: FAO ï Unesco, Soil map of the World ï Volume IX

Distribution of forest class in Vietnam

In the provinces, flat lowland extends in the eastern part of the provinces where most of the original deciduous forests used to exist and were currently converted into rice cultivation. Plantation of Pinus or Acacia spread out the gentle hill slope adjacent to the lowland. The savanna vegetation, where indigenous small trees scatter, is dominant in the sandy areas near the seashore. Plantations of Casuarinas are also developed in the sandy area as sand- and wind- sielding forests to prevent sand from moving by strong wild from the sea. In the western part of the provinces, mountain broad leave forest is dominant. This type of forest is fragmented and the mosaic patches of the forest spread over the steep slope or the top of the mountain.

The major soil types in the target provinces are Arenosols, Salic Fluvisols, Thionic Greysols, Acrisola, Ferralsols and Leptosols. Among these soil types, Acrisols are the most dominant, followed by Ferrasols and Thionic Fluvisols.

3.3.2 Forest Classification and Land Use

Pursuant to the government decisions and decrees, namely, i) Decision of National Parliaments on the land use planning for the period of 2005ï 2010, ii) Government Decision on the land use planning for the same period, and iii) Prime Minister Decision No. 186, MARD instructed PPCs of all provinces

and cities to implement the forest classification survey to update the figures of the provincial land use planning including the three forest types. By the end of 2007 all provinces submitted the updated land use data to MARD and MARD consolidated the report and submitted to Prime Minister the report on the total area of forest land in the country (No. 3122/BC-BNN-LN on October 20, 2008). The total area of forest land in the country is 16,247,492 ha, which consists of 2,199,342 ha of special use forest (13.5 %), 5,552,327 ha of protection forest (34.2 %), and 8,495,823 ha of production forest (52.3 %).

As the table below shows, the total forest land of the 12 target provinces is 5,545,102 ha which accounts for 34% of the same land in the county (16,247,492 ha), while the total land area of the provinces (8,939,400 ha) accounts 27% of that of the country (33,114,600 ha). In other words, the ratio of forest land in the target provinces (62 % of total land area) is higher than the same of the country (49 % of the same).

Forest Land Area of 12 Provinces

Province	Total Forest Land (a)	Total Land Area (b)	Ratio of Forest Land (b /a)
Total of 12 Provinces (c)	5,545,102	8,939,400	62 %
Whole country (d)	16,247,492	33,114,600	49 %
(c /d)	34 %	27%	

Source: PPC Decisions issued in 2007 on the planning of three types of forests

The next table indicates the forest areas in the target provinces. Nghe An province has the largest forest land (1,178,182 ha) among the 12 target provinces and the area is around two to five times larger than that of other provinces. The total area of protection forest in the 12 provinces is 2,047,334 ha, which is more than one third (37 %) of total protection forest in the country (5,552,327 ha).

Area of Forests by Forest Type in the 12 provinces

(Unit: Ha)

Province	Special Use Forest	Protection Forest	Production Forest	Total of Forest Land	Total Land Area
1. Thanh Hoa	81,504	191,944	355,651	629,099	1,113,500
2. Nghe An	170,004	395,146	613,032	1,178,182	1,649,900
3. Ha Tinh	74,641	120,390	170,546	365,557	602,600
4. Quang Binh	125,498	174,482	321,076	621,056	806,500
5. Quang Tri	68,790	95,794	165,542	330,126	474,400
6. T.T. Hue	88,317	88,129	131,425	307,871	506,500
7. Quang Nam	133,772	327,711	216,300	677,783	1,043,800
8. Quang Ngai		130,499	165,588	296,087	515,300
9. Binh Dinh	33,844	155,148	131,148	320,140	604,000
10. Phu Yen	19,160	101,110	129,730	250,000	506,000
11. Ninh Thuan	42,327	115,864	40,987	199,169	335,800
12. Binh Thuan	32,485	151,117	186,410	370,012	781,000
Total of 12 porivnces	870,341	2,047,334	2,627,427	5,545,102	8,939,400
Whole country	2,199,342	5,552,327	8,495,823	16,247,492	33,114,600

Source: PPC Decisions issued in 2007 on the planning of three types of forests

Forest cover is classified into three (3) types: natural forest, plantation and bare land. The figures in the next table show the areas of three types of forest in each province. As a whole, the average ratio of bare land to the total forest land is 23 %, which is higher than the national average of 17 %. It suggests the need for reforestation and rehabilitation in the 12 provinces is relatively high in the country.

Forest Land Use in the 12 provinces

Unit: ha

Province	Total Forest Land	Covered with Natural Forest	Covered with Plantation 1)	Bare land and others	Ratio of Bare Land (%)
	(a = b +c+d)	(b)	(c)	(d)	(d /a)
1. Thanh Hoa	629,099	388,782	151,871	88,446	14
2. Nghe An	1,178,182	688,941	137,253	351,988	30
3. Ha Tinh	365,557	210,485	112,391	42,701	12
4. Quang Binh	621,056	457,383	95,488	68,185	11
5. Quang Tri	330,126	135,059	87,108	107,959	33
6. T.T. Hue	307,871	203,763	103,725	383	0
7. Quang Nam	677,783	387,063	78,484	212,236	31
8. Quang Ngai	296,087	105,564	143,324	47,199	16
9. Binh Dinh	320,140	187,188	87,505	45,447	14
10. Phu Yen	250,000	126,233	41,228	82,539	33
11. Ninh Thuan	199,169	141,201	6,159	51,809	26
12. Binh Thuan	370,012	257,351	27,183	85,478	23
Total of 12 provinces	5,545,102	3,289,013	957,135	1,298,954	23
Whole country	16,247,492	10,348,591	13,461,503	2,785,989	17

Source: (1) MARD Decision, No. 1267/QD-BNN-KL, Dated on 04/05/2009
(2) PPC Decisions issued in 2007 on the planning of three types of forests
1) ñCoverage of plantationò includes the plantation extending to the outside of forest land. In case of T.T. Hue the private plantations extends in the agricultural production land which account for almost same scale as forestry land. As a result, the figures of bare land ratio became zero. However, there are actually vast bare land in the hilly and mountain areas in T.T.Hue which needs to be rehabilitated through the Project.

According to the MARD guidelines, bare land is classified into three (3) types: grassland (class ñIaò), shrub and bush (class ñIbò), and regenerating sparse woodland (class ñIcò). MARD Decision No.134/QD-BLN-KH dated on 04/04/1991 titled ñTechnical Regulations to establish the Watershed Protection Forestò states that reforestation shall target the bare lands classified into ñIaò and ñIbò, while the Assisted Natural Regeneration (ANR) with/without enrichment planting shall be applied to ñIbò and ñIcò. The next table shows the area of bare land in the protection forest in the target provinces. Although some data are not available at the moment, almost all the provinces have 18,000 to 66,000 ha of bare land in their protection forest. Again, Nghe An province is likely exceptional as it has 135,000 ha of bare land which is four to six times of other provinces. In general, many bare lands are located in the western hilly and mountain areas in the provinces.

Bare Land in Protection Forest in the 12 Provinces

Unit: ha

Province	Areas of bare land in the Protection Forest Land				
	Ia	Ib	Ic	Other	Total
1. Thanh Hoa	12,979	11,678	15,814		40,701
2. Nghe An	35,067	50,005	49,530	464	135,066
3. Ha Tinh	3,429	7,664	6,715	147	17,955
4. Quang Binh	621	4,817	11,419	988	17,845
5. Quang Tri	11,961	9,244	8,316	479	30,000
6. T.T. Hue	0	0	0	0	0
7. Quang Nam	975	26,206	39,042	0	66,223
8. Quang Ngai	1,641	12,762	14,504	0	28,907
9. Binh Dinh	5,682	9,933	9,719	4,366	29,700
10. Phu Yen	11,972	11,390	11,778	0	35,140
11. Ninh Thuan	4,059	13,761	7,098	6,788	31,706
12. Binh Thuan	2,533	5,587	18,587	5,538	32,245

Source: (1) PPC Decision issued during 2007 and 2008 on survey of three types of forest
Bare land in T.T.Hue belongs to the ñUnused landò, which will be incorporated in the

3.3.3 Forest Ownership

The Forest Protection Department of MARD updated the data of forest ownership in 61 provinces and cities in the country in 2008. The figures of 12 target provinces are summarized in the next table.

Forest Land of 12 Provinces by Owner (unit: ha)

Province	Total Forest Land	State Enterprise [1)]	Management Boards	Other Economic Org.	Households
1. Thanh Hoa	629,099	14,744	156,644		348,495
2. Nghe An	1,178,182	141,079	568,460	84	377,561
3. Ha Tinh	365,557	97,063	179,133		33,426
4. Quang Binh	621,056	142,915	241,332		100,688
5. Quang Tri	330,126	77,780	68,523		18,303
6. T.T. Hue	307,871	24,279	168,885	1,045	55,569
7. Quang Nam	677,783	11,156	135,785	1,044	46,392
8. Quang Ngai	296,087	25,480	118,393	725	107,958
9. Binh Dinh	320,140	68,027	108,839	12,037	22,021
10. Phu Yen	250,000		129,272		52,733
11. Ninh Thuan	199,169	56,489	109,148		
12. Binh Thuan	370,012	48,027	302,878	1,017	27
12 provinces	**5,545,102 (100%)**	**707,038 (13%)**	**2,287,292 (41%)**	**15,952 (0.3%)**	**1,193,171 (22%)**

(continued.)

Province	Community	Other Organization	Army Force	PPC/CPC (Not yet allocated to the owners)
1. Thanh Hoa		272	37,949	40,994
2. Nghe An		590	2,361	88,048
3. Ha Tinh	3,797		342	51,817
4. Quang Binh	3,418	444	4,359	127,901
5. Quang Tri	11,043		4,201	150,277
6. T.T. Hue	16,032		6,405	35,658
7. Quang Nam	5,329	107	1,189	476,782
8. Quang Ngai	1,053	1,226	297	40,956
9. Binh Dinh		4	1,317	107,895
10. Phu Yen		5,971	629	61,396
11. Ninh Thuan				33,532
12. Binh Thuan	1,982		13,825	2,256
12 provinces	42,653 (1%)	8,613 (0.2%)	72,873 (1%)	1,217,510 (22%)

Note: 1) State Forest Enterprise is one of the state enterprise having large forest area.
2) Other economic organizations include private entities engaging in the forest industries such as paper mill companies, wood and timber companies, etc.
3) Community means the household groups or villages who are living adjacent to the forest and capable to manage it.
4) Other organizations are police guarding the national boundaries and any other organizations who are based in the rural areas.

Source: Forest Protection Department, MARD. 2008.

Management boards of protection and special-use forests occupy the largest share of the forest (41 %) of the country.. About 1.2 million hectare of the forest is allocated to households having land use certificate so called ñred book.ò The state enterprises still has significant share of the forests in the 12 provinces. Meanwhile there are still 1.2 million ha of forest, which is not allocated to any entities and is temporarily managed by DPCs or PPCs.

3.3.4 Production and Marketing of Forest Products

(1) Wood Production

Because of its geographical advantage, the provinces in the central region are the leading producers of wood and timber products to export abroad in the country. Wood and timber are mainly produced in the production forest land. Small timbers and wood chips of Acacia species are the main industrial products in the target provinces. In many rural areas, making a contract with private companies, such as milling and processing factories in the capital city of the provinces, is the prevailing practice. The rotation period of Acacia and Eucalyptus are seven to ten years on average. After harvesting woods, local communities replant the seedlings in the same plot.

The next table shows the timber production in the target provinces for the last five (5) years. The total production of timber in the 12 target provinces have been gradually increasing.

Timber Production in 12 Provinces (unit: m^3)

Province	2000	2004	2005	2006	2007	2008
1. Thanh Hoa	38,400	33,100	33,700	46,100	45,800	51,600
2. Nghe An	93,800	92,100	93,500	92,700	98,900	100,200
3. Ha Tinh	28,500	44,000	47,500	49,200	73,100	62,300
4. Quang Binh	30,800	39,600	37,300	34,800	43,500	43,200
5. Quang Tri	13,400	34,300	44,600	48,400	54,200	65,500
6. T.T. Hue	31,100	49,100	54,200	58,100	64,600	65,400
7. Quang Nam	69,100	91,700	128,700	141,200	156,000	206,300
8. Quang Ngai	57,900	150,600	151,400	150,200	180,600	180,400
9. Binh Dinh	78,400	125,200	127,300	138,800	152,100	161,800
10. Phu Yen	13,200	11,100	11,700	13,600	18,500	21,500
11. Ninh Thuan	6,100	500	3,300	3,900	2,100	3,900
12. Binh Thuan	39,900	26,300	36,700	37,100	38,400	35,700
Total of 12 provinces (% over the country total)	501,600 (21 %)	697,600 (27 %)	769,900 (26 %)	814,100 (26 %)	927,800 (27%)	997,800 (28 %)
Total of the country	2,375,600	2,627,800	2,996,400	3,128,500	3,461,800	3,562,300

Source: Statistical Year Book of Vietnam, 2008

(2) Marketing of Wood Products

Vietnam is the world's fourth largest wood chip exporter in 2008, with an estimated volume of two million tons being shipped, mainly to Japan and China.. In 2002, the country exported only 150,000 metric tons of wood chips and was a marginal supplier at the time. The interest of farm households in planting trees has contributed to the rapid increase of the supply. Until early 2000, production of crops and livestock generated more profits than timber. This partly resulted in conversion of forestland to farmland. This changed when the wood chip exports took off in 2002-2003. Many farmers are now planting trees as the profitability is considered very good compared to many other crops. The number of woodchip mills has exploded in Vietnam from only 15 plants in 2003 to currently 50 wood chip mills along the 3500 km long coastline. The chip mills typically have a annual capacity between 50,000 and 150,000 tons, but many of them are recently running at a reduced rate due to a lack of logs.[1]

Unlike wood chip, Vietnam has largely relied on import of particle board, MDF (medium density fibreboard), and plywood to fill shortfall in domestic supply. Meanwhile Vietnam is one of the largest exporters of furniture to US. and Europe. But the industry has also relied on import of certified wood

[1] EWorldWire (http://www.eworldwire.com/pressreleases/19500)

materials. Owing to the growing importance of forest industry in Vietnam, the country is expanding its domestic timber resources to be less dependent on imported wood raw-material in the future.

The market of wood chips and small round timber in the 12 provinces is stable and has been expanding recently according to information from DARDs. In Binh Dinh and Phu Yen provinces, paper mill factories in the provincial capital cities make agreements with rural farmers to sell Acacia wood directly to the factories. Apart from the market of round wood and wood chips, local farmers also sold small trees and branches of Acacia as a fuel wood in the local market.

(3) Non-Timber Forest Products (NTFP)

NTFP are also collected from forests and sold in the local market. Although there is no statistical data of NTFP production and consumption, some NTFPs such as rattan, bamboo shoots, mushrooms and traditional medicines are quite popular in the target province sand sold in the local markets in the district and commune centers.

3.3.5 Forest Degradation and Forest Fire

MARD Decision No.1267/QD-BNN-KL dated on 05/05/2009 specifies the main causes of forest degradation in the country, namely, i) illegal cutting, ii) forest fire, and iii) insects attacks. Oh the other hand, the interviews made by the Survey Team to the Forestry Sub-departments of the target provinces revealed that the main causes of forest destruction in the watersheds and coastal areas were: i) cutting and fetching trees for firewood, ii) clearing forest for crop production, and iii) unplanned and over exploitation of high valued timber wood. In addition to those mentioned above, the forest fire is also one of the major threats to natural forest and plantations in the provinces. The risk of forest fire becomes high during the dry season when the dry heated winds blow from Lao border.

Statistical figures show that 1,711 forest fires occurred in the twelve target provinces from 2001 to 2008 and damage 6,904 ha of plantation and natural forest. On average. 214 forest fires occurred and damaged 863 ha per year. Looking at each province, the number of fires and forest damaged areas vary with provinces depending on the local conditions. In Ninh Thuan, Thua Thien Hue, and Bing Thuan province, forest fires occurred more frequently than other provinces and have recorded from 33 to 44 fires per year on average. In terms of damaged area, Quang Tri province is the highest, followed by Ninh Thuan and Binh Thuan provinces. On the other hand, less fires occurred in Quang Nam, Quang Ngai and Phu Yen provinces.

Data on Forest Fire in 12 Provinces

Province		No of Forest fires	Burned Forest Area (ha)			
			Total	Plantation	Natural Forest	Bare land
1. Thanh Hoa	Total (2001-2008)	107	711	596	27	88
	Annual average	13	89	74	3	11
2. Nghe An	Total (2001-2008)	109	272	201		72
	Annual average	14	34	24		10
3. Ha Tinh	Total (2001-2008)	109	289	263	26	
	Annual average	14	36	33	3	
4. Quang Binh	Total (2001-2008)	110	398	507	14	35
	Annual average	14	50	63	2	4
5. Quang Tri	Total (2001-2008)	81	1,010	1,010		
	Annual average	10	126	126		
6. T.T. Hue	Total (2001-2008)	263	709	709		
	Annual average	33	89	89		
7. Quang Nam	Total (2001-2008)	51	316	286	30	
	Annual average	6	40	36	4	

Province		No of Forest fires	Burned Forest Area (ha)			
			Total	Plantation	Natural Forest	Bare land
8. Quang Ngai	Total (2001-2008)	89	464	463	1	
	Annual average	11	58	58	0	
9. Binh Dinh	Total (2001-2008)	143	583	580	3	
	Annual average	18	73	72	0	
10. Phu Yen	Total (2001-2008)	60	544	310	234	
	Annual average	8	68	39	29	
11. Ninh Thuan	Total (2001-2008)	284	881	449	432	
	Annual average	36	110	56	54	
12. Binh Thuan	Total (2001-2008)	305	727	6	721	
	Annual average	44	91	1	90	
Total of 12 provinces	Total (2001-2008)	1,711	6,904	5,381	1,487	195
	Annual average	214	863	673	186	24

Source: Forest Protection Department, MARD (http://www.kiemlam.org.vn/)

Approximately 66% of the forest fires took place in the plantations, while 41% were in natural forests and the remaining occurs in shrub and savanna vegetation. In general, young forests with unclosed canopy or in the regenerating natural forest, which is categorized as class ñIIaò and ñIIbò in the vegetation classes in Vietnam, are susceptible to forest fire.

3.4 Socio-economic Conditions

3.4.1 Population

The total population in the 12 target provinces in 2008 is estimated to be 17.8 million. Thanh Hoa and Nghe An provinces are the most populous with 3.7 million and 3.1 million in the same estimation (2008 projection), respectively. The average annual population growth rate between 2005 and 2008 is 0.8% in the project area which is lower than the national average of 1.2%. Nghe An, Phu Yen, Ninh Thuan and Binh Thuan provinces indicated the higher rate of the same among the target provinces. Thanh Hoa and Ha Tinh provinces marked the lowest annual population growth rate of 0.4%.

The proportion of rural population in the target provinces is higher than the national average of 71.9%. In the target provinces, 81.5%, on average, lives in rural area. Thanh Hoa province has the highest rural population in the target provinces, which accounts for 90.0%, followed by the Nghe An province (87.7%) and Ha Tinh province (86.9%).

Population of Target Provinces, Rural population and average annual population growth rate (Unit: thousand persons

Year	2000	2004	2005	2006	2007	2008	Rural Population (2008) %	Annual average population growth (2005-2008)
Thanh Hoa	3,494	3,647	3,671	3,682	3,697	3,713	90.0%	0.4%
Nghe An	2,887	3,003	3,039	3,064	3,101	3,131	87.7%	1.0%
Ha Tinh	1,275	1,287	1,299	1,289	1,294	1,307	86.9%	0.4%
Quang Binh	802	832	839	846	853	858	85.5%	0.8%
Quang Tri	581	616	622	625	630	636	75.4%	0.8%
T.T. Hue	1,064	1,120	1,134	1,138	1,145	1,151	68.2%	0.7%
Quang Nam	1,389	1,452	1,463	1,474	1,484	1,492	82.5%	0.7%
Quang Ngai	1,200	1,259	1,269	1,281	1,292	1,303	85.3%	0.8%
Binh Dinh	1,481	1,545	1,557	1,567	1,579	1,593	73.4%	0.8%

Year	2000	2004	2005	2006	2007	2008	Rural Population (2008) %	Annual average population growth (2005-2008)
Phu Yen	801	849	861	871	880	886	79.7%	1.1%
Ninh Thuan	515	555	562	569	577	583	67.7%	1.3%
Binh Thuan	1,066	1,136	1,151	1,163	1,175	1,189	60.0%	1.1%
Project Target Province Total	16,554	17,300	17,467	17,569	17,706	17,840	81.5%	0.8%
National Total	77,635	82,032	83,106	84,137	85,172	86,211	71.9%	1.2%

Source: Statistical Year Book of Vietnam (2008)

3.4.2 Ethnicity

Vietnam is known as a country with ethnic minority groups. The number of ethnic minority groups in the country is reported to be 54.[2] In the target provinces, the dominant ethnicity of the population in the rural households[3] is the Kinh which accounts for 90.4% of the total population on average[4]. The remaining rural population is comprised of various ethnic groups including Thai, Muong and Cham ethnicities.

Ethnic distribution in the rural household of the 12 target provinces (% of the head of household)

	Kinh	Thai	Muong	Cham	Others
Thanh Hoa	83.4	6.11	9.63	-	0.85
Nghe An	86.3	9.89	0.01	-	3.84
Ha Tinh	99.9	-	0.03	-	0.04
Quang Binh	97.9	-	-	-	2.08
Quang Tri	89.1	-	-	-	10.90
T.T. Hue	94.7	0.01	0.01	-	5.33
Quang Nam	92.9	0.03	0.02	-	7.03
Quang Ngai	86.2	0.01	0.01	-	13.79
Binh Dinh	97.6	0.01	0.01	0.30	2.09
Phu Yen	94.2	0.02	0.01	2.59	3.20
Ninh Thuan	72.0	-	0.01	13.34	14.70
Binh Thuan	90.9	0.03	0.04	3.52	5.51
Project Target Province Total	**90.4**	**2.01**	**0.98**	**4.94**	**1.65**
National Total	**85.1**	**2.01**	**1.81**	**0.18**	**10.93**

Source: GSO (2007). The results of rural agriculture, forestry, and fishery census 2006.

3.4.3 Economic Conditions

In the target provinces,

People significantly depend on the agriculture, forestry, and fishery sector for their livelihoods though the dependency has slightly declined over the period. On the other hand, the importance of the industry and construction, and service sectors had increased gradually between 2005 and 2007, as the gradual increase in the GDP from other sectors is observed. In T.T. Hue province, the service sector

[2] Committee for Ethnic Minority. (2005). Socio-Economic Development Program for Extremely Difficult Communes in Ethnic Minority and Mountains Areas in the Period 2006-2010. (Downloaded on 08/08/09 http://cema.gov.vn/modules.php?mid=4405&name=Content&op=details)

[3] The enumeration unit of the census is comprised of households in rural areas and agriculture, forestry and fishery households in urban areas (GSO, 2007. The results of the 2006 agriculture, forestry and fishery census).

[4] ibid

has been the main economic sector in its economy with the least scale of agriculture, forestry and fishery sector of 19.9% in 2007.

Economic Structure of Target provinces (% of sector wise GDP)

	Agriculture, forestry fishery			Industry and construction			Service		
	2005	2006	2007	2005	2006	2007	2005	2006	2007
Thanh Hoa	32.3	30.4	28.3	34.6	35.1	36.9	33.1	34.5	34.8
Nghe An	34.4	33.1	31.0	29.3	30.3	32.0	36.3	36.6	37.0
Ha Tinh	43.1	40.3	38.6	25.6	26.7	27.3	31.3	33.0	34.1
Quang Binh	29.7	27.9	25.8	32.1	33.6	35.3	38.2	38.5	38.9
Quang Tri	35.9	34.7	32.1	25.6	27.7	30.9	38.5	37.6	37.0
T.T. Hue	21.6	20.2	19.9	34.8	35.9	36.2	43.6	43.9	43.9
Quang Nam	31.0	29.0	26.1	34.0	35.5	37.9	35.0	35.5	36.0
Quang Ngai	30.2	31.9	29.9	39.2	32.9	36.0	30.6	35.2	34.1
Binh Dinh	38.4	36.0	34.2	26.7	28.7	31.8	34.9	35.3	34.0
Phu Yen	36.3	34.6	32.1	29.3	30.7	32.3	34.1	34.7	35.6
Ninh Thuan	40.9	43.8	44.6	20.4	19.0	19.5	38.7	37.2	35.9
Binh Thuan	30.4	27.5	25.6	32.7	33.7	33.7	36.9	38.7	40.7
Project Target Province Total	33.7	32.5	30.7	30.4	30.8	32.5	35.9	36.7	36.8

Source: Socio-Economic Statistical Data of 63 Provinces and cities. Statistical Publishing House (2009).

Although the GDP from industry, construction and service sectors are increasing, the agriculture, forestry and fishery sector still provide most of the employment opportunities and household income in the target provinces. In 2007, the agriculture sector provided employment to 63.6% in the target provinces. Especially in the northern provinces of Thanh Hoa, Nghe An, Ha Tinh and Quang Binh has the high employment rates. In the south, 74.9% of the total population of Phu Yen province was engaged in the Agriculture, forestry and fisheries sector. However, the population employed in the sector is declining with the annual rate of 2% between 2005 and 2007 while the population employed by the construction & industry has grown annually by 15% and 16% for service sector during the same period.

Employed population of agriculture sector and average annual growth rate of sector wise employment (2005-2007) (Unit: thousand persons)

	Total employed population			% of population employed by the agriculture, forestry and fishery			Average annual growth rate of employed population by sector (2005-2007)		
	2005	2006	2007	2005	2006	2007	Agri., forestry, fishery	Construc-tion & Industry	Services
Thanh Hoa	1,902	1,953	1,994	78.3%	74.8%	72.0%	-2%	15%	18%
Nghe An	1,506	1,549	1,692	79.0%	70.4%	68.2%	-1%	32%	32%
Ha Tinh	639	619	625	80.1%	70.1%	69.6%	-7%	34%	19%
Quang Binh	411	416	421	71.0%	69.8%	68.7%	0%	0%	9%
Quang Tri	282	289	318	64.1%	62.1%	59.8%	3%	28%	7%
T.T. Hue	513	517	521	42.2%	39.7%	39.7%	-2%	3%	3%
Quang Nam	747	760	778	71.3%	69.8%	67.4%	-1%	8%	9%
Quang Ngai	645	687	705	77.4%	61.5%	60.3%	-7%	27%	56%
Binh Dinh	796	809	822	69.0%	67.4%	66.3%	0%	4%	9%
Phu Yen	418	479	483	84.8%	75.0%	74.9%	1%	2%	2%
Ninh Thuan	262	279	282	62.3%	53.2%	52.8%	-4%	17%	17%
Binh Thuan	539	557	575	65.9%	64.8%	63.6%	1%	7%	7%
Project Target Province Total	10,662	10,920	11,222	70.4%	64.9%	63.6%	-2%	15%	16%
National Total	42,527	43,339	44,172	-	-	-	-	-	-

Source: GSO (2009) .Socio-Economic Statistical Data of 63 Provinces and cities.

The average monthly income per capita is reported to be 470,000 VND in the target provinces, which accounts for 74% of the national average (636,000VND) (GSO 2008). On average, 27.9% of the income derives from the agriculture, forestry and fishery, while 32.2% was earned from the salary/ wage. The target provinces except T.T. Hue and Ninh Tuan, the agriculture sector generates 30% of the income per capita. The rural and urban gap has become evident. The national average income per capita in the urban area was reported to be 1,058, 000VND, while that of the rural area remained as low as 506,000VND[5].

Monthly average income per capita in 2006 at current prices by income source and by province (Unit: Thousand VND)

	Total	Salary/ wage	Agriculture	Non agriculture	Others
Thanh Hoa	395	31.4%	33.7%	13.9%	20.8%
Nghe An	413	25.4%	32.2%	16.5%	25.9%
Ha Tinh	400	18.3%	32.0%	22.3%	27.5%
Quang Binh	420	32.1%	29.5%	13.6%	24.8%
Quang Tri	436	29.1%	30.7%	24.5%	15.6%
T.T. Hue	517	34.2%	17.4%	30.4%	18.0%
Quang Nam	459	39.9%	26.4%	19.2%	14.6%
Quang Ngai	455	36.7%	25.1%	24.0%	14.3%
Binh Dinh	553	34.0%	24.2%	30.6%	11.0%
Phu Yen	523	34.4%	32.1%	21.8%	11.7%
Ninh Thuan	491	36.0%	18.3%	31.6%	14.1%
Binh Thuan	577	31.5%	35.7%	22.7%	9.9%
Project Target Province Total	470	32.2%	27.9%	23.0%	16.7%
National Total	636	34.3%	24.8%	22.8%	18.1%

Source: Statistical Year Book of Vietnam (2008)

From the above, it is clear that the agriculture, forestry and fishery sector remains a major economic sector which provides employment opportunities to local communities, though the construction, industry and service sectors has also been growing in the target provinces. Furthermore, the low income in rural area, of which large proportion of the population is likely to be engaged in agriculture, forestry and fishery activities, may imply the low productivity of the sector. In other words, in order to achieve the well being of the rural population, which accounts for the majority of the population in the target provinces, the productivity and profitability of the sector need to be enhanced.

3.4.4 Poverty Situation

Vietnam has demonstrated its rapid economic growth as planned in the SEDP (2001-2010) and most of the indicators of Millennium Development Goal have been nearly achieved. Despite the drastic improvement in the poverty ratio, the inequality in distribution of wealth remains evident with 0.42 of the gin coefficient of the national average. The rural poverty rate is still high (18.0%), while that of the urban area is 7.7% in 2006 according to the new government poverty line[6]. Under the SEDP (2005-2010), reducing the rural-urban poverty gap has been identified as an urgent issue to be resolved. The target provinces indicated the poverty rate of 21.6%, which is higher than the national average. Within the target province, the highest poverty rate was marked by Ha Tinh province (30.8%), followed by Quang Tri (27.6%), Thanh Hoa (26.6%), and Nghe An (25.20%) in 2007.

[5] GSO (2009). Statistical Year Book of Vietnam 2008

[6] Poverty line for 2006-2010: 200,000VND/person/ month for rural and 260,000VND/ person/ month for urban areas. Up to 2002, poverty line of Vietnam has been defined by two authorities, MOLISA and GSO. In 2005, a government order was issued to set the poverty line as 200,000 VND/ month/ person (rural) and 260,000 VND/ month/ person (urban) to adopted between 2006 and 2010 (Decision No. 170/2005/ QD-TTg of July 8, 2005 promulgating the poverty line for the 2006-2010 period).

Poverty Rate based on the new government poverty line in 2006-2010[7]

Province	2006	2007
Thanh Hoa	27.5	26.6
Nghe An	26.0	25.2
Ha Tinh	31.5	30.8
Quang Binh	26.5	26.0
Quang Tri	28.5	27.6
T.T. Hue	16.4	15.6
Quang Nam	22.8	22.1
Quang Ngai	22.5	21.7
Binh Dinh	16.0	15.4
Phu Yen	18.5	17.8
Ninh Thuan	22.3	21.2
Binh Thuan	11.0	10.5
Project Target Province Average	22.5	21.6
National Average	15.5	14.8

Source: Statistical Year Book of Vietnam (2008)

The government of Vietnam as mandated in SEDP 2006-2010 has implemented the livelihoods interventions for the poor households. Programmed 135 and 134 have been implemented for improving the livelihoods of the poor. These programmes included the interventions such as the credit, exemption of fees for the health care services and education as well as technical training and agriculture, fishery and forestry extension services to improve productivity. In the regions where the target provinces are located, many of the poor households have benefited from such programmes. Across the three regions, health fee exemption benefited nearly 80% of the poor households with the highest proportion of 87.5% marked in the south central coast region. The assistance for agriculture, fishery, and forestry extension has provided to the 23.1% of the households in the north central coast region while it was 9.4% for the south east region. This may have reflected the local specificity in the livelihoods needs of the poor. This, in other words, implies the higher the number of beneficiary households, more needs for the intervention.

% of households benefited from the projects/ policies of programs on 135, 134 in 2006 (Unit: %)

	By regions of the project area			By location of the households		National
	North central coast	South central coast	South east	Rural	Urban	
Credit for the poor	45.0	30.3	47.4	40.6	39.3	39.5
Health exemption fees for the poor	80.7	87.5	74.1	76.7	81.5	80.9
Education exemption fees for the poor	51.8	45.9	42.7	40.9	50.6	49.5
Job training for the poor	5.9	3.9	4.2	2.9	4.2	4.1
Agriculture land provision for ethnic minorities	4.4	6.7	3.9	1.8	4.2	3.9
Agriculture fishery and forestry, extension	23.1	17.8	9.4	6.8	19.8	18.3
land and housing for the poor	8.3	12.5	8.6	7.9	11.2	10.8
Safe drinking water for the poor	7.6	11.7	8.7	5.7	10.1	9.6

Source: Results of the Survey on Household Living Standards 2006

[7] ibid

3.4.5 Agriculture Production

Paddy rice has been a main crop planted throughout the 12 target provinces. The total production area of paddy in the target provinces was 1,139,600ha in 2007 with the yield of 4.8ton/ ha.

Planted area and Yield of Paddy

	Planted area of Paddy (Thous. ha)				Yield (ton/ha)			
	2004	2005	2006	2007	2004	2005	2006	2007
Thanh Hoa	254.6	252.2	254.3	254.4	5.2	4.9	5.5	5.3
Nghe An	182.5	180.2	182.2	181.2	4.8	4.6	5.0	4.7
Ha Tinh	102.2	98.5	101.8	100.9	4.8	4.6	4.7	3.6
Quang Binh	48.3	48.2	49.1	50.0	4.7	4.6	4.7	4.3
Quang Tri	46.6	44.9	45.9	46.3	4.6	4.5	4.7	4.6
T.T. Hue	51.3	50.5	50.3	50.3	4.8	4.7	5.0	5.2
Quang Nam	86.4	84.4	83.6	84.1	4.4	4.4	4.6	4.7
Quang Ngai	75.2	74.3	75.1	74.0	4.8	4.9	5.0	5.2
Binh Dinh	125.4	111.7	121.0	112.0	4.6	4.7	5.0	5.2
Phu Yen	59.5	58.3	57.9	56.6	5.5	5.4	5.4	5.7
Ninh Thuan	33.9	17.0	34.2	33.4	4.7	4.7	5.0	5.2
Binh Thuan	88.2	81.5	96.4	96.4	3.9	4.1	3.7	4.5
Project Target Province (Total area/ average yield)	1,154.1	1,101.7	1,151.8	1,139.6	4.7	4.7	4.9	4.8

Source: Statistical Year Book of Vietnam (2008)

The cropped area of maize was 207,200 ha in the target provinces with the average yield of 3.8 ton/ ha in 2007. The yield is relatively high in Quang Ngai and Binh Dhinh provinces while those of Quang Tri province are as low as 2.1 ton/ ha in the same year.

Planted area and yield of Maize

	Planted area (Thous. ha)				(Yield Quintal/ ha)			
	2004	2005	2006	2007	2004	2005	2006	2007
Thanh Hoa	63.7	65.3	63.8	59.4	38.6	37.4	36.5	39.5
Nghe An	60.3	64.4	67.1	59.6	36.0	33.9	34.6	34.7
Ha Tinh	9.1	11.1	7.8	8.6	31.4	29.5	24.4	28.4
Quang Binh	3.9	4.1	4.7	4.8	42.1	36.1	40.2	39.4
Quang Tri	2.6	2.9	3.0	3.2	20.0	20.0	20.7	20.6
T.T. Hue	1.4	1.8	1.8	1.7	30.0	28.3	40.0	38.2
Quang Nam	10.7	10.5	11.6	11.7	40.1	41.7	41.6	43.8
Quang Ngai	9.5	9.8	10.2	10.6	44.5	47.6	49.2	49.9
Binh Dinh	7.2	7.6	7.8	7.8	39.7	44.2	47.1	49.7
Phu Yen	5.8	6.2	6.9	5.8	18.8	20.6	23.5	26.6
Ninh Thuan	12.3	13.3	13.5	14.2	22.5	27.6	28.7	29.1
Binh Thuan	19.1	22.6	19.8	19.8	46.0	41.2	51.1	52.9
Project Target Province (Total/ Average Yield)	205.6	219.6	218.0	207.2	34.1	34.0	36.5	37.7

Source: Statistical Year Book of Vietnam (2008)

The production of sugarcane and peanut in the 12 target provinces is summarized bellow. The total planted area of sugarcane is 101,000 ha and its total production is 5,268.6 tons. Thanh Hoa and Nghe An provinces are the main production area of sugarcane in the target area. Peanut is produced with 110,000ha and produces 200,700 tons. Thanh Hoa, Nghe An and Phu Yen has large production areas.

Production of Sugarcane and Peanut (2007)

	Planted area (Thous. Ha)		Production (Thous. Tons)	
	Sugarcane	Peanut	Sugarcane	Peanut
Thanh Hoa	32.9	16.8	1,865.7	29.4
Nghe An	30.3	24.4	1,485.7	53
Ha Tinh	0.3	20.5	14.6	36.9
Quang Binh	0.1	5.6	1.6	8.3
Quang Tri	0.0	5.6	0.6	9.9
T.T. Hue	0.3	4.7	8.8	9.6
Quang Nam	1.1	10.6	46.5	16.9
Quang Ngai	7.3	5.7	390.9	11.1
Binh Dinh	3.5	8.1	185.9	18.7
Phu Yen	20.3	0.9	1,051.4	0.9
Ninh Thuan	1.6	0.4	68.8	0.3
Binh Thuan	3.3	6.7	148.1	5.7
Project Target Province Total	101.0	110.0	5268.6	200.7

Source: Statistical Yearbook of Vietnam (2008)

The results of the field survey done by the Preparatory Survey Team indicated other crops produced in the target provinces, such as rubber, cashew nuts, pepper and coconuts. The production data of these crops are summarized in the table bellow. The data from Binh Dinh, Phu Yen, Ninh Thuan, and Binh Thuan was not valid for processing. However, the fruits were reported in the raw data.

Production data of other crops in the 12 provinces (2007)

	Planted area (ha)						Production (tons)					
	Tea	Coffee	Rubber	Cashew	Pepper	Coconut	Tea	Coffee	Rubber	Cashew	Pepper	Coconut
Thanh Hoa	-	-	7,397	-	-	-	-	-	3,552	-	-	-
Nghe An	-	1,980	4,664	-	-	-	-	1,718	2,162	-	-	-
Ha Tinh	-	-	4,926	-	-	-	-	-	322	-	-	-
Quang Binh	-	-	9,378	-	-	-	-	-	3,862	-	-	-
Quang Tri	-	-	13,713	-	2,135	-	-	-	8,227	-	1,743.3	-
T.T. Hue	19	915	7,885	-	-	-	72	325	1,034	-	-	-
Quang Nam	507	-	3,178	1,397	228	212	821	-	186	2,345	-	3,675.0
Quang Ngai	-	-	1,895	3,491	-	2,697	-	-	325	1,509	-	13,726.0
Binh Dinh	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Phu Yen	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Ninh Thuan	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Binh Thuan	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Total	526	2,895	53,036	4,888	2,363	2,909	893	2,043	19,670	3,854	1,948.3	17,401.0

Note: n.a.: Data not available during the field survey.
Source: Results of Field Survey, JICA Survey Team (July, 2009)

The above mentioned crops are produced for commercial purposes except staple food. The data show that the gap between the farm gate price and market price is narrower for lowland rice, sweet potato and rubber. On the other hand, the market price of vegetables and tea are higher than their farm gate prices by more than 20%.

Average farm gate price and increment of market price of the main agriculture produces in the northern 4 target provinces (2006-2008)

Crops	Farm gate price (a) (Unit: VND/ Kg)	Market Price (b) (Unit: VND/ Kg)	Increment (b/a)
Lowland rice	7,542	8,202	109%
Upland rice	3,500	3,938	113%
Maize	3,554	3,965	112%
Cassava	2,677	3,102	116%

Crops	Farm gate price (a) (Unit: VND/ Kg)	Market Price (b) (Unit: VND/ Kg)	Increment (b/a)
Sweet potato	4,633	5,011	108%
Beans	7,556	8,678	115%
Vegetables	3,567	4,333	121%
Tea	15,875	19,803	125%
Rubber	5,122	5,478	107%
Fruits	9,883	11,500	116%

Source: Results of Field Study, JICA SAPROF Team (July 2009).

3.4.6 Rural Industry

Establishments for processing agriculture, forestry and fishery are commonly distributed across the target provinces. In Binh Dinh and Quang Binh provinces, 28% and 14% of the communes has handicraft establishments, respectively. Forestry processing unit is available in 77% of the communes in the target provinces. Quang Binh province has the highest proportion of communes with the forestry processing establishment.

Summary of the households engaged in industries in 12 provinces

Province	Agriculture		Forestry		Fishery/ Aquaculture	
	% of Commune with processing units	No of processing units/ commune	% of Commune with processing units	No of processing units/ commune	% of Commune with processing units	No of processing units/ commune
Thanh Hoa	92.8	44.3	78.9	20.5	8.7	3.0
Nghe An	79.1	24.1	75.4	15.2	6.4	3.9
Ha Tinh	88.4	19.1	75.9	11.9	7.9	2.9
Quang Binh	94.3	23.0	92.2	39.1	18.4	5.6
Quang Tri	91.5	14.0	77.1	7.5	10.2	2.9
T.T. Hue	81.8	18.5	71.1	17.9	11.6	6.9
Quang Nam	92.7	23.4	77.9	7.9	13.7	1.0
Quang Ngai	85.8	23.8	77.2	6.9	17.3	4.5
Binh Dinh	96.9	54.3	78.9	18.4	23.4	3.6
Phu Yen	94.5	27.2	82.4	8.1	20.9	3.0
Ninh Thuan	80.9	9.2	63.8	6.7	14.9	7.4
Binh Thuan	81.4	10.8	68.0	5.9	30.9	2.4
12 Provinces Total	88.3	24.3	76.6	13.8	15.4	3.9

Source: GSO (2007). Results of the 2006 rural, Agricultural and Fishery Census.

Handicraft can be an alternative means of livelihoods in the rural area during the off farming season or as supplementary economic activity in the rural area. In the project area, Thanh Hoa province has the largest number of households who engage in the handicraft making. On the other hand, Binh Dinh province has a largest proportion of the communes having the handicraft industry.

% of Communes with Handicraft industry and the number of regularly participating households in 12 Provinces

Province	% of Commune with handicraft industry	No of regularly participating households
Thanh Hoa	7.7	18,197
Nghe An	7.6	5,306
Ha Tinh	5.4	2,228
Quang Binh	13.5	8,335
Quang Tri	3.4	390

Province	% of Commune with handicraft industry	No of regularly participating households
T.T. Hue	9.1	1,345
Quang Nam	8.33	2,043
Quang Ngai	1.9	686
Binh Dinh	28.1	13,252
Phu Yen	5.5	974
Ninh Thuan	2.1	139
Binh Thuan	12.4	997
Project Target Province Total	8.8	53,892

Source: GSO (2007). The results of the 2006 Rural, Agricultural and Fishery Census

3.4.7 Access to Market

The available data on market accessibility enables us to understand the issue of market accessibility to some extent. In the target provinces, 65.3% of the communes has access to market facilities, which is higher than the national average, while 56.2% of the communes can use permanent and semi-permanent market facilities. Within the target provinces, Binh Dinh and Phu Yen province have higher proportion of the communes having access to market, while Quang Tri province has the lowest rate. Although the data does not present the spatial and infrastructure aspects of the market accessibility, we could generally understand that the possibility of difficulties in accessing markets in 45.7% of the rural communes.

No of Communes having market and permanent and semi-permanent market

Provinces	Communes with market			Communes with permanent and semi-permanent market	
	No of communes	%	No of markets in communes	No of communes	%
Thanh Hoa	337	57.7	381	209	54.9
Nghe An	275	63.2	323	144	44.9
Ha Tinh	160	66.4	180	99	55.0
Quang Binh	102	72.3	129	61	47.3
Quang Tri	42	35.6	52	30	57.7
T.T. Hue	64	69.4	138	76	55.1
Quang Nam	97	47.6	121	93	76.9
Quang Ngai	95	58.6	139	75	54.0
Binh Dinh	105	82.0	181	99	54.7
Phu Yen	75	82.4	134	80	59.7
Ninh Thuan	35	74.5	81	53	65.4
Binh Thuan	72	74.2	111	54	48.9
Project Target Province Total	1,459	65.3	1,970	1,073	56.2
National Total	5,336	58.8	6,917	3,684	53.3

Source: GSO (2007). Results of Rural Agriculture, Forestry and Fishery Survey 2006.

3.5 Rural Infrastructure

3.5.1 Roads

Roads in the target Provinces are classified into central managed road, provincial and city managed road, and district and commune managed road in accordance with the location and responsibility of the operation and maintenance. According to the Statistical Year Book 2007, the condition of the

district and commune roads is poorer than that under the management of city and central governments. Although more than 96% and 73% of the central and provincial roads are paved, respectively, only 35 % of the district road is paved and it causes difficulties for the villagers in the travelling especially in the rainy season.

Condition of Road in Vietnam including Target Provinces (unit: km)

	Total	Central Management		Provincial, City Management		District & Commune Management	
Asphalted or Concreted	66,010	12,768	(94 %)	22,086	(70 %)	31,156	(27 %)
Stone Paved	10,231	275	(2 %)	865	(3 %)	9,091	(8 %)
Mixed Stone & Soil road	36,150	392	(3 %)	5,034	(16 %)	30,724	(27 %)
Soil road	47,698	119	(1 %)	3,590	(11 %)	43,989	(38 %)
Total	160,089	13,554	(100 %)	31,575	(100 %)	114,960	(100 %)

Source: Statistical Year Book, 2007

3.5.2 Water Supply

According to the Poverty Profile Survey carried out by JBIC in 2008, the clear gap in the accessibility to the safe water is observed in the region-wise and area-wise. The population in the South East region covering Ninh Thuan and Binh Thuan provinces has more access to the safe water than the households in the North Central Coast and South Central Coast regions and the accessibility is 93.9%, 76.6% and 83.9% respectively.

Accessibility to the safe water in the rural area is lower than the one in the urban area. Although 92.2% of people living in the urban area in the North Central Coast region can access to the safe water, only 74.5 % can do in the rural area. In addition, the water sources in the rural area are limited and fragile to the climate condition and natural environment. Even through people can access to the safe water in the rural area, most of them depend on water in the small pond, stream and spring.

Access to the Safe Water

Region	Total	Urban Area	Rural Area
North Central Coast: *(Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue)*	76.6 %	92.2 %	74.5 %
South Central Coast: *(Quang Nam, Quang Ngai, Binh Dinh, Phu Yen)*	83.9 %	92.0 %	80.7 %
South East: *(Ninh Thuan, Binh Thuan)*	93.9 %	98.3 %	89.8 %

Source: Poverty Profile Vietnam, JBIC Feb.2008

3.5.3 Irrigation

Total length of irrigation canal in the 12 target provinces is 34,141 km. Out of 34,141km, 11,733 km canal is solid and lined by the concrete or other materials. The coverage of solid or concrete lines canal is 34% in the 12 Provinces and it is high in North Central Coast region (40.4%). A total of 3,094 pump stations is available in the target Provinces serving agriculture, forestry and fishery production in the communes. The pumping stations are concentrated in the North Central Coast region.

Available Irrigation Facilities

Region	Province	Length of Irrigation Canal under commune or cooperative management (km)	Length of Solid Irrigation Canal		Number of Pump station
North Central Coast	Thanh Hoa	7,347.5	3,093.0	(42 %)	756
	Nghe An	6,413.0	3,009.0	(47 %)	596
	Ha Tinh	3,758.6	1,342.3	(36 %)	375
	Quang Binh	1,528.3	676.7	(44 %)	223
	Quang Tri	1,667.0	373.3	(22 %)	155
	Thua.Thien- Hue	1,512.5	480.9	(32 %)	355
South Central Coast	Quang Nam	1,214.8	362.3	(30 %)	184
	Quang Ngai	4,506.5	1,660.7	(37 %)	111
	Binh Dinh	2,557.6	156.2	(6 %)	198
	Phu Yen	1,666.2	272.5	(16 %)	96
South East	Ninh Thuan	677.3	248.3	(37 %)	20
	Binh Thuan	1,292.0	98.4	(8 %)	25
Total		34,141.3	11,733.6	(34 %)	3,094

3.5.4 Healthcare Units

In the target provinces, 2,692 medical service units are established with 13,376 patient beds in the 12 target provinces. The number of patient bed available per medical unit is 5.0 on average. 1.1 medical service units are available in one commune on average. Considering the proportion of the population living in the rural area in the target provinces, all the populations in the provinces may not necessarily be accessible to health services.

Availability of health facilities in communes of 12 provinces (2007)

	Medical service units in commune	No of patient beds	No of beds/health centre	No/ commune	No of health care centre/ commune
Thanh Hoa	636	3,770	5.9	587	1.1
Nghe An	477	2,580	5.4	437	1.1
Ha Tinh	263	1,410	5.4	238	1.1
Quang Binh	159	724	4.6	141	1.1
Quang Tri	140	674	4.8	118	1.2
T.T. Hue	152	535	3.5	119	1.3
Quang Nam	237	1,185	5.0	206	1.2
Quang Ngai	178	537	3.0	162	1.1
Binh Dinh	160	606	3.8	129	1.2
Phu Yen	108	365	3.4	91	1.2
Ninh Thuan	65	390	6.0	47	1.4
Binh Thuan	117	600	5.1	96	1.2
Project Target Province Total	2,692	13,376	5.0	2,371	1.1

Source: Socio-Economic Statistical Data of 63 provinces and cities (2009).

3.5.5 Education

In the 12 target provinces, 3,423,000 primary schools and 2,378,000 lower secondary schools are found. The total average class room population of the primary school is 25.4 persons/classroom with the pupil teacher ratio of 19.0 persons/teacher on average. The classroom population and student teacher ratio for the lower secondary school are 35.7persons/ classroom and 18.3 students per teacher. As the government is promoting the secondary education, the classroom population may increase

with higher number of students to be taught by one teacher. Although the statistics does not indicate the geographical distribution of the primary and secondary schools, there may be some variations in availability of primary and secondary schools. In the provinces where the rural population is high, the number of children who lack access to education may outnumber those in the urban area.

Overview of primary and lower secondary school in target provinces in 2007

	Primary school					Lower secondary				
	No of school (1000)	No of class Rm	No of teachers	Class. students *	Student/ teacher ratio**	No of school (1000)	No of class Rm	No of teachers	Class. students*	Student/ teacher ratio **
Thanh Hoa	729	10,707	14,284	23.3	17.5:1	650	7,958	16,118	19.5	9.6:1
Nghe An	565	9,936	14,415	24.3	16.7:1	438	7,199	14,266	36.9	18.6:1
Ha Tinh	309	4,122	5,359	26.5	20.4:1	195	3,282	6,771	37.0	17.9:1
Quang Binh	209	2,930	3,871	25.3	19.1:1	146	2,099	4,134	36.3	18.4:1
Quang Tri	159	2,521	3,658	23.6	16.2:1	106	1,595	3,427	35.9	16.7:1
T.T. Hue	235	3,633	4,809	29.1	22.0:1	103	2,477	4,753	37.9	19.8:1
Quang Nam	268	4,920	6,275	24.6	19.3:1	192	3,221	6,046	21.2	11.3:1
Quang Ngai	234	3,898	4,918	26.1	20.7:1	153	2,765	5,019	38.3	21.1:1
Binh Dinh	242	4,704	5,852	28.1	22.6:1	128	3,108	5,256	41.7	24.6:1
Phu Yen	159	3,228	4,623	25.1	17.5:1	99	1,883	4,005	34.9	16.4:1
Ninh Thuan	140	2,287	2,726	25.7	21.6:1	51	1,113	2,018	38.3	21.1:1
Binh Thuan	274	4,084	5,259	27.8	21.6:1	117	2,475	4,651	38.7	20.6:1
Project Target Province Total	3,523	56,970	76,049	25.4	19.0:1	2,378	39,175	76,464	35.7	18.3:1

*: Unit: persons/ classroom

**: the number of students/ teacher

Source: Socio-economic statistical data of 63 provinces and cities (2009).

3.6 Development Plans and Strategies of the 12 Provinces

3.6.1 Five Year Socio-economic Development Plan of the Provinces Concerned

The targets indicated in the SEDP (2006-2010) were translated into the provincial development plan by reflecting the local specificity. The study team reviewed the relevant documents regarding socio-economic development plans of the target provinces except Quang Tri. The overview and key indicators of the reviewed documents are shown in **Table 3-1**.

In the documents reviewed, Nghe An and T. T. Hue provinces have developed the long term development plan up to 2020. Than Hoa and Quang Binh provinces are in the process of developing the plans for the forth coming period of 2011-2015. The cross cutting themes of the plans of the plans, which are inline with SEDP, are to: 1) emphasise on the industrial development; 2) reduce poverty rate; and 3) ensure environmental sustainability. Forest coverage was also adopted as a target to be achieved in the environmental sustainability. The target figures to be achieved in 2006-2010 were set at 45% and 55%, while 60% was the target for 2020. The following table gives the present status of socio-economic development plans and forest coverage targets by 2010 of the 12 provinces.

Summary of the target forest coverage indicated in the provincial socio economic development plan

Province	Plan period	Forest coverage by 2010 otherwise indicated
Than Hoa	Socio-Economic Development Plan (2011-2015)	Not indicated.
Nghe An	Master Plan of Socio-Economic Development in Nghe An for 2020	53% (2010)/ 60% (2020).

Province	Plan period	Forest coverage by 2010 otherwise indicated
Ha Tinh	Agriculture and Rural Development Plan (2006-2010)	55%
Quang Binh	Socio Economic Development Plan (2011-2015)	Not found
Quang Tri	-	Document not found.
T. T. Hue	Socio Economic Development Plan for 2020	55% (2010)/ 60% (2020)
Quang Nam	Socio Economic Development Plan (2006-2010)	45%
Quang Ngai	Socio-Economic Development Plan for 5 years (2006-2010)	45%
Binh Dinh	Socio-Economic Development Plan for 5 years (2006-2010)	44%+
Phu Yen	social-economic development Plan for 5 years (2006-2010)	45%
Ninh Thuan	The overall socio economic development plan for Ninh Thuan (2006 ï 2010)	52%
Binh Thuan	Socio-Economic Development Plan (2006-2010)	52%

Source: Results of data collection, JICA SAPROF Team (July, 2009).

3.6.2 Provincial Forestry Development Strategy

MARD instructed DARDs in the provinces to formulate the forest development strategy through Decision No. 147/QD-BNN-LN dated on 19/04/2004 on the formulation of the provincial forest development strategy. Each DARD was supposed to formulate the Provincial Forest Development Strategy 2006-2010, which specifies the policy directions and tasks of the forest sector for the next five years (2006-2010) based on the accomplishments in the past five years (2001-2005) and prospects of socio-economic development in the province until 2010.

The Survey Team was able to collect and review the strategies of Quang Tri, Binh Dinh and Phu Yen provinces in the field survey, those of the rest of the provinces were not collected by the Team as they have yet to be formulated or DARDs did not provide any relevant data to the Team.

The following basic concepts are commonly found in the strategies reviewed by the Team.

(i) to protect natural forests using the appropriate technologies with the participation of the local community,

(ii) to accelerate reforestation of bare land to improve watershed and coastal environment to secure the water sources and the favourable conditions for agricultural production,

(iii) to develop the silviculture and forestry technologies, especially those for breeding of high quality seedlings, tending and utilization of high valued timber woods,

(iv) to contribute to the poverty reduction and national security and defence focusing on protection of the forests along the borders with the neighbouring countries.

The following table summarizes the main physical targets and key directions indicated in the strategies of these provinces. The strategies determined the physical targets in forest development and protection of natural forests as well as stakeholdersô capacity development and poverty reduction in the rural areas through forestry development.

Key Items	Target indicators and key directions
Land Use Planning	Quang Tri: To update the provincial land use planning
	Binh Dinh: To update the land use planning To develop ecotourism and to increase tree cavers in residential and industrial area. Standard area covered by trees: 10 ï 12 m^2/person in average and 10-20 % of total area in the industrial zone
Forest Coverage	Quang Tri: Up to 43 ï 44 % in 2010 and 50 % in 2020
	Binh Dinh: Up to 44 % in 2010 and 49 % in 2020 To carry out reforestation of 5,000 ï 6,000 ha/year (both in protection and production forest)
	Phu Yen: Up to 45 % in 2010
Protection Forest	Quang Tri: To focus reforestation in three main watershed in the province and coastal areas
	Phu Yen: To attain annual mean increment of natural forest to be 1.0 ï 1.5 m^3/ ha/year through ANR
Special Use Forest	Quang Tri: To secure the protection of four natural protection area
	Phu Yen: To attain annual mean increment of natural forest to be 1.0 ï 1.5 m^3/ ha/year through ANR
Production Forest	Quang Tri: To apply the advanced technologies in developing the production forest to attain high economic value of plantation
	Phu Yen: To attain annual mean increment of plantation to be 10.0 ï 15.0 m^3/ ha/year
Forest Exploitation	Quang Tri: To prohibit the timber exploitation in the natural forests until they attain the target volume of 90 ï 120 m^3/ha in 2010 and 120 - 150 m^3/ ha in 2020. To attain the growth of plantation 15 - 20 m^3/ha/year by applying appropriate silvicultural technologies. To harvest timbers from plantation 100,000 ï 150,000/year m3 in the whole province. To harvest resin of *Pinus merkusii* 4,000 ï 5,000 ton/year in 2010 and 8,000 ton/year in 2015 To harvest rattan and bamboo 7,000 ï 8,000 ton/year
	Binh Dinh: To harvest timbers in average 253,000 m3/year during 2006 ï 2010 and 481,000 m3/year during 2011-2020
	Phu Yen: Harvest in the Natural Forest To harvest large size timber 4,000 m^3/year To harvest small size timber in average 660 m^3/year To harvest rattan in average 110 ton/year To harvest ñDÞu chaiò average 50 ton/year Harvest in the Plantation To harvest 120,000 m^3/year until 2010 and 400,000 m^3/year from 2011 to 2020
Outputs of Forestry	Quang Tri: To attain the forestry production equivalent to 70 billion dong/year by 2010 - Timber harvested in the plantation : 60 billion dong - NTFP : 10 billing dong
	Binh Dinh: To attain the economic development of forestry sector with the rate of 5.2%/year

Key Items	Target indicators and key directions
	Phu Yen: To attain the economic development of forestry sector with the rate of 4 - 5 %/year To attain the share of forestry sector being 2.5 ï 3.0 % of total GDP in the province
Poverty Reduction	Quang Tri: To give the opportunity of contracted work to 10,000 to 20,000 people by contracting forest protection, ANR and reforestation. To employ 2,500 to 3,000 people in the paper mill factory in the province.
	Binh Dinh: To give the opportunity of contracted work to 5,000 to 7,000 people. To provide the trainings to 50 % of forestry workers in the province.
	Phu Yen: To give the opportunity of contracted work to 20,000 people
Training of Human Capacity	Quang Tri: To increase the ratio of M.Sc and Ph.D. holders up to 7% of total forestry staffs by 2010. To give 60 ï 80 staff the training opportunity at the agriculture and rural development secondary school. The staff of ethnic minority group and those living in the mountain areas are preceded To carry out trainings on silvicultural technologies to the local people

Chapter 4 Review of the SPL-3 Afforestation Project

4.1 Project Objectives and Components

The Special Project Loan III (SPL-3) Afforestation Project[1] was implemented from 2002 to 2008. The project was a part of the National Five Million Hectare Reforestation Programme (5MHRP). Hence, the objectives and principles of the Project are taken from those of 5MHRF, as follows:

Objectives

(1) To reforest, maintain, and protect watershed protection forests in order to increase forest coverage for soil erosion control, water regulation, environmental improvement, and mitigation of natural calamities (flood and drought).

(2) To improve the livelihood of residents in the watershed by creating employment and income generation opportunities through the project activities.

(3) To improve the capacity of provincial and local governments and community groups of rural households in planning, implementing, and managing afforestation and forest protection.

Principles

(1) People are the main and important actors for the establishment, protection, and regeneration of forests and are entitled to enjoy benefits from forest-related activities.

(2) The socio-economic situation of people should be improved by applying a sustainable agro-forestry system for multiple purposes, harvesting of non-wood forest products, and growing agricultural crops under forest canopy.

The components originally included in the project were forestry development and forestry infrastructure construction. The project later added some components to ensure sustainability of forest protection and management by local people, i.e., small-scale infrastructure construction, agricultural and forestry training and extension, and forest fire prevention and suppression. The features of the project components are described below.

[1] The official name of the project is "Rural Infrastructure Development and Living Standard Improvement Project III (Sector Project Loan III): Afforestation Component."

Investment Components of the SLP-3 Afforestation Project

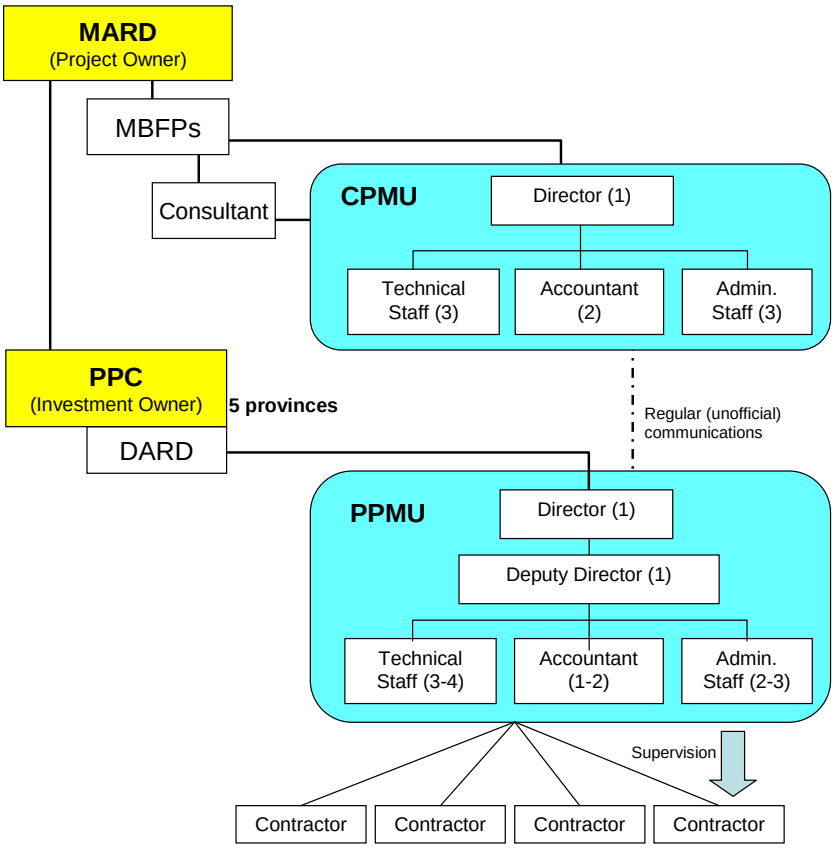
Components	Contractors	Description
Forest Development		
Afforestation	State Forest Enterprises (SFEs), Management Board of Protection Forest (MBPF), and other companies	This is to establish new protection forests in barren land. The Project provides funds for seedling production, planting activities in the 1st year and tending from 2nd-4th years. The contractors sublet the planting and tending activities to households or group of households.
Protection of natural forest	The same SFEs and management board as described above and groups of households having bank account	The major activity is patrolling of natural forests to prevent illegal cutting of trees and forest fire in existing natural or plantation forests. The project provides funds for a maximum of five years. The contractors sublet the protection activities to households or group of households.
Assisted natural regeneration (ANR) with and without enrichment planting	- do -	This is to improve forest cover of the existing degraded natural and plantation forests by applying techniques of assisted natural regeneration or additional planting of seedlings.
Forestry Infrastructure Construction		
Forest watch tower	PFMBs and forest-related companies	Construction of watch towers in strategic places.
Nurseries	- do -	Construction of nurseries to prepare and supply seedlings for forest development.
Firebreak line	- do -	Construction of firebreak lines to check the spread of forest fires. The firebreak lines also serve as temporary access roads for transportation of seedlings.
Access road	- do -	Construction of new access roads or improvement of existing access roads for transportation of seedlings to and forestry/agriculture products from, sub-project sites.
Forest guard station	- do -	Construction of small field offices for forest guards in strategic places.
Additional Components		
Small-scale infrastructure construction	PFMBs and forest-related companies	Construction and upgrading of small-scale irrigation facilities, roads, and a bridge to assist livelihood development of local people.
Agricultural and forestry training and extension	Agricultural extension center, Universities, etc.	The activities include enlightenment activities for local staff and communities on forest protection and maintenance, and technical assistance with provision of materials for local people on agriculture/ agro-forestry development to support the improvement of their livelihoods.
Forest fire prevention and suppression	Forest protection center	Procurement of forest fire control equipment and training and drills on forest fire prevention and suppression.

4.2 Project Organizations

MARD was the owner of the project and responsible for (a) formulation of project policies and regulation, (b) appraisal of the sub-project prepared by province, and (c) guidance and supervision of

project. A Central Project Management Unit (CPMU) was established under the Management Board of Forestry Projects (MBFP) to implement tasks assigned by MARD.

The Provincial People's Committees (PPCs) of the five provinces were the investment owner of the project and had overall responsibility for the implementation of the sub-project. At provincial level, the Provincial Project Management Unit (PPMU) was established under DARD to implement the sub-projects. The organization of the project is illustrated below:



Organization Structure of SPL-3 Afforestation Project

4.3 Implementation Procedures of the SPL-3 Afforestation Project

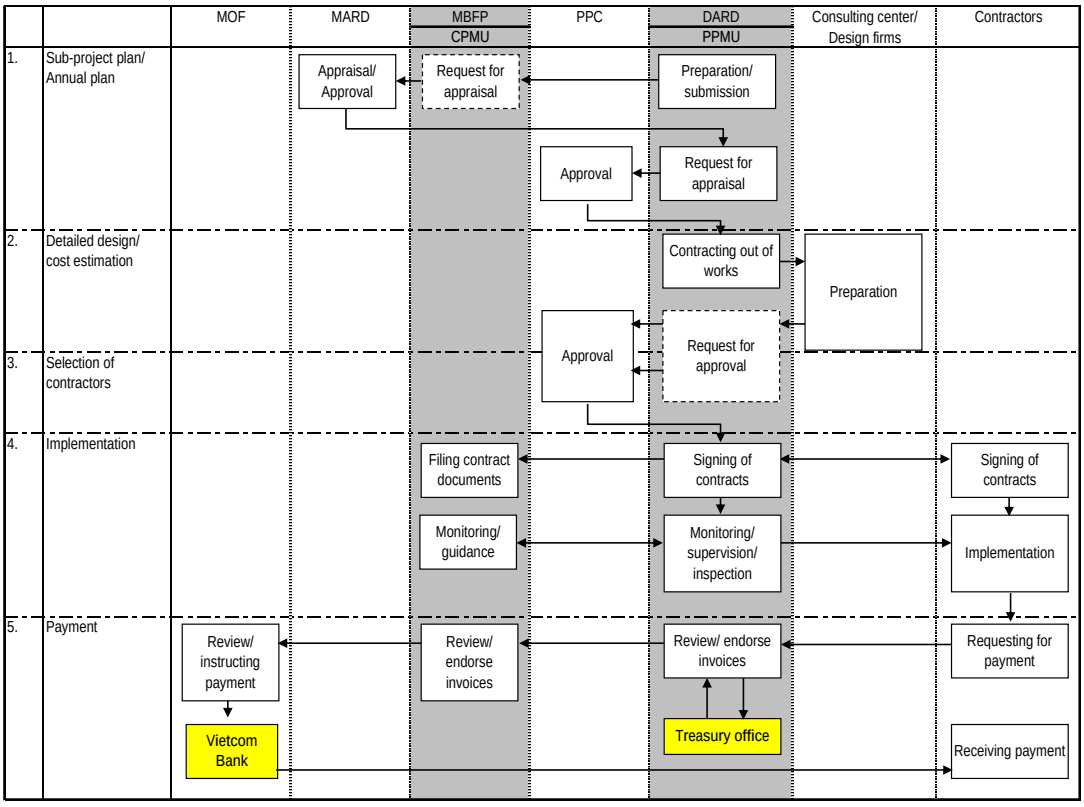
The implementation of the project started with preparation of sub-project plans at the provincial level by PPMU. The Planning Department and other concerned departments of MARD appraised the plans and approved the investment targets of each component and subproject costs. After approval by MARD, PPCs officially approved the project and then, the PPMUs sublet the preparation of detailed design of the investment activities to the consulting centers of DARDs. PPCs had an authority to approve the detailed design, cost estimation, and contractors of the investment activities of the sub-project.

The contractors of investment activities were selected without bidding but through approval of PPCs because there were few contractors capable to implement forest-related activities and extension activities and local-based contractors have an advantage in implementing activities in the most efficient manner. This was also in line with the state regulations on investment of construction projects.

The PPMU Director was authorized by PPC to sign the contracts. PPMUs were responsible to supervise the progress and quality of contracted activities. After signing of the contracts, PPMUs were required to send the contract documents to CPMU, which subsequently submitted the documents to MoF and the list of contracts and contract documents to JBIC.

As for payment, investment owners (PPCs) could pay a maximum of 50% of the contract cost to contractors as advance payment. The advance payment was refunded in every progress payment at the same percentage of advance payment. The progress and final payments were done based on the certified inspection of progress accomplishment by PPMU. Each payment proposal approved by PPMU was checked by the provincial state treasury before forwarding them to CPMU for processing of payment. CPMU reviewed the payment proposals and endorsed them to MoF for payment. MoF then instructed Vietcom Bank for payment to contractors after their review.

The implementation procedures of the project are illustrated below:



Implementation Procedures of SPL-3 Afforestation Project

4.4 Accomplishments

4.4.1 Afforestation

Afforestation was designed to plant main tree species together with subordinate species in accordance with the MARD regulations. The main tree species used were (a) *Dipterocarpus alatus*, (b) *Hopea odorata*, (c) *Pinus caribaea* and *Pinus merkusii*, which were indigenous in the project area and/or in the Southeast Asia countries. The subordinate species were the group of *Acacia spp*. The main trees were supposed to form the closed canopy 20 to 25 years after planting, while the subordinate trees were to be thinned or harvested before the main trees forms the canopy in the upper layer of the forest.

Afforestation contracts were implemented for four years starting with planting of seedlings in the first year followed by tending for three years. Afforestation started in 2002 in T.T. Hue Province and in other provinces in 2003. The total planted areas inspected by PPMUs were 20,432 ha. More than 90% of the areas were planted for three years from 2003 to 2005; about 6,400 ha per year in five provinces or 1,250 ha per year per province.

Accomplishment and Inventory Results of Afforestation

Unit: ha

	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen	Total
1. Planned target	4,500	4,233	2,723	5,036	4,287	20,779
2. Accomplishment inspected by PPMUs	4,485	4,097	2,716	4,847	4,287	20,432
3. Results of forest inventory (2008)	4,452	4,083	2,709	4,788	4,221	20,253
4. Difference (3-2)	-33	-14	-7	-59	-66	-179

Source: Results of forest inventory, PPMUs of five provinces

Inventory of forests developed by the project was carried out in 2008 by contracting out to provincial consulting centers or sub-FIPI in Hue City in order to assess the quantity and quality of the forests. The results showed there were some reduction of the planted areas (179 ha in five provinces in total) compared with the areas inspected by PPMUs. The reduction was mainly due to damages by forest fire and death of trees due to severe weather conditions. It was also reported that some areas were encroached by local people after the completion of the contract period. PPMUs/DARDs proposed PPCs to replant the areas in 2009 using the fund of 661 program.

4.4.2 Natural Forest Protection

This sub-component supported the activities of natural forest protection and involved the establishment of sign boards, patrolling and enlightenment activities to local people. The contracted period is five years at maximum.

Accomplishment and Inventory Results of Natural Forest Protection

Unit: ha

	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen	Total
1. Planned target	3,000	5,500	2,175	6,445	1,837	18,957
2. Accomplishment inspected by PPMUs	3,000	5,503	2,175	5,568	1,837	18,083
3. Results of forest inventory (2008)	3,000	5,438	2,158	5,611	1,837	18,045
4. Difference (3-2)	-	-65	-17	+43	-	-38

Source: Results of forest inventory, PPMUs of five provinces

The results of forest inventory showed that the inventoried area was smaller than the area inspected by PPMUs in T.T. Hue and Quang Nam Provinces. This was reportedly due to forest encroachment by people, which occurred after completion of the contract period. In Quang Nam, local people planted *Acacia mangium* after cutting the trees. Both provinces require the new owners of the forests to guide local people to maintain the planted trees properly (in Quang Nam) or to replant the encroached areas.

4.4.3 Assisted Natural Regeneration with Enrichment Planting

This sub-component was implemented in poor natural forests and involved not only augmentation of indigenous species naturally generated but also enrichment planting of indigenous species on the first year followed by three years of tending and protection and another two years of protection only (six years in total). It was implemented in Quang Tri , Quang Nam and Phu Yen Provinces. The accomplishment as well as the results of forest inventory is given below.

Accomplishment and Inventory Results of ANR with Enrichment Planting (unit: ha)

	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen	Total
1. Planned target	100	-	444	-	1,196	1,740
2. Accomplishment inspected by PPMUs	100	-	444	-	1,196	1,740
3. Results of forest inventory (2008)	100	-	444	-	1,193	1,737
4. Difference (3-2)	-	-	-	-	-3	-3

Source: Results of forest inventory, PPMUs of five provinces

4.4.4 Assisted Natural Regeneration without Enrichment Planting

This sub-component was also carried out in poor natural forests under four-year contract. It included activities such as weeding of wild grasses, cleaning bushes and shrubs, making fire break, protection, etc. to augment natural regeneration of indigenous trees in the forest. It was implemented in Quang Ngai Province from 2004 to 2007 and in Quang Tri Province from 2005 to 2008.

The accomplishments inspected by PPMUs as well as the results of forest inventory are given below. The forest inventory found out 36 ha of the area was burned by forest fire, which occurred after completion of the contracts in 2007. PPMU proposed PPC to re-establish forest using the fund of 661 Programs.

Accomplishment and Inventory Results of ANR without Enrichment Planting

Unit: ha

	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen	Total
1. Planned target	1,820	-	-	878	-	2,698
2. Accomplishment inspected by PPMUs	1,820	-	-	322	-	2,142
3. Results of forest inventory (2008)	1,820	-	-	286	-	2,106
4. Difference (3-2)	-	-	-	-36	-	-36

Source: Results of forest inventory, PPMUs of five provinces

4.4.5 Construction of Forestry Infrastructure

Forest infrastructure constructed by the project comprised of forest watch towers, nurseries, firebreak lines, access roads, and forest guard stations. The construction of infrastructures progressed steadily without too much delay during the project period. Besides the construction of the facilities, maintenance and upgrading of forestry roads and firebreak lines were also conducted according to the needs. The quantity of forest infrastructure contracted and constructed is shown below:

Accomplishment of Forestry Infrastructure Construction by Province

Type of Infrastructure		Quang Tri		T.T. Hue		Quang Nam		Quang Ngai		Phu Yen		Total	
		Q'ty	%	Q'ty	%	Q'ty	%	Q'ty	%	Q'ty	%	Q'ty	%
Forest watch tower	Contracted	4		7				7		4		22	
(unit: no.)	Accomplishment	4	100%	7	100%			7	100%	4	100%	22	100%
Nurseries	Contracted			4		4				2		10	
(unit: no.)	Accomplishment			4	100%	4	100%			2	100%	10	100%
Fire breakline	Contracted	177.0		53.7		56.0		59.7		49.8		396.2	
(unit: km)	Accomplishment	167.5	95%	53.7	100%	22.1	39%	59.7	100%	46.8	94%	349.8	88%
Access road	Contracted	27.9		35.4		26.5		41.7		23.6		155.2	
(unit: km)	Accomplishment	27.9	100%	35.4	100%	24.7	93%	40.6	97%	23.4	99%	152.0	98%
Forest guard stations	Contracted	2		5		7		1		2		17	
(unit: no.)	Accomplishment	2	100%	5	100%	6	86%	1	100%	2	100%	16	94%

4.4.6 Construction of Small-scale Infrastructure to Assist Livelihood Development

The construction of rural roads, a bridge and small-scale irrigation systems were added in 2006 as new project component to assist in the livelihood development of local people. The PPMUs of the five provinces commenced this component in late 2006 and completed it by October 2008.

(1) Rural Road

There were two kinds of rural roads constructed by the project such as cemented road and unpaved earth road. Only Quang Ngai Province constructed unpaved earth roads, while the other four provinces constructed cemented roads. Among the five provinces, only Quang Ngai constructed a bridge. It was a 12 meter bridge constructed with rural road. The accomplishments of the five provinces are as follows:

Rural Roads Constructed by the Project

Province	Contracted Quantity (km)				Accomplishment (km)				
	2006	2007	2008	Total (a)	2006	2007	2008	Total (b)	(b/a)
Quang Tri		3.7	0.7	4.4		3.7	0.7	4.4	100%
T.T. Hue		10.2		10.2		8.1	2.0	10.1	99%
Quang Nam		8.8	2.8	11.7		8.8	2.8	11.7	100%
Quang Ngai		12.9	1.2	14.1		8.8	5.3	14.1	100%
Phu Yen		2.9	0.9	3.8		2.8	0.9	3.7	97%
Total		38.6	5.6	44.2		32.3	11.7	44.0	100%

(2) Small Scale Irrigation System

Small-scale irrigation system consists of check dam and/or irrigation canals. There are three variations in the contracts of this component: (a) construction/rehabilitation of check dam only, (b) construction/rehabilitation of check dam and canal, and (c) construction/rehabilitation of canal only.

The accomplishments of the check dam and irrigation canal construction are shown below:

Check Dams Constructed by the Project

Province	Contracted Quantity (no.)				Accomplishment (no.)				
	2006	2007	2008	Total (a)	2006	2007	2008	Total (b)	(b/a)
Quang Tri									
T.T. Hue									
Quang Nam									
Quang Ngai		6		6			6	6	100%
Phu Yen		3	1	4		3	1	4	100%
Total		9	1	10		3	7	10	100%

Irrigation Canals Constructed by the Project

Province	Original plan in 2006 (a)	Contracted Quantity (km)				Accomplishment (km)					
		2006	2007	2008	Total (b)	2006	2007	2008	Total (c)	(c/a)	(c/b)
Quang Tri			1,45		1,45		1,41		1,41		97%
T.T. Hue	1,40		0,47		0,47		0,47		0,47	34%	100%
Quang Nam											
Quang Ngai				5,96	5,96			5,96	5,96		100%
Phu Yen	1,39	0,79		0,84	1,63		0,69	0,53	1,22	87%	75%
				0,67	0,67			0,96	0,96		143%
Total	2,79	0,79	1,92	7,47	10,19		2,57	7,45	10,02	359%	98%

Note: The canals in the shaded columns (5.96 km in Quang Ngai and 0.96 km in Phu Yen) was constructed with check dam.

4.4.7 Agricultural and Forestry Training and Extension

(1) First Stage Activities

Agriculture and forestry training and extension component was additional to the project. It was carried out in two stages: The first stage of the activities was implemented in a form of workshop to (a) introduce the JBIC Afforestation Project with its objectives, target and accomplishment, (b) present the proposed forest management plan after the investment phase of the Project, and (c) discuss the detailed training and extension programs for communes and local people concerned regarding livelihood development and capacity building activities in the next stage. The number of organized workshops and the participants are shown below.

Number of Organized Workshops and Participants (1st Stage)

Level	Province & District		Commune		Village		Total	
Province	Workshop	Number of Participants	Workshop	Number of Participants	Workshop	Number of Participants	Workshop	Number of Participants
Quang Tri	1	35	20	800	40	2,000	61	2,835
T.T. Hue	1	30	6	240	18	720	25	990
Quang Nam	1	40	6	270	18	900	25	1,210
Quang Ngai	1	45	6	270	19	855	26	1,170
Phu Yen	1	40	4	160	14	630	19	830
Total	5	190	42	1,740	109	5,105	156	7,035

(2) Second Stage Activities

The training programs and extension activities for the second stage were prepared by PPMUs with the assistance of the consultant based on the discussions made and proposals given at the workshops in the first stage. All provinces spent longer time for contracting than expected. The second stage activities were commenced in late 2007 in Phu Yen Province. The other four provinces started their activities in the second quarter of 2008.

As in the first stage, workshops on forest protection and management were conducted in the four provinces with the participation of the commune/village leaders. The new owners of JBIC forests such as the Protection Forest Management Boards and forest companies also attended the workshops and discussed how to implement the forest management plan after the investment phase of the Project. Quang Ngai Province did not organize the workshops because they completed such discussions in the workshops of the first stage.

Number of Organized Workshops and Participants (2nd Stage)

Province	Commune / Village level	
	Workshop	Number of Participants
Quang Tri	7	210
T.T. Hue	6	240
Quang Nam	7	350
Quang Ngai		
Phu Yen	4	120
Total	24	920

All provinces implemented technical training and demonstration/trials in the communes concerned. The training programs and the demonstration/trials varied in the five provinces according to the needs and requests of the local people.

Second Stage Extension Activities Conducted in Five Provinces

Province	Items of training and demonstration/trials	
Quang Tri	♦ Planting and tending of Acacia tree ♦ Planting and tending of Bamboo	♦ Planting productive fodder grass ♦ Planting of maize and new variety of peanuts
T.T. Hue	♦ Planting and tending of Acacia tree ♦ Planting of rattan ♦ Tending of plantations & and protection of natural forest	♦ Aquaculture of freshwater fish ♦ Growing of durian and "Thanh Tra" pomelo
Quang Nam	♦ Planting productive fodder grass ♦ Planting of maize and new variety of peanuts ♦ Breeding of improved variety of beef cattle	♦ Aquaculture of special freshwater products ♦ Aquaculture of freshwater fish
Quang Ngai	♦ Planting and tending of Acacia tree and Areca palm	
Phu Yen	♦ Planting and tending of Acacia tree	♦ Growing of improved variety of rice

4.4.8 Forest Fire Prevention and Suppression (FFPS)

Forest fires often occurred in the five provinces; these are caused by fire spread from vegetation clearing by local farmers and due to explosion of phosphorous bombs. Hence this component was added. It involved the implementation of FFPS training and purchases of vehicle and equipment for fire extinguishing works.

The training courses were implemented from late 2007 to 2008 under the contracts with Vietnam Forest Protection Center. The participants of the training courses included officials of DARD, PPMUs, forest ranger department, members of steering committee on forest protection and FFPS, representatives of district and commune PC and villages under the Project, the contractors of the Project, FFPS forces at village level, and representatives of Vietnamese Fatherland Front and Youth Association.

Number of FFPS Training Courses and Participants

Facility	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen
Timing	**11/2007**	**04/2008**	**09/2007**	**10/2007**	**06-07/2008**
At the provincial level	**1** (*40*)	**1**	**1** (*60*)		**1** (*35*)
At the district level	**3** (*150*)	**3** (*195*)	**3** (*150*)		**3** (*126*)
At the commune/village level				**6** (*240*)	

Figures in parenthesis ( ) indicate the number of participants.

The lecturers of Vietnam Forest Protection Center introduced to the participants the existing rules and regulations regarding FFPS in Vietnam, provided lectures on forest fires and measures for forest fire prevention and fire suppression, and guided them to design a FFPS plan at the commune level. The discussions and exchanges of opinions were actively held. A one-day field training and demonstration were also organized in all provinces regarding suppression of forest fires using firefighting equipment, command of forest firefighting, mobilization of firefighting forces, and cooperation in forest firefighting.

All provinces purchased the FFC equipment and distributed this to the Protection Forest Management Boards (the new owners of the JBIC forests), steering committee of forest fire prevention and suppression (FFPS) at the district and commune levels, and DARD. The quantity of FFC equipment purchased is shown in the table below.

Equipment for Forest Fire Control Purchased by Each Province

Equipment	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Phu Yen
1. Pump	1		1	1	1
2. Vegetable cutting machine	4	10	3	9	6
3. Wind blower	4	10	3	9	6
4. Chainsaw	4	10	4	6	5
5. Swatter	100	56	100	200	
6. Clearing knife	100		105		105
7. Portable water container	1	2	2	2	2
8. GPS	3	2	3	3	1
9. Speaker	4	5	3	10	3
10. Binocular	4	4	3	14	3
11. Fire protection clothes+shoes	50	80	50	120	60
12. Hand fire extinguisher			30	50	167
13. Digital camera			1	1	2
14. Boat			1		
15. Tent	3	3	2		2
16. 4x4 pick-up vehicle	1	1	1	1	1

4.5 Benefit Sharing System

4.5.1 Study on an Appropriate Benefit Sharing Ratio for SPL-3 Afforestation Project

(1) Background

The project was implemented during the era when the forestry sector of Vietnam had made important strategic shifts from state-controlled to people-managed forestry. The government forestry policies in early 2000 clearly stated allocation and contracting of forests and forest land to households, individuals, and villages/communities, together with more open policies that allow forest owners to actively use allocated forest land in the most efficient way. The Forest Protection and Development Law of 2004 also paved a way for long-term collective management and protection of protection forests by PFMB and local people, which the project envisaged.

It is a well known belief that without sufficient economic incentives from the forests, local people have the tendency not to engage in protection and management of forests. On the other hand, the instructions for the project[2] requires the establishment of an appropriate regulation on the sharing of the benefits among the state, the future owners, and contractors of the forests. Further, the benefit sharing framework for forestry projects/programs[3], which was under revision in 2005, was anticipated to allow each province to determine the appropriate sharing ratio of the benefits from the forests among the State and the owners/contractors of the forest. Thus, the consultant for SPL-3 Afforestation Project made a study on an appropriate sharing ratio of benefits from protection forests under the project.

The consultant conducted field studies in the five provinces from July to September 2005 and collected data and information on the growth rate of several tree species, farm gate prices of forest products, administration cost of the project at the province, district and commune levels, and cost of harvesting and thinning of trees from PPMU and forest enterprises/companies. The consultant also visited selected project sites to survey site conditions and estimated the MAI (mean annual increment) and wood volume.

(2) Method

The study estimated two kinds of sharing ratios:

a) The ratio computed based on the proportion of the investment made by each stakeholder (the state and forest owners) for forest establishment, protection and management in a certain period of time.

b) The ratio necessary for the state to recover 100% of its initial investment.

Such sharing ratios were computed through cost-benefit analysis of three or four afforestation models each in the five provinces. The study assumed that the state (consisting of province, district, and commune) and the communities (future forest owners: PFMB and local people) would invest in the project. The cost of forest development, protection and management was estimated for the duration of 40 years at 2005 prices. Both labor cost and cash cost related to the activities of the establishment, protection and management of forest plantation were estimated based on the projected management practices. For the benefits from the forest, fuel woods, chip woods and round woods from sub-species, round wood of main species, and resin from main species were estimated.

[2] MARD Minister's Decision No.1357/BNN/KH dated 20/05/2002 titled "Instruction for Implementation of Afforestation Project in 5 Central Provinces Financed by JBIC Loan

[3] Prime Minister's Decision No. 178/2001/QD-TTg dated 12/11/2001 on Benefits and Obligations of Households and Individuals Assigned, Leased, and Contracted Forests and Forest Land

(3) Results

The study provided two different benefit sharing ratios for each province as shown below:

Comparison of Two Different Sharing Ratio (weighted average)

Provinces	Based on the Share of the Total Investment		Based on 100% Recovery of Initial Investment by the State	
	Community	The State	Community	The State
Quang Tri	**69%**	**31%**	64%	36%
T.T. Hue	66%	34%	**71%**	**29%**
Quang Nam	**68%**	**32%**	48%	52%
Quang Ngai	65%	35%	**75%**	**25%**
Phu Yen	68%	32%	**68%**	**32%**

Source: Cost and Benefit Analysis for Determining Appropriate Benefit Sharing Ratio in JBIC Afforestation Project (Dec. 2005)

The sharing ratios in the five provinces vary because the amount of initial investment by the state, growth rate of trees, tree species, etc. in each province were different. In particular, the sharing ratio for community estimated in Quang Nam based on 100% recovery of initial investment by the state was smaller than those of the other provinces because the growth rate of trees was projected to be low due to the poor growth at the time of the study. On the other hand, the sharing ratios for the communities in T.T. Hue and Quang Ngai were estimated to be higher due to better growth of trees in the provinces.

The study proposed that each province compare the sharing ratio in two cases and select the one that provides higher sharing ratio for the community (shaded yellow), since they would feel unfairness if their share of the benefit is lower than their share of the investment. As a result, the proposed sharing ratio of benefits between the community and the state is 70%:30%, on the average.

4.5.2 Benefit Sharing Regulation for SPL-3 Afforestation Project

(1) Draft Regulation

After completion of the cost-benefit analysis, the consultant once proposed to CPMU to issue a benefit sharing regulation for the JBIC project since PM Decision No.178 is difficult to apply to the project. However, CPMU decided to wait for the revision of PM Decision 178, which was undertaken by DOF as of 2006. There was an expectation then that the revised benefit sharing regulation would provide simpler and more flexible benefit sharing mechanism in which PPC can decide the details, including sharing ratio of the benefits.

It was in March 2008 when the consultant learned from DOF that they gave up revising PM Decision 178. According to DOF, each project shall propose their own benefit sharing regulation, if necessary, and request DOF for review and approval. JBIC also requested CPMU in July 2008 to establish the benefit sharing mechanism for the project for sustainable management of the forests.

In response to the request of JBIC, the consultant assisted CPMU in drafting the regulation. Series of discussions were held with CPMU and DOF on the draft regulation. A workshop was also held in September 2008 with the participation of representatives of PPMUs, JBIC, MPI, MOF and concerned departments of MARD. After the workshop, the consultant and CPMU revised the draft incorporating the comments given by the workshop participants.

The benefit sharing ratios proposed in the draft regulation are provided below. It provides ranges of ratios and requires PPC to decide specific ratios based on the site conditions. The result of the

cost-benefit analysis (70%:30%) was used as the ratio of benefits from sub-species in an average site. Meanwhile, higher sharing ratios were given to forest owners and contractors from main species and in the case of the forest located in difficult sites because higher investments would be required by these cases for management and protection of the forest.

Sharing Ratios of Benefits in the Draft Regulation

Site	Species	Average site		Difficult site	
A. When forests are allocated		**Owners**	**CPC/DPC**	**Owners**	**CPC/DPC**
New Plantation	Sub-species	65-75%	25-35%	80-90%	10-20%
	Main species	80-90%	10-20%	90-95%	5-10%
Natural/regenerated forest	All species	70-80%	20-30%	80-90%	10-20%
B. When forests are contracted by PFMB		**Contractors**	**PFMB**	**Contractors**	**PFMB**
New Plantation	Sub-species	65-75%	25-35%	80-90%	10-20%
	Main species	80-90%	10-20%	90-95%	5-10%
Natural/regenerated forest	All species	70-80%	20-30%	80-90%	10-20%

Note: This applies only to harvested timbers from forests invested by the project. Owners and contractors can enjoy 100% of thinning products, NTFP, dead trees, and trees from forest invested by themselves.

(2) Final Regulation

MARD Minister's Decision No. 108/2008QD-BNN promulgating the regulation on benefit sharing applicable to the project was approved on the 11th of November 2008. The sharing ratios in the draft regulation were changed to provide more benefits to the forest owners and contractors as follows. In principle, the sharing ratios follow those specified in Prime Minister's Decision No.178/2001/ QD-TTg.

Sharing Ratios of Benefits in MARD Decision No.108/2008/QD-BNN (11/11/2008)

Site	Species/ Forest Conditions	Benefit Sharing Ratio	
A. When forests are allocated		**Owners**	**Commune**
New Plantation	Sub-species	100%	-
	Main species	90-95%	5-10%
Natural/regenerated forest	All species	85-90%	10-15%
B. When forests are contracted by owners (PFMB)		**Contractors**	**PFMB**
New Plantation	Sub-species	100	-
	Main species	80-90%	10-20%
Natural/regenerated forest	For impoverished forest	95%	5%
	For forest regenerated after slash and burn cultivation or after exploitation of timber logs of a diameter of under 20cm	75-85%	15-25%
	For forests with average or rich reserves of over 100 m^3/ha: (from the time of being contracted to the time of exploitation)	2%/year of harvested timber	The rest

Note: This applies only to harvested timbers from forests invested by the project. Owners and contractors can enjoy 100% of thinning products, NTFP, dead trees, and timbers from forest invested by themselves..

The above sharing ratios are applied to the value of timber products after paying taxes and expenses for exploitation and transportation of products to places of sale. The MARD Decision requires the PPCs of the five provinces to decide the specific sharing ratios of benefits based on the above and the actual conditions of each type of site.

Aside from the benefit sharing ratios, the MARD Decision provides the following provisions:

1) PPC shall retrieve part of investment funds of the project and use it for forest management, protection and development in their localities;
2) Owners and contractors shall observe the regulation on exploitation of timber and other forest products under MARD Decision No.40/2005/QD-BNN dated 07/07/2005;
3) PPC shall promulgate a regulation on management and use of the shared benefit remitted to the communal budget, including the value for setting up a forest protection and development fund at the district and commune levels.
4) Organizations, households and individuals as the owner of the forest are encouraged to invest their capital in planting protection forests after the first cycle and exploit and use forest products under the current laws and regulations.

4.6 Lessons Learned from the Implementation of SPL-3 Afforestation Project

The implementation of the SPL-3 project was delayed due to changes of the project objectives and scope of works and the implementation was rushed/expedited immediately upon approval by the government and JBIC. Therefore, the project left behind several lessons learned particularly on the implementation procedures and enhancement of a sense of project ownership among local people. The following are the main lessons learned from the project:

Issues/ Lessons Learned	Recommendations for future projects
[Participatory approach]	
1. Local people were not well-informed about the project and were not involved in the planning stage of the project. They merely participated as laborers at the initial stage of the project.	♦ Dissemination of information on the project and project policies should be done for local governments and people before implementing detailed planning in the field. By doing so, the local governments and local people concerned could understand the importance and benefits from the project as well as their responsibilities regarding forest protection and development. This could improve the detailed plan of each site and facilitate project implementation with active participation of the local people.
2. The preparation of detailed design of forestry development components was rushed in all provinces since only four years remained for the implementation period of the project when it was started in 2002. Therefore, the detailed design was prepared in a short period of time without sufficient participation of local people. This resulted in insufficient understanding of the project by local government and local people, continuous use of the project sites by local people for crop cultivation which led to changes in the project sites, and lack of project ownership by the local people until an information campaign was conducted under the agriculture and forestry training and extension in 2006-2007.	♦ Detailed planning of forestry development should be implemented with the active participation of local communities at the beginning of the project implementation

Issues/ Lessons Learned	Recommendations for future projects
[Support for livelihood development]	
3. The local government and local people appreciated the small-scale infrastructure construction and extension and training for income generation of the local people, which were implemented by the project. The activities attracted their attentions to the project and facilitated their understanding on the importance of the Project and sustainable forest protection and management.	♦ Participatory forest projects should include training and extension activities and small-scale infrastructure construction to assist livelihood development of the participants.
[Cost norm of training and extension activities]	
4. Implementation of agricultural and forestry training and extension activities and forestry inventory survey was much delayed because PPMUs faced difficulty in estimating the cost of the additional activities and also in obtaining approval from PPCs on the cost estimation. The problem is attributed to lack of official cost norms for the activities.	♦ Cost norm of training and extension activities and forest inventory survey should be included in the project regulations or manuals.
[Implementers/managers of project activities]	
5. The Project utilized public institutions for implementing project activities such as PFMBs, forest protection center, agricultural extension centers, consulting centers, universities, etc. The procurement of their services was done by direct appointment rather than bidding. The procurement method was quite appropriate because they have enough capacity and experiences in doing the activities. On the other hand, private sector has very limited capacity for implementing forestry development, agricultural and forestry extension and training, and forest fire control training done by the Project. Although the private sector has technical capacity for the construction of infrastructure, the infrastructure under the project are very small in scale and located in remote areas and thus, are not financially attractive to private firms.	♦ Public institutions rather than private ones are suitable as implementers/managers of forest development activities of the project to assure sustainability of the project.
[Project duration]	
6. It usually takes at least two years to prepare a detailed plan of a subproject in a specific locality, including contracting of the works, social preparation activities (such as information dissemination to local people and community organizing), participatory land use planning, and planning of livelihood development activities. On the other hand, a contract of afforestation in protection forest land should have longer period of tending due to slow growth and vulnerable main tree species, say four years. It makes the duration of afforestation contracts five (5) years, one year longer than the contract under the project. Assuming the total area planned for afforestation would be planted in three years, seven years are necessary to complete afforestation contracts. Further, one year is necessary before completion of the projects to carry out forest inventory survey and transfer of project outputs to new owners.	♦ Duration of the forestry projects in this kind shall be at least 10 years

Issues/ Lessons Learned	Recommendations for future projects
[Management fee of contractors]	
7. Management fee of the contracts under the project was merely 6% of the total contract cost, following the regulations of 661 program. Many contractors complained of low management fee. It is understandable that the contractors spent a lot of funds for management of the contracted works because the project sites are scattered in remote mountainous areas with poor accessibility. Furthermore, the contractors had to provide technical guidance to the local people on planting and tending techniques to maintain the quality of works.	♦ The ceiling of management fee for the contractors should have been increased to improve the quality of their outputs and to avoid the financial burden of the contractors.
[Ceiling budget for infrastructure & extension]	
8. The ceiling budget of forestry infrastructure construction and extension activities was set at 6% and 2% of the total project budget pursuant to the regulation of 661 program. There was no ceiling for the budget of rural infrastructure such as rural roads and irrigation facilities since such infrastructure will be constructed from the budget of other projects/programs according to the regulation of 661 program.	♦ Ceiling of the budget for infrastructure construction and extension should be increased. In the project, fund disbursement for forestry development, forestry infrastructure, rural infrastructure, and training and extension components was 65%, 10%, 9%, and 2%, respectively, of the total disbursement for the project.
[Authority of PPC and DARD	
9. The project delegated certain decision-making authorities to PPCs such as the approval of the investment norm of activities and estimated cost of each contract. This is deemed proper since the PPC was the investment owner and directly responsible for the project implementation. CPMU/MARD was in charge of overall planning of the project, controlling, monitoring and supporting the provinces in project implementation. This was appropriate particularly to avoid cumbersome bureaucratic procedures to get approvals from MARD. However, the delayed approval by some PPCs hampered smooth implementation of the project activities so that PPMUs sometimes requested CPMU to send no objection letters from MARD to facilitate decision-making of the PPCs.	♦ For the future project, MARD should delegate decision making authority to PPC as much as possible like they did for SPL-3 Afforestation Project. PPC should also delegate the authority to approve the design and cost estimate of contracts to DARD to facilitate the project implementation.

Chapter 5 Lessons Learned from Similar Forestry Projects

5.1 Overview of International Support in Forestry Sector

Since the beginning of its reform process in the early 1990s, the Vietnam forestry sector has received significant support from international donors. Early support to the sector came from the Swedish Government through the Swedish International Development Agency (SIDA), the German Government through the German Agency for Technical Cooperation (GTZ) and the German Bank for Reconstruction (KfW), the Japanese Government through Japanese International Cooperation Agency (JICA), the World Bank (WB), Food and Agriculture Organization of the United Nations (FAO), World Food Program (WFP), Asian Development Bank (ADB) and others. These supports from the international communities/donors have contributed to the achievements in afforestation, forest employment, forest protection and conservation, forest industry and shift to social/community forestry regime. The list of completed and on-going ODA-funded forestry projects are given below:

Major ODA Forest Projects in Vietnam

Projects	Total Cost (mil. US$)	Project Area (Provinces)	Reforestation Area	Project Duration
I. Grant Projects				
1. PAM 4304	33.0	20 provinces		1992-1998
2. SFDP	EUR 10.3	Song La and Lai Chau	-	1993-2004
2. MRDP	18.1	Phu Tho, Yen Bai and Lao Cai		1996-2002
3. KfW1	5.7	Lang Son, Bac Gian	15,593 ha	1995-2000
4. PAM 5322	18.4	14 provinces		1997-2002
5. KfW2	9.3		21,000 ha	1997-2002
6. KfW3	6.0	Bac Giang, Quang Ninh, Lang Son	17,175 ha	1999-2005
7. KfW3 phase 2	3.0	Bac Giang, Quang Ninh, Lang Son	9,390 ha	2002-2008
8. PACSA	11.5	**Quang Nam, Phu Yen**	**3,670ha**	2001-2005
9. KfW4	9.4	Thanh Hoa, Nghe An	*10,500 ha	2002-2008
10. KfW6	112.3	**Quang Nam, Quang Ngai, Binh Dinh, Phu Yen**	*22,700 ha	2005-2013
11. KfW3 phase 3	4.0	Bac Giang, Quang Ninh, Lang Son	*7,000 ha	2007-2013
II. Loan Projects				
1. ADB 1	24.5	**Thanh Hoa, Quang Tri, Phu Yen** and Gia Lai	12,226 ha (**6,332 ha**)	1997-2005
2. WB 1	22.0	**Thanh Hoa, Quang Tri,** Lam Dong, Kon Tum, Binh Phuoc	- *Protection only*	1998-2006
3. WB 2	56.0	Tra Vinh, Soc Trang, Bac Lieu, Ca Mau	5,790 ha (**4,662 ha**)	2000-2007
4. JBIC	16.5	**Quang Tri, T.T. Hue, Quang Nam, Quang Ngai, Phu Yen**	**22,724 ha**	2002-2008
5. WB 3	67.1	**TT Hue, Quang Nam, Quang Ngai, Binh Dinh**	*66,000 ha	2005-2011
6. KfW7	17.2	Hoa Binh, Son La	*3,000ha	2006-2014-
7. ADB 2	91.3	Kn Tum, Gia Lai, **Phu Yen**, Dak Lak, Dak Nong, Lam Dong	*41,858 ha (***6,850 ha**)	2007-2014

Source: Management Board of Forestry Projects

Note: Underlined figures indicate the afforestation targets/ accomplishment for protection forests. The rest are the targets for production forests. Figures with "*" are targets.
PAM: Projects funded by World Food Programme
SFDP: Social Forestry Development Project (funded by Germany)
MRDP: Mountain Rural Development Programme (funded by Sweden)
KfW: KfW Afforestation Project (funded by Germany's Bank for Reconstruction)
PACSA: Project for Afforestation in Coastal Sandy Area
ADB1: Forestry Sector Project

WB1: Forest Protection and Rural Development Project
WB2: Coastal Wetland Protection and Development Project
JBIC: Rural Infrastructure Development and Living Standard Improvement Project III (Sector Project Loan III) /Afforestation Sector
WB3: Forestry Sector Development Project in 4 provinces
ADB3: Forests for Livelihood Improvement in the Central Highlands Sector Project

Donors' supports have recently focused on the areas of sustainable forest management; forest protection, conservation and environmental services; forest product processing and trade; forest research, extension, training, and education; and strengthening forest sector policy, organizational, planning, financial, and monitoring frameworks. There are also various donor-supported projects working in the field of rural development, livelihood improvement and others, which indirectly linked with forestry.

Between 2001 and 2008, financial support from international donors to the forestry sector has declined in both relative and absolute terms. In 2008, the development investment fund from the central and provincial budgets for forestry sector was about VND 2,331 billion, of which VND 281 billion or 12.1% was ODA investments for international projects.[1] It is expected that substantial support from donors will not continue in the long term as Vietnam is going to join the group of medium income countries (GDP per capita will be over USD 1000). Although government policy includes promoting private sector investment in forestry, it is an accepted fact that the share of private investment is only a few percent of the total investment fund.

5.2 Policies of Major Donors

There are common features in the donors' policies in the forestry sector, such as the focus on poverty reduction, and the promotion of the economic potential of forests by applying improved approaches to plan forest management more scientifically and sustainably, and to encourage participation of local communities. Donor policies and strategies have influenced the development of the sector. The following sections provide a summary of current forestry policies of selected donors.

5.2.1 Asian Development Bank (ADB)

ADB policies reflect the three main principles of protection, production, and participation based on mechanisms of sustainable and effective forest management. Based on these principles, ADB support focuses on the following activities: (i) sustainable and scientific management planning; (ii) strengthening the protection function of forests in terms of land and water, and sustainable exploitation of natural and planted forests; and (iii) encouraging local participation in forestry development activities design and implementation. ADB also considers sustainable natural resources management as a focus with aims to reduce poverty and ensure sustainable economic growth. ADB has been revising its new forestry policies based on the review and adjustment of the former ADB forestry policies issued in March 1995, and on comments from other partners.

5.2.2 Kreditanstalt fuer Wiederaufbau (KfW)

Sustainable protection and management of natural resources is one of three priorities in the development cooperation between Vietnam and Germany. Germany's financial cooperation executed by KfW addresses these priorities through support of model projects on forest plantation and management in poor provinces in north and central Vietnam.

[1] 2008 Forestry Sector Development Report (Jan. 2009), FSSP

Since 1995, KfW projects have focused on income generation for local farm households through development of production forest on barren lands, with the objectives of protecting soils and conserving water. Over the years, KfW has shifted the emphasis from fast growing tree species to indigenous species and natural forest regeneration. As KfW has been in a position to provide grants up to KfW6, one objective has been to design and test improved approaches and mechanisms for forest regeneration and sustainable forest management by means of financial assistance.

Approaches in KfW forestry projects are based on the participation of relevant agencies, strengthening of private enterprises, close quality monitoring (following national and international standards) and focus on rural livelihood improvement. Local people are encouraged to participate directly in the land use planning, and anyone interested in forest plantation is eligible for allocation of forest lands. In the first years of a project, farmers are provided in-kind support (seedlings, etc.), financial support, training and extension services. The farmers are paid according to the results and then, are able to withdraw money from an account at a local bank (VBARD). This is a unique model to enhance the participation of farmers and their access to bank services. Thus, KfW projects do not only contribute to natural resources management, but also to the improvement of rural livelihoods.

5.2.3 World Bank (WB)

Facing the global crisis on forests, WB has reviewed and revised its policy and strategy in October 2002. This strategy entails three important objectives:

- Utilize forest potentials aiming at reducing poverty,
- Develop the forestry sector in an economically sustainable way, and
- Protect the global value of forests.

Accordingly, forestry policies of WB are based on the objective of poverty reduction with the condition that environmental values are not negatively affected. In order to achieve this objective, WB aims at the application of advanced approaches, which ensure safeguard of protection forests, and effective management of production forests.

5.2.4 Europe Union (EU)

Apart from the Project on Social Forestry Development and Nature Conservation (SFNC) in Nghe An Province, EC has been supporting the implementation of a series of mountain rural development projects with forestry as a major component. Combination of poverty reduction and sustainable forest management and biodiversity conservation is consistently pursued by EC.

5.3 Lessons Learned from Similar Forestry Projects

The Forest Sector Support Program and Partnership (FSSP) conducted a study entitled “Scope and Options for a Harmonization of Investment Procedures and Project Implementation Frameworks in the Forestry Sector” in 2003-2004. The study analyzed five on-going large-scale ODA forestry projects, namely the Forest Sector Project (ADB), Son La-Lai Chau Rural Development Project (EU), Afforestation Program as reflected in KfW1-3 projects (KfW), SPL-3 Afforestation Project (JBIC), and Forest and Rural Development Project (World Bank). The strengths, shortcomings and possible solutions identified by the study are important lessons learned for the project to be formulated. Some of them which are considered relevant to the proposed project are listed below:

Issues	Solutions
[Project design, preparation and appraisal]	
1. **Slow project preparation/design and appraisal/ approval**, especially with large investment projects (WB and ADB projects often take three to five years for preparation and approval), may lead to the loss of project implementation momentum. Strictly designed project activities and rigid implementation modalities with defined cost norms and cost breakdown in a logical matrix format may become soon outdated in the fast changing context of Vietnam. In some cases, projects have to be restructured (WB) or take significant changes (EC).	♦ Better coordination between donor and government appraisal procedures to shorten time required for project preparation. Flexibility and freedom should be foreseen so that project implementers could adapt to the changing environ of a project. Project design should contain its goals, objectives, approach and outputs, rather than going into details with project activities and cost estimates.
2. **Lack of coordination between donor and government appraisal procedures**: There is not enough effective coordination between the consultants and counterpart team in project formulation and appraisal process. While the consultant team is charged with preparing formulation reports for submission to the donors, Vietnamese counterparts are left with works on preparing the pre-feasibility study for submission to government. Poor coordination between these two processes has resulted to different understandings and consequently delays in the appraisal and approval process, or later problems in project implementation.	♦ The project formulation report for the donor as well as the pre-feasibility study for Government should be the worked of both the consultant team and counterpart team. The guidelines of ADB and MPI on the procedures for project preparation and implementation should be applied in this process.
3. **Unrealistic institutional assessment**: Unavailability of "independent" private extension services, design companies or forest services are common features of the institutional environment forestry projects. However, in most projects, designers did not study carefully what institutions and services units would be eligible and capable to work for the particular project. These are project oversights and most of the time the issues were left and unattended for the first years of project implementation, which caused delays.	♦ Analysis of the availability and capacities of eligible institutions and services should be carried out by the design team as an integrated component of the project preparation. In this, donor policies on, for example, private sector involvement need to be adjusted to the realities in Vietnam, where professional private service institutions are still rare, and those existing might not be interested in getting involved with complicated ODA projects.
[Beneficiaries' ownership]	
4 Design documents are prepared mainly by project designers (donors and government) in a rather short period of time, while being able to pre-determine activities, budgets, and schedules, cannot truly reflect the priorities of local people. As a result, beneficiaries often have interest only in some, and not all, project investments and are reluctant to contribute their energy and resources to project activities less attractive to them.	♦ Detailed pre-targeting of the donor or government should be avoided. To this extent, donors and government should indicate lump sum budgets and objectives, which beneficiaries should further specify and prioritize during operational planning; Beneficiaries' contribution should be decided by local communities in the context of yearly operational planning and budgeting, adjusted to local conditions ♦ Government and donors should jointly developed suitable guidelines on the simplest possible procedures for community participation in procurement for, and implementation of, forestry and rural development projects

Issues	Solutions
5 More beneficiaries-based, flexible project designs are necessary. Community control over budget and decision making are key factors for efficient use of the funds, and is likely to substantially increase beneficiaries' contributions as experienced e.g. in concrete canal or rural village road construction:	♦ Beneficiaries' contribution should be decided by local communities in the context of yearly operational planning and budgeting, adjusted to local conditions.
[Procurement and contracting]	
6 During the implementation of the WB1 project, the WB tightened up on the general procurement procedures for the whole of Vietnam, whereby the government departments or state-owned companies that were related to the project implementing agency became ineligible for subcontracting work because the WB placed much more emphasis on the procurement of services from the private sector. A limited period for the change over was allowed and this included specific project-based waivers from the WB in Washington for the procurement of services from a related state-owned company or organizations where there was no capacity in the private sector and this took some time to clarify. Similarly, a number of projects did suffer in the procurement of technical services in fields such as engineering, agricultural or forest extension due to the very limited capacity in the private sector at the time.	♦ Same as solution no.3. ♦ Apply direct procurement for specific activities such as training, extension, designing silviculture activities and infrastructure construction, micro-planning, etc. (***Note**: This issue did not occur in SPL-3 Afforestation Project wherein the project implementation guidelines specified such public institutions as eligible contractors.)*
7. The Provincial People's Committee (PPC) approves the design and cost estimate for all forestry projects and the approval is often a slow process.	♦ PPC should delegate/authorize the approval of design and cost estimate to sectoral departments related to components or sub-components of the project.
[Objectives, tasks and time frame]	
8. Some projects were designed with multiple objectives, without a clear clarification of their priority. In general, it is suggested that project designers follow a straightforward and simple approach as possible with realistic goals and objectives.	♦ Several main objectives can be identified e.g. for poverty reduction or for forest conservation, but a clear priority ranking should be specified.
9. Similarly, the timeframe of the projects needs to be carefully reviewed. It usually takes at least two years to prepare project investments in a specific locality due to time-consuming activities such as community approaches, land use planning and land allocation. There are only three to four years left to implement the project, which is not enough to see the full impact of forestry-related project activities, even for a normal project duration of five to six years. This is a short period particularly for forestry investments wherein initial results can be observed after eight to 15 years at the earliest.	♦ Unless project durations can be extended to <u>at least eight years</u>, land and forest resource inventory, land use planning and land allocation should be carried out before the implementation of project, using government budgets or preparatory donor budgets to avoid delays in the implementation. ♦ Donors should consider project durations of eight to ten years (as already applied in KfW plantation projects) and project designs should foresee a reduction of project investments, or replacement of donor contributions with counterpart/government funds in the last three to five years to facilitate a smooth transition into the post-project period.

Issues	Solutions
10. Some investment projects developed new policies while implementing the investments at the same time, which proved very difficult and time consuming.	♦ If new policies are required, a separate technical support project should prepare such policies, and the investment project should start only if the policy has been developed and approved by the respective government institution(s) for large-scale application.
11. Projects designed with a wide and extensive scope of components and activities faced complications due to limited management capacities of the local administrations.	♦ The project design should focus on core activities rather than addressing every possible intervention and activities, which, together with the still too complicated procedures for procurement and disbursement, totally overwhelms the project management capacity of local staff.
[Capacity building]	
12. It takes a lot of time and energy to improve the project management capacity of project staff and implementing agencies, particularly of communities involved at the commune and village levels as required in participatory approaches. Many projects do not allocate sufficient resources for this component or plan low budget for its activities. For example, most of projects have developed only two to three days of staff training courses for very important project management activities (M&E, financial management, work planning, environmental safeguard policies, etc.), which is too short to develop a good understanding of these issues. Very few training courses or workshops have been conducted regularly on any level to upgrade knowledge, or to draw lessons learned, which hampered capacity development of project staff.	♦ Simplified guidelines for project management, small civil works, community participation, safeguard policies, environmental policies, and training and extension should be prepared jointly between the donors and the government. ♦ Training courses for project staff should be carried out before the start of implementation of project activities. ♦ Training materials should be easy to understand, and suitable for local staff capacities and awareness levels of beneficiaries.
[Project Implementation Manual]	
13. All large-scale ODA projects in the forestry sector have specified their standard operating procedures (SOP) in the so-called "Project Implementation Manuals (PIM)", which, apart from WB projects, were elaborated during project implementation. Whereas PIMs prepared in KfW grant projects since 1995/96 were rather clear and down-to-earth, ADB1 (Forestry Sector Project) as the first ODA loan project in forestry took more than three years (1998 into 2001) to complete this document, due to the fact that many procedures and investments had to be clarified.	♦ Detailed draft PIM should be prepared during the design process by consultant and counterpart teams, and be endorsed by donors and government. The content of PIM should include all draft guidelines with appraised comments from relevant authorities so that these documents could become effective as soon as project agreement is signed. At the same time, future PIM have to allow for increased decentralization and beneficiaries involvement, and must therefore not regulate all aspects anymore on the central level in detail, but rather clarify responsibilities of lower levels and beneficiaries and provide appropriate guidance.

Issues	Solutions
[Financial management]	
14 The necessity to prepare detailed budgets not only for government, but also for ODA loan funds in line with government regulations (pursuant to Decree 52) is one of the challenges in financial management, particularly for forestry projects where many small-scale investments occur and which are impossible to be exactly defined. Budgets are allocated according to project components and budget items as shown in the pre-feasibility study and project documents. As for the overall budget, the state approves the pre-feasibility study, but delegates the authority for appraisal and approval of the feasibility study to the executive ministry. As stipulated in Decree 52, there has to be a feasibility study for each and every investment activity, which is appropriate for infrastructure projects (this is the rationale for the emergence of Decree 52), but not for forestry projects. However, unless these requirements are met, the state treasuries cannot endorse expenditure statements, which is required for reimbursements by the loan donor. Thus, financial administration is at present the most cumbersome and demanding task of the Executing Agencies.	♦ Ministry of Agriculture and Rural Development (MARD) should report to government on problems related to the preparation of overall budget planning for forestry and rural development projects, and asking for a specific mechanism for establishing the overall budget projection in a simplified way. ♦ Executing Agencies should issue a framework for technical standards and cost norms for different forestry-related investments, and should allow PPCs to decide and approve the actual investment costs according to provincial policies.
[Project management]	
15. In most forestry projects, MARD is the investor so that all relevant documents have to be submitted to MARD for approval, with prior appraisal by the respective functional departments within MARD. This resulted to cumbersome bureaucratic procedures causing delays in the project implementation. (*In the JBIC afforestation project, provincial authorities are the investor, and are as such directly responsible for project implementation. MARD is in charge of overall project activities, controlling, monitoring and supporting the provinces in project implementation*.)	♦ The model of delegating the role of investor for provincial project components to provincial authorities as exercised in the JBIC project is considered the most appropriate project organization for forestry projects. Provincial authorities should be delegated the rights of approval for project implementation.

5.4 Lessons Learned on Monitoring System

Strong monitoring systems contribute to the efficiency and effectiveness of projects. The monitoring indicators should be set and clearly defined at the initial stage of the project with the participation of key stakeholders. There is a tendency to define too many indicators, too poorly defined or without accessible data sources. However, simplicity and clarity are the keys to the definition of good indicators, otherwise, the monitoring system is not likely to work and be sustained.

The monitoring system - a way to collect data for the monitoring indicators - should also be simple and pragmatic. The monitoring system can function properly only if it is constantly supplied with data. Baseline survey, appraisals and other data collection methods, including the use of existing data,

should be considered, hence allocated with adequate budget and resources, and included in the work plans.

The survey team reviewed the monitoring system of selected forestry projects based on available project documents. The review results shown in the table below indicate that the projects either did not define monitoring indicators clearly or spent much resource to develop complicated monitoring systems. Aforementioned "what the monitoring system should be" have not partly materialized yet at the project levels.

Issues in the Monitoring System of Selected Forestry Projects

Project	Issues in Monitoring System
JICA – SPL III Afforestation Project Time: Aug-2004 to Dec-2008 Location: 53 communes in five provinces Components: development of protection forest, forestry infrastructure, small-scale infrastructure, agriculture training, forest fire prevention. Total investment fund: VND 232 billon	Lacking predefined monitoring indicators Reporting based on Decision 803/2007/QD-BKH on Issuance of Reporting Mechanism on Implementation of ODA Programs and Projects, potentially useful one consolidated report format Contract management and disbursement monitoring
ADB2 - Forest for Livelihood Improvement in the Central Highlands Sector Project (FLITCH) Time: Jun-2006 to Dec-2014 Location: 60 communes in six provinces Components: forest management, livelihood improvement, capacity development, project management Total investment fund: USD 91 million	Remarkable changes in socio-economic, land, forest resource between the time of FS/ baseline and beginning of the project The need of the Project Implementation Manual (also absence of accounting software and procurement issues are sources of delays) Low disbursement and rudimentary M&E system pointed out in FLITCH evaluation. Absence of national M&E consultant. Need to integrate with FOMIS. Project staff needs to be trained in project management and implementation.

Project	Issues in Monitoring System
WB 1– Forest Protection and Rural Development project Time: Feb-1998 to Jun-2006 Components: protected area management, buffer zone development, project management and institutional development Total investment funds: USD 21.5 million loan and USD 5 million grant	Design of M&E: During project preparation, the attention had been given to the design of project M&E system. The project included nine person-months for an international M&E specialist to help the PMU prepare and establish an M&E system based on the key performance indicators (KPI) identified at project appraisal. In addition, 65 person-months were budgeted for outsourcing a local monitoring and auditing team (MAT) to provide an independent measurement and analysis of project and TA activities and all aspects of performance on an annual basis. Progress was measured against the KPI. Periodic overall M&E was carried out by the PMU. M&E Implementation: The international M&E specialist began work in late-1999 reviewing the M&E indicators, establishing baseline data and undertaking staff training. However, the first M&E system was too complicated and several revisions were made to simplify it, followed by workshops and training. The M&E system was established and ready for testing at the local level only by early 2001. A fully-functioning M&E system was in place in early 2002. M&E Utilization: Establishment of the system was just a first step; maintaining it by continuous data inputs was a much more difficult task. In the last year of the project, the M&E system ceased to function because of the lack of data inputs from the local levels and the lack of back-up TA. With strong pressure from IDA supervision missions, the M&E system was restored and became operational again before the closing date of loan agreement.
GOV – 5 Million Hectares Reforestation Program/ Program 661 Time: 1998 - 2010 Main goal: to increase the newly planted forest and restore the degraded natural forest areas; to allocate land and forest to people	Forestry M&E are focused only on the results of the public investment, and not on the environmental, social and economical impacts of the project. M&E of the project impacts are necessary not only for the project to assess its progress but for the stakeholders to know whether output is actually leading to desired impacts.
GOV – Program for Piloting Community Forest Management Time: 2006-2007 Location: 40 communes	M&E Guidelines for Implementation of Village Community Forest Management Plan (No. 1703/CV – DALNCD, 14-11-2007, DoF) are too complex and sophisticated to follow.

Chapter 6 Study on the Scope of the Project

6.1 Selection of the Project Areas

6.1.1 Basic Concepts to Project Area Selection

Prior to the selection of the project areas in the target provinces, the Survey Team set the following basic principles and minimum requirements for the selection of the target sites.

Basic principles in site selection

a. The project area should be currently categorized as protection forest and will never be converted into industrial/agricultural development area/zone in the future.

b. The project area should be contiguous and large enough to ensure the functions of watershed or wind/sand shielding protection forest when a canopy of forest is established.

c. The project area should not be beyond the capacity of the forest owner (e.g., PFMBs) and local communities who would develop and manage the project area during the project period.

d. The project area is strategically located to produce significant functions as protection forest.

e. There should villages/communities that reside adjacent to the project areas and can take part in the project activities, such as afforestation/reforestation, assisted natural regeneration, and protection of natural forest in protection forest.

f. The total sum of the project areas in one province should be determined on the basis of the capacities of potential contractors for forestry development, infrastructure development, and capacity development components in the respective provinces.

Minimum requirements for site selection

- The proposed site should have a sizable area of protection forest in a contiguous form.
- A forest owner of the proposed site should be capable of developing and managing the proposed site.
- The proposed site should be suitable for afforestation/reforestation in terms of natural conditions, such as rainfall pattern, temperature, and soil conditions.
- The proposed site should not be the project sites for other similar projects.
- There is no social and/or political conflict taking place over land use of the proposed site.
- No industrial development activity is planned in the proposed site or no land use conversion is anticipated in the proposed site.
- No resettlement/land acquisition is required along with the introduction of the project.

After given the explanation/guidance about the basic principles and minimum requirements listed above in the beginning of the survey, DARDs of the target provinces selected the proposed sites in

line with the same principles and made a long-list of the proposed sites. The proposed target sites proposed by DARDs are presented in **Table 6-1**, and summarized below.

Initial Target Areas proposed by DARDs of the 12 Provinces

Province	Target areas for improvement/development of <1			Districts related	Communes involved
	Watershed PF	Coastal PF	SPL-3 sites		
1. Thanh Hoa	32,700	800	0	10	50
2. Nghe An	71,650	0	0	10	57
3. Ha Tinh	19,608	678	0	5	64
4. Quang Binh	3,500	2,100	0	5	33
5. Quang Tri	9,800	0	4,485	6	23
6. T.T. Hue	14,100	700	4,135	5	16
7. Quang Nam	13,170	0	1,550	6	21
8. Quang Ngai	12,430	0	4,787	4	20
9. Binh Dinh	19,069	0	0	5	11
10. Phu Yen	16,370	0	4,221	3	4
11. Ninh Thuan	13,504	50	0	4	8
12. Binh Thuan	7,800	2,700	0	3	8
Total	233,701	7,028	19,178	66	315

Note: <1 The target areas are the total of the targets for the respective forest development/improvement activities, such as afforestation, protection of natural forest, and ANR.
Sources: DARDs of the 12 provinces

The targets proposed by DARDs were likely beyond the capacity of the target provinces; the targets and scopes of the 12 provinces needed reviewing and adjusting in consideration of the capacity levels of the contractors and local communities in the target provinces.

6.1.2 Criteria for Project Area Selection

To prioritize and adjust the target areas proposed by DARDs in line with the basic principles described in Section 6.1.1, the Survey Team developed the following criteria.

Criteria for Evaluation of the Target Project Sites

Criteria	Indicator
1. Type of forest owner (Capacity of forest owner)	The area under management of PFMB is more prioritized than the management of CPC/villages. In general, PFMB is more capable than CPC/villages in terms of forest management.
2. Geographical contiguity	The area geographically contiguous on a medium scale (more than 100ha) would be prioritized.
3. Area for reforestation under one forest owner	The total sum of the project areas for reforestation should not be more than 1,500 ha for one forest owner. The experiences of SPL-3 and 661 program suggested that 500 ha/annum or 1,500 ha for three years would be the maximum target for afforestation.
4. Importance of protection forest	The protection forest that has an important facility (e.g., dam, reservoir) to protect either in the downstream basin for watershed protection forest or in the inland area for coastal protection forest. The area categorized as the most critical watershed is naturally prioritized.
5. Location of the project area	The area located in the strategic point for improving the functions of protection forest should be prioritized.
6. Accessibility to the project area	The area accessible from local communities should be prioritized. The easier they can access to the site, the more they can frequently management.
7. Poverty ratio of communes involved	The higher poverty ratio in the commune is, the higher priority the commune is given.

Sources: JICA Survey Team, 2009

6.1.3 Evaluation of the Project Areas

Table 6-2 shows the results of the evaluation of the target areas. Its summary is highlighted below.

Results of Evaluation of the Target Sites

Province	Results of Evaluation
1. Thanh Hoa	The proposed sites dispersed and isolated from the contiguous areas and those currently managed by CPCs or any local organizations (e.g., youth group) should be reconsidered. The sites with less than 100 ha should also be reconsidered.
2. Nghe An	The proposed sites dispersed and isolated from the contiguous areas and those with less than 100 ha should also be reconsidered.
3. Ha Tinh	The proposed sites currently managed by CPCs or any local organizations (e.g., youth group) and those with less than 100 ha should also be reconsidered.
4. Quang Binh	The proposed sites dispersed and isolated from the contiguous areas and those with less than 100 ha should also be reconsidered.
5. Quang Tri	The proposed target sites can be proposed for the project.
6. T.T. Hue	The proposed target sites can be proposed for the project.
7. Quang Nam	The proposed target sites located in small islands in the reservoir should be reconsidered.
8. Quang Ngai	The proposed target sites can be proposed for the project.
9. Binh Dinh	The proposed target sites located away from local communities should be reconsidered and the target with more than 1,500 ha should be reduced.
10. Phu Yen	The proposed target sites located away from local communities should be reconsidered and the target with more than 1,500 ha should be reduced.
11. Ninh Thuan	The proposed target sites located away from local communities should be reconsidered and the site evaluated as low priority area should be canceled.
12. Binh Thuan	The proposed target sites located away from local communities should be reconsidered.

As shown in **Table 6-1,** the target areas for the project were selected in consultation with DARDs of the target provinces. A total of 23,030 ha, 3,300 ha and 89,920 ha were selected for afforestation, improvement of existing plantations, and ANR/protection of natural forest in watershed protection forests, respectively. Likewise, 1,550 ha, 800 ha, and 1,600 ha in coastal protection forests were selected for the same sub-components. **Table 6-3** gives the list of communes that would relate to the project areas in the respective target provinces.

Results of the Provision Selection of the Project Areas

Province	Watershed PF			Coastal PF			Improve.	No. of
	Afforestation	Improve. of existing plantations	Protection/ ANR	Afforestation	Improve. of existing plantations	Protection/ ANR	of SPL-3 plantation	Communes concerned
1. Thanh Hoa	1,270	1,400	7,400	0	0	0	0	12
2. Nghe An	2,300	900	4,100	0	0	0	0	39
3. Ha Tinh	1,960	1,000	8,510	0	0	0	0	18
4. Quang Binh	1,600	0	3,800	400	800	0	0	15
5. Quang Tri	2,900	0	6,750	0	0	0	3,610	17
6. T.T. Hue	3,000	0	10,500	0	0	0	4,100	8
7. Quang Nam	970	0	10,200	0	0	0	1,550	19
8. Quang Ngai	3,500	0	6,500	0	0	0	3,790	9
9. Binh Dinh	2,480	0	8,410	0	0	0	0	10
10. Phu Yen	1,500	0	5,250	0	0	0	2,620	4
11. Ninh Thuan	1,610	0	10,600	50	0	0	0	7
12. Binh Thuan	0	0	7,800	1,100	0	1,600	0	9
Total	23,090	3,300	89,920	1,550	800	1,600	15,670	167

Sources: JICA Survey Team, 2009

6.2 Forest Owners

The target project areas are currently managed by PFMBs in the 12 provinces. A total of 57 PFMBs in 54 districts and one township are responsible for the target protection forests as tabulated below. In Duy Xuyen district in Quang Nam province, a new PFMB will be established for management of the target protection forests.

Districts where the Project Areas are located and Related Forest Owners (or PFMB)

Province	District (PFMB)	
1. Thanh Hóa	Thường Xuân (Sông Đằn), Như Xuân (Sông Chàng), Như Thành (Như Xuân)	Thạch Thành (Thạch Thành), Tĩnh Gia (Tĩnh Gia), Hà Trung (Hà Trung)
2. Nghệ An	Tương Dương (Tương Dương), Nam Đàn (Nam Đàn), Nghi Lộc (Nghi Lộc),	Yên Thành (Yên Thành), Tân Kỳ (Tân Kỳ), Quỳnh Lưu (Quỳnh Lưu)
3. Hà Tĩnh	Nghi Xuân (Hồng Lĩnh), Can Lộc (Hồng Lĩnh), Cẩm Xuyên (Cẩm Xuyên, Thạch Hà),	Thạch Hà (Thạch Hà), Hương Sơn (Ngân Phố)
4. Quảng Bình	Quảng Trạch (Quảng Trạch), Quảng Ninh (Ba Rền, Long Đại, Ven Biển Nam)	Lệ Thủy (Ven Biển Nam)
5. Quảng Trị	Hướng Hóa (Hướng Hóa – Đakrông), Đakrông (Hướng Hóa – Đakrông), Vĩnh Linh (Bến Hải), Gio Linh (Bến Hải)	Hãi Lăng (Thạch Hãn), Trieu Phong (Thạch Hãn), Quảng Trị township (Thạch Hãn),
6. Thừa Thiên Huế	Hương Trà (Sông Hương, Sông Bồ), Hương Thủy (Sông Hương, Hương Thủy)	Phong Điền (Sông Bồ)
7. Quảng Nam	Đông Giang (Sông Kôn, A Vương), Phuóc Sơn (Đak Mi), Bắc Trà My (Sông Tranh),	Phú Ninh (Phú Ninh), Núi Thành (Phú Ninh), Duy Xuyên (New PFMB to be established)
8. Quảng Ngãi	Ba Tơ (East Ba Tơ / West Ba Tơ), Sơn Hà (Thạch Nham),	Sơn Tây (Sơn Tây) Tây Trà (Tây Trà)
9. Bình Định	Hoài Nhơn (Hoài Nhơn), Hoài An (Hoài Ân), Phú Mỹ (Phú Mỹ)	Vĩnh Thạnh (Vĩnh Thạnh), Tây Sơn (Tây Sơn)
10. Phú Yên	Đồng Xuân (Đông Xuân), Sông Hinh (Sông Hinh)	Sông Hòa (Sông Hòa)
11. Ninh Thuận	Bác Ái (Sông Trâu), Ninh Hải (Sông Trâu)	Ninh Sơn (Krongpha) Ninh Phước (Tân Giang, Ninh Phước)
12. Bình Thuận	Tuy Phong (Tuy Phong, Lòng Sôn - Đá Bạc), Bắc Bình (Lê Hồng Phong, Cà Giấy)	Hàm Thuận Bắc (Đông Giang, Sông Quao, Hàm Thuận Đami, Hồng Phú)
Total	54 districts, 1 township, 57 PFMBs, One PFMB under the preparation of establishment in Quảng Nam province	

6.3 Study on the Project Components

6.3.1 Basic Approach to Project Component Study

The project proposal submitted to JICA in 2008 and proposed plans developed by DARDs of the target provinces were reviewed and examined from the viewpoints of integrity, practicability, efficiency, effectiveness, and sustainability through reviews of documents, data and information

collected, field reconnaissance, and in-depth interviews/discussions with key personnel. The Survey Team adopted the following approaches in the study on the project components.

a. The project components proposed by MARD and DARDs are to be incorporated into the project plan as long as they are essential to the achievement of the project goals.

b. The project components may be reformulated with due attention to maintaining logical framework and integrity of the project components.

c. The scope of the project components is to be examined and revised to make them realistic as compared with the current capacities of the stakeholders in the target provinces and justifiable in connection with the project objectives.

d. The experiences and lessons learned from SPL-3 Afforestation Project are to be fully referred in reviewing and determining the scope of the project components.

e. Due consideration should be given to the achievement of sustainable forest management through introduction of long-term contract for protection and management of protection forests.

6.3.2 Summary of Study on Project Components

The following table summarizes the major points of the proposals submitted by MARD and DARDs and comments/recommendations made by the Survey Team on their proposals.

Proposed Plans submitted by MARD and DARDs and Team's Recommendations

Items / Objectives	Proposal submitted by MARD (2008)	Proposal submitted by DARDs (2009)	Comments/Recommendations made by the Team
Objectives	Long-term Objectives - Sustainable management and protection of protection forests - Restoration and conservation of biodiversity, and - Poverty reduction in mountainous area. Immediate Objectives - to restore and improve watershed and coastal protection forests - to strengthen the capacity of the local governments and the owners of protection forests - to improve the livelihood of communities who would manage protection forests	Same as on the right	- The proposed objectives seem reasonable and appropriate.

Items / Objectives	Proposal submitted by MARD (2008)	Proposal submitted by DARDs (2009)	Comments/Recommendations made by the Team
Forest inventory and planning	The following activities were proposed in the proposal. • Forest inventory of 438,300 ha through analysis of high resolution satellite pictures and field surveys • Setting up land marks in forest boundaries • Updating forest maps for land use planning and forest management • Land use planning with participation of PFMBs of protection forests and local communities who would manage the areas in the future • Detailed design for forest development contract and infrastructure construction	- A total of 464,532 ha were proposed as the target for forest inventory in the 12 provinces. - DARDs seemed to have rather limited concept of "Forest Inventory and Planning." Although they agreed with the ideas of using high resolution satellite images and making land use plans with local communities, most of them have apparently not experienced those activities yet.	- 464,532 ha was quite large as compared with the targets for afforestation, ANR and protection of natural forest. - The target should be limited to the compartments where the selected project areas belong. - Effectiveness and necessity of the use of high resolution satellite images should be clarified with its procedures and estimated cost. - Participatory planning should be institutionalized in detailed planning of the forest-related and livelihood-related components. - Standard procedures and necessary inputs including potential contractors for participatory planning should be specified.
Training and extension	The following activities were described without any numeric targets. • Information dissemination to local government and local people concerned. • Socio-economic baseline survey in the project area • Support for participatory land use planning • Support for forest and forest land allocation to local communities • Capacity building of the staff of management boards of protection forest and local government and local people on forest protection and management • Support for planning, training, and implementing promising income generating activities for local communities • Establishing and strengthening market chains of forestry and non-forestry products	Through discussions with the Survey Team, DARDs identified the following as major activities under this component. - Orientation of the project - Training for stakeholders at provincial level on: i) project management, ii) participatory planning, iii) monitoring and evaluation, iv) GIS/GPS, v) contract management, vi) training of trainer, vii) public awareness raising, viii) study tours, etc. - Training for stakeholders at district level on: i) silviculture techniques, ii) public awareness raising, iii) forest fire protection, iv) project management, etc.	- Socio-economic survey should be integrated with detailed planning since the results of the survey would be the basis of the plan. - Capacity development of project and local government staffs, information dissemination, and agriculture and forest extension are the major activities to be covered by this component in the original proposal. The Survey Team recommends that the agriculture and forestry extension sub-component be renamed "Livelihood Development Assistance" since its activities will not be limited to agriculture and forestry matters but may cover all the issues related to livelihood improvement. - The work quantity of this component was not determined yet in the proposals from MARD and DARDs. There is a need to pre-determine the following information to estimate the work volume. • topics to be handled in training and information dissemination • number of target groups • frequency of meeting/training courses - Capacity Development sub-component should include i) orientation and guidance for the project staff, ii) training on project management skills for project staff, and iii) technical training for the staff of management boards and local governments, and iv) OJT on extension works for district government staff. - Guidance to local governments and communities concerned about the project concepts, enhancement of awareness of forest

Items / Objectives	Proposal submitted by MARD (2008)	Proposal submitted by DARDs (2009)	Comments/Recommendations made by the Team
			protection and co-management, and introduction of a benefit sharing mechanism would be the major topics in Information Dissemination sub-component. - Livelihood Development Assistance should consist of the activities that would support local communities in generating income from agricultural production (e.g., crops, coffee, and animal husbandry), NTFPs, and other small scale enterprise activities.
Improvement of watershed protection forest	• Afforestation bare land in very critical area: 32,500 ha • Protection of natural protection forests: 44,200 ha • Protection of protection forests established by SPL-3 Afforestation Project in five provinces: 20,400 h • Assisted natural regeneration (ANR) with enrichment planting: 7,500 ha • ANR: 39,000 ha	- Afforestation: 35,174 ha - ANR with enrichment: 9,578 ha - ANR: 25,210 ha - Protection of natural forest: 155,756 ha - Improvement of existing plantations: 7,983 ha - Protection of forests established by SPL-3: 13,644 ha - Enrichment planting in forests established by SPL-3: 1,865 ha - Vegetation clearing and thinning in forests established by SPL-3: 11,063 ha	- As discussed in Section 6.1, the target areas for this component should be reviewed and revised to make them to an optimum size. - The proposed areas, which seem to be difficult to access from communities/residential areas, should be reconsidered in view of project sustainability. - The outcomes from "ANR" and "Protection of natural forest" are not as visible as that from afforestation/reforestation. The expected goals of those sub-components with necessary activities should be determined to judge its effectiveness and necessity. - Afforestation designs proposed by some district were likely developed from a standpoint of the "restoration of forest" but not "contribution to local household economy." The designs should be reviewed and revised to enable local communities to gain a certain income from forest management if applicable. - The estimated costs for afforestation range from VND 18 million to 30 million. They should be reviewed and the optimal costs should be determined in consideration of the government regulations (Decision No. 38) and cost norms used by the other ODA-funded forestry projects.
Improvement of coastal protection forest	• Afforestation in sandy area to minimize sand movement: 2,000 ha • Enrichment planting in poor quality coastal protection forests in sandy area: 500 ha	- Afforestation in bare land: 3,338 ha - ANR with enrichment: 3,300 ha - Mangrove plantation: 390 ha	- The proposed sites for mangrove plantation are currently classified as "unused land," not as "protection forest." The appropriateness of site selection should be examined. - Species, plantation designs and silvicultural practices introduced in afforestation in sandy coastal protection forests should be reviewed and revised based on the past experiences in the other projects, such as PACSA.

Items / Objectives	Proposal submitted by MARD (2008)	Proposal submitted by DARDs (2009)	Comments/Recommendations made by the Team
Construction of silviculture infrastructure	• Forest watch towers • Nurseries • Access roads • Fire breakline • Forest guard stations	- Watch towers: 120 units - Nurseries: 54 units - Access roads: 739 km - Fire breakline: 1,161 km - Green fire breakline: 92 km - Forest guard stations: 103 units - Foot paths: 75 km - Information boards: 60 units	- In the target provinces, there is a tendency to propose silviculture infrastructure facilities not necessarily relating to the project activities. They should be confined to those necessary for accomplishing the targets of forest development/improvement sub-components. - The estimated costs for facilities vary with the provinces. For instance, the unit cost for forest road improvement varies from VND 150 million to VND 1,500 million. The costs for the respective facilities should be reviewed and standardized by determining their typical designs.
Construction and improvement of small-scale infrastructure for livelihood development	• Village roads • Bridges • Small-scale irrigation system • Schools (class rooms) • Clinic	Initial ideas of given by DARDs were as follows. - Rural roads: 492.5 km - Irrigation dams: 92 units - Irrigation canals: 92 km - Culvert: 3 units - Water supply system: 8 units	- Like in the case of silviculture infrastructure, the proposals submitted by some provinces for small scale infrastructure development were too large to implement in this project. It is quite difficult for the project satisfy all the needs of the target communes. The proposals should be reviewed and evaluated in terms of the effectiveness, practicability, and development needs of local communities. - Likewise, the estimated costs for the proposed facilities should be reviewed and optimized since the unit costs for the facilities vary with the provinces widely.
Forest fire control	• Procurement of forest fire control equipment and tools • Implementation of forest fire control drills	DARDs had no clear idea of this component, though they indicated the need for training on forest fire control.	- There is no clear plan proposed by MARD and DARDs. Necessary training or capacity development activities along with forest fire control equipment and tools should be determined in consideration of the present situation of the target provinces.
Project management	• Establishment of Central Project Management Unit (CPMU) was proposed at MARD. • Provincial People's Committees (PPCs) were proposed as the investment owners of the project and Provincial Project Management Unit (PPMU) under DARD was responsible for operation and management of the project activities in the respective provinces.	All the DARDs agreed with the following ideas: - An organizational set-up for project implementation should be similar with the formation in SPL-3 in general, where two layers of decision making, CPMU and PPMUs, were introduced. - A steering committee should be established at each level, central and province. - Some DARDs further proposed to delegate a certain level of authority to DARD/PPMU so as to shorten the approval process.	- As pointed out by some DARDs, some parts of the responsibilities and authorities currently assigned to PPC should be transferred to DARD so that DARD can give approval to PPMU for the matters directly related to project implementation, such as estimated costs and contracts with contractors. - Roles and responsibilities of the respective stakeholders to be involved in the proposed institutional set-up should be defined. - In order to propose an appropriate institutional arrangement for implementation of the project, the institutional set-ups introduced by SPL-3 and the other ODA-funded forestry projects should be reviewed along with their lessons.

Items / Objectives	Proposal submitted by MARD (2008)	Proposal submitted by DARDs (2009)	Comments/Recommendations made by the Team
Project Cost	• The total direct cost and total project cost of the proposed project were estimated at VND 1,173 million and VND 1,430 million, respectively.	The total amount of the project direct costs submitted by DARDs was at VND 4,401 million, while the total project cost was at VND 6,089 million without consulting services.	- Cost and work norms for forest development, silviculture infrastructure development, and small scale infrastructure development should be reviewed and re-examined. - Cost and work norms for some sub-components/activities (e.g., ANR, construction/upgrading of access roads, etc.) were not available. - The total cost originally proposed does not include price contingency for the project period. The project cost should be recalculated upon reformation of the plan.

6.4 Study on Institutional Arrangement for Project Implementation

6.4.1 Review of Institutional Arrangements made by Similar Forestry Projects

(1) Overview

MARD has been implementing a number of ODA-funded forestry projects as described in Chapter 4. Among others, the institutional set-ups of the following projects were reviewed and studied to understand the institutional arrangements made for the past and on-going ODA-funded forest projects and extract "good practices" that could be employed in the institutional arrangement for the proposed project.

a. SPL-3 Afforestation Project (JICA)

b. Forest Sectorl Development Project (WB)

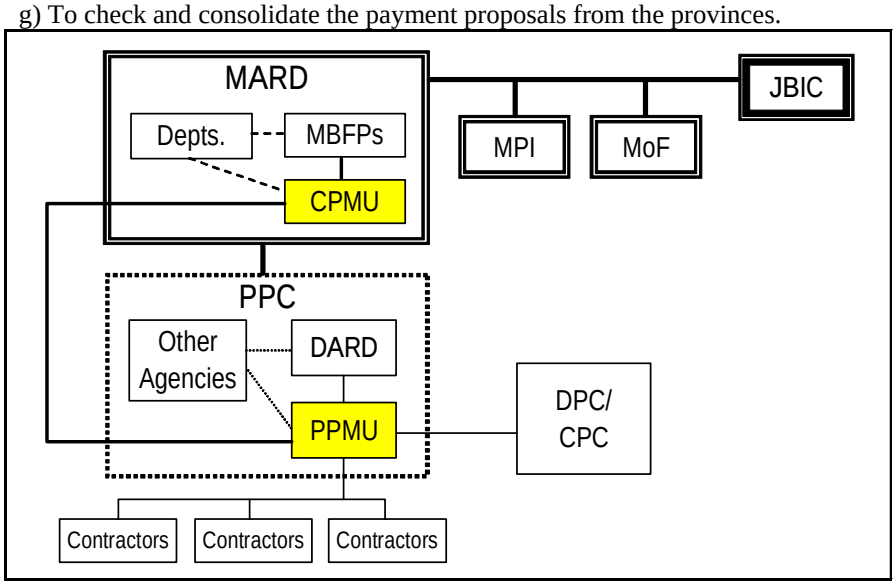
c. KfW 7: KfW Afforestation Project (KfW)

d. Forests for Livelihood Improvement in the Central Highlands (ADB)

The results of the study are summarized below.

a. SPL-3 Afforestation Project (JICA)

Organizational set-ups	Outlines
Executing agency (Project Owner)	MARD was the owner of the Project (defied by No.2054/QD/BNN/KH dated 27 June 2003)
National level	- The Central Project Management Unit (CPMU) was established under MBFPs as a standing body to implement the project-related tasks assigned by MARD. The major tasks of CPMU were: a) To manage and coordinate the project implementation under MARD's instruction; b) To guide the Provincial Project Management Units (PPMUs) to develop the project plans; c) To compile annual plans of provincial projects for the submission to MARD for approval; d) To issue instructions on project management and of standard forms to PPMUs; e) To supervise technical and financial aspects of the provincial projects; f) To compile periodical reports to be submitted to JBIC, MPI, MoF and MARD; and

Organizational set-ups	Outlines
	g) To check and consolidate the payment proposals from the provinces.  **Institutional framework of the Project under SPL-3 Afforestation Project**
Provincial level	- PPC was the investment owner of the provincial project and responsible for the overall implementation. The tasks given to PPC were: a) To decide on the project organization and implementation mechanism in line with the regulations of MARD; b) To approve the project plan, total cost estimation and relevant investment procedures; c) To arrange sufficient amount of counterpart fund for project activities in the province; d) To approve the annual operational and financial plan of the provincial project; e) To use the project budget in accordance with the approved plans; and f) To check and evaluate the performance of PPMU. - The Provincial Project Management Unit (PPMU) established under Department of Agriculture and Rural Development (DARD) by the decision of Chairman of PPC was a representative of the investment owner (PPC). PPMU had the following tasks: a) To prepare annual operational and financial plan of the provincial project and its submission to PPC and CPMU for approval; b) To implement the provincial project in accordance with the approved plan and target as well as the implementing procedures of the prevailing regulations; c) To implement all decisions related to the project; d) To instruct the contractors on the procedures of management and Completion Report of the Consulting Services utilization of JBIC loan; e) To sign contracts with winning contractors; f) To supervise and check the quality of project outputs and certify the payment proposals by the contractors; g) To prepare and submit reports and documents on project performance as required by authorities concerned; h) To carry out liquidation as required by prevailing State regulations; and i) To cooperate and coordinate with CPMU on annual audit of project performance and inspection of the project by CPMU staff, the Consultant and other higher authorities.

Source: Completion Report on the Consultant Services for SPL-3 Afforestaton Project (2008)

b. Forest Sector Development Project (WB)

Organizational set-ups	Outlines
Executing agency	MARD
National level	- The Project Steering Committee (PSC) was organized under the 5MHRP Steering Committee to provide direction and guidance, and ensure coordination among and between agencies. - The Central Project Coordination Unit (CPCU) is responsible for overall coordination between central government agencies/units and between central government and provincial ones.
Provincial level	- The Provincial Project Management Units (PPMUs) established at the four target provinces have the direct responsibility for field implementation of the project.
District and commune levels	- The District Implementation Units (DIUs) and Commune Working Groups were established at 21 districts and 120 communes, respectively. They have been directly involved in delivery of services and implementation of the project activities.

Source: Appraisal Report on Forest Sector Development Project (2004)

c. KfW 7: Afforestation Project

Organizational set-ups	Outlines
Executing agency	MARD/MBFP
National level	- The National Project Steering Committee (NPSC), chaired by the Vice Minister of MARD or Director General of FD, was established with participation of the line departments of MARD and other ministries concerned. - The National Project Management Board (NPMB) was also established under MBFP. The main tasks of NPMB are to i) develop technical, financial and management guidelines, ii) manage project funds, iii) coordinate with relevant organizations for implementation, iv) procure facilities and equipment, v) develop/plan training programs, and vi) establish and implement the monitoring system.
Provincial level	- The same organizational set-up was also applied to the provincial level structure. The Provincial Project Steering Committee (PPSC) chaired by Vice Chairman of PPC was organized for overall management of the project. - The Provincial Project Management Unit (PPMU) headed by Vice Director of DARD was established. PPMU is responsible for operational and financial planning, accounting, preparation of technical, financial and management guidelines, monitoring of district activities, organization of training courses, and reporting of project progress to NPMU.
District level	- The District Project Management Unit (DPMU) headed by Vice Chairman of DPC was established at district level. The main tasks of DPMU are to i) develop annual operational plans, ii) appraise results of land use planning and forest development planning and iii) supervise forest development / management activities.
Commune level	- The project has coordinated with Chairman or Vice Chairman of CPCs, the commune forest staff and extension staff, village chiefs, and heads of village support groups. - The field staff assigned to the project communes at one staff per commune or one staff per 150-200 ha is the focal point of the project with local communities. Its tasks and responsibilities include, but not limited to, the following: i) briefing on the project, ii) organization of farmers, iii) guidance and coordination with local households, and iv) transfer technologies, to name a few. - The Village Support Groups were formed to develop a link between field staff and commune extension staff and small households. VSG has functioned as a management body for forest development and management activities in the village.

Source: Feasibility Study on Forest Development in Hoa Binh and Son La provinces (2006)

d. Forests for Livelihood Improvement in the Central Highlands Sector Project (ADB)

Organizational set-ups	Outlines
Executing agency	MARD
National level	- The Central Project Steering Committee (CPSC) headed by Vice Minister of MARD was established by MARD. CPSC is responsible for providing guidance and overseeing the project to ensure objectives of the project. - The Central Project Management Unit headed by a project director is responsible for coordinating, monitoring, and providing quality control and advisory services to the target provinces during the project.
Provincial level	- The Provincial Project Steering Committee (PPSC) headed by the leader of PPC was established to oversee the project implementation at provincial level. - The Provincial Project Management Units (PPMUs) under the provincial DARDs are responsible for project implementation in the provinces.
District and commune levels	N.A.

Source: Appraisal Report on Forests for Livelihood Improvement in the Central Highlands Sector Project (2006)

(2) Findings and analysis

Some findings and results of the review of the institutional arrangements are highlighted below.

a. All the reviewed projects except SPL-3 established the project steering committees at both central and provincial levels. The establishment of steering committees has apparently contributed to the facilitation of inter-ministrial or sectoral coordination and the materialization of holistic interventions.

b. KfW 7 and WB projects set the project management units at all the layers from central to village levels, while SPL-3 developed the structures at central and province levels.

c. In SPL-3, local households/communities were involved in the project as sub-contractors for forest development and/or management of protection forests assigned by the contractors (e.g., PFMBs and SFEs), while those involved in KfW 7 and WB projects were able to develop their own production forests with the financial assistance from the projects.

d. It would be difficult or unrealistic to hand over to local communities full authorization in management and use of protection forests in the proposed project since the ownership of protection forest should remain at the current forest owners. Therefore, the level of participation of local communities will not be the same with what KfW 7 and WB projects institutionalized in their projects.

e. However, the following arrangements should be considered in the conceptualization of the organizational set-up for the proposed project.

   - Community organization at village or hamlet (or kinship group) level to materialize long-term contract between the community and PFMB for protection and management of protection forests

   - Allocation of field staff or utilization of local households as local facilitators/field staff

   - Involvement of DPCs, CPCs and extensions workers at the district and commune levels in the project implementation

6.4.2 Review of the Government Regulations

The following government regulations were reviewed during the Preparatory Survey.

a. Decree No. 131/2006/ND-CP issued by the Government on 09 November, 2006 on the issuance of the Regulation on Management and Utilization of Official Development Assistance

b. MPI Circular No. 03/2007/TT-BKH issued on 12 March, 2007 on Guiding the Functions, Tasks, and Organizational Structure of ODA Program or Project Management Units

c. MPI Circular No. 04/2007/TT-BKH issued on 30 July, 2007 on Guiding the Implementation of the Regulation on Management and Utilization of Official Development Assistance

Through reviews of the regulations/guidelines above, the Survey Team identified that the following should be taken into account in establishment of the organizational set-up for implementation of the proposed project.

a. The main stakeholders in the project implementation of ODA-funded project are: i) Line Agency which is normally called "Executive Agency" or used to be called "Project Owner" in the Vietnamese context, ii) Project Owner which is the same with "Implementing Agency", and iii) Project Management Unit.

b. Line Agency has the overall responsibility for implementation of the project. Ensuring the fund and staff allocation, approval of plans and contracts, monitoring and supervision of the performance of Project Owner, and regulations of the project activities in line with the existing government regulations and laws are the major tasks given to Line Agency.

c. Project Owner has the responsibility for direct management of the project and utilization of ODA and counterpart funds to implement the project. Project Owner shall: i) organize the project management unit, ii) sing contacts in accordance with legal regulations, iii) conduct appraisal and approval of technical design and cost estimation, iv) supervise the performance of contractors, v) recommend mechanisms and policies to ensure the smooth and effective implementation of the project, vi) manage and utilize the investment funds, and vii) monitor and evaluate the operation of the project, to name a few.

d. Project Management Unit (PMU) shall assist Project Owner in the implementation of the project with the following tasks: i) planning of an overall plan and detailed annual plans of the project, ii) preparation for project implementation and management of the project, iii) bidding and contract management, iv) financial and asset management including fund disbursement, v) data collection, public relations and coordination, and vi) monitoring and evaluation of the project.

e. The project that has a number of sub-projects with involvement of various Line Agencies is called "umbrella project." One of the Line Agencies takes the coordination roles of the whole project, while the others take the Line Agency's roles to their sub-projects. The leading Line Agency is called the "Line Agency of the umbrella project."

f. The umbrella project shall have two layers in its organizational set-up, the organizational structure for coordination and management of the whole project and that for implementation of the sub-projects. Each level would have the Line Agency, Project Owner, and Project Management Unit.

g. The proposed project will be categorized as an umbrella project. MARD and MBFP will be the line agency and project owner of the whole project, respectively, while PPCs and DARDs of the target provinces will be the line agencies and project owners of the sub-projects in the respective provinces. The project management units will be established at both central and provincial levels.

6.4.3 Examination of Institutional Set-up for Implementation of the Proposed Project

(1) Examination of overall framework of the structure

As described in the former section, the proposed project is to be regarded as an umbrella project, and therefore, the same organizational structure with what SPL-3 Afforestation Project adopted would be introduced.

In order to hasten the decision making process, which is one of the causes of delay in implementation of the project, the introduction of the steering committee should be considered in the structure of the proposed project. In the similar forestry projects, such as KfW7 and WB projects, the steering committee has been effective in improving the coordination among the relevant departments and sub-departments and handling the inter-sectoral issues.

It is also judged that development of district or commune level structure is not necessarily required for implementation of the proposed project since the ownership of protection forest will remain at PFMBs and PFMBs will be the right organizations to collaborate/co-work with local communities.

(2) Examination of the establishment of sub-CPMU

One of the concerns that MARD has over the project implementation is the difficulty in managing the 12 provinces by one central project management office. It would not be easy for one Central Project Management Unit located in Hanoi to grip and monitor the counterpart bodies on a provincial level since the 12 target provinces extend over the country and CPMU can not visit those far from Hanoi periodically. Therefore, there is a proposal made by MARD to establish a branch of CPMU in one of the target provinces in central coastal region, so that CPMU can provide direct control over the DARDs/PPMUs in those far from Hanoi. In the initial idea unofficially given by MARD of the sub-CPMU, the branch office composed of five (5) staffs (Director, Vice Director, Planning, Technical, and Administration) is proposed to be established in Hue.

In order to come up with the appropriate organizational structure for implementation of the project, the Survey Team examined the effectiveness, disadvantages, and necessity of the establishment of the sub-CPMU in the central coastal region. The results of the examination are given below.

Effectiveness:

Although there is no official justification given by MARD for establishment of the sub-CPMU, the following effects are expected to be generated from the establishment of the branch.

a. CPMU can easily communicate with DARDs and PPMUs in some of the provinces accessible from its branch. Hence, the establishment of the branch of CPMU make CPMU's monitoring of DARDs and PPMUs easier.

b. Close communication or face-to-face communication may lessen the misinterpretation of the project implementation guidelines/regulations. Consequently, it may be able to ensure the quality of the works and contribute to the achievement of the project goals.

c. If the qualified persons are allocated to the sub-CPMU, the branch would be the functional office to provide advice and assistance to nearby DARDs and PPMUs in a timely manner. Eventually, it would help to ensure the smooth implementation of the project.

Disadvantages and Difficulties

Though some positive effects might be generated from the establishment of the sub-CPMU, the following disadvantages and difficulties are also expected.

a. MARD will incur additional cost for operations of the branch of CPMU. Although the size of the office is half as much as that of CPMU, the substantial amount of the operation cost is required for 10-year operations of the sub-office.

b. Only one branch can not cover all the provinces located southward from Hue. There should be one more branch to cover those in south central region to monitor and control the activities effectively. But it would create further additional burden to MARD.

c. Unless clear demarcation in roles and responsibilities between CPMU and its sub-office is made in writing, overlaps in decision making would take place.

d. The establishment of the sub-CPMU to grip the activities on a provincial level seems to be opposite to the current government policy of decentralization. It would be more important to develop the capacities of DARDs and PPMUs for proper and smooth implementation and management of the project in terms of ensuring the project sustainability.

e. It might be also difficult for MARD to deploy and station the staff from Hanoi at the sub-CPMU located in central coastal region.

f. Regardless of the establishment of the sub-CPMU, a regular and systematic support and monitoring by CPMU is essential to ensuring the quality of the works done by DARDs and PPMUs.

Conclusion:

As a result of the examination of possibility of the introduction of the sub-CBMU, the survey team recommends that the project should focus on the capacity development of DARDs and PPMUs along with the institutionalization of a regular and systematic monitoring by CPMU rather than the new establishment of a branch of CPMU in one of the target provinces.

6.4.4 Capacity of Governmental Agencies as Service Providers for the Project

In Vietnam, most of forestry and rural development projects funded by ODA and the government have involved many government agencies or institutions as contractors/ service providers of project activities such as socio-economic survey, capacity development, extension services, survey and mapping, detailed design, forestry development, and so on. This is because firms and organizations in private sector lack capability and experiences in the field of forestry and rural development and government agencies are the most experienced and reliable. NGOs exist in the country but they are few, small in scale, inexperienced, and do not have capacity to handle large scale project activities. The SPL-3 Afforestation project relied on government agencies for project implementation - PFMB for forest development and silviculture infrastructure construction, provincial design center (under DARD) for detailed design preparation of forestry development, universities and PAFEC (provincial agriculture fishery extension center) for extension services.

The proposed project will need the Involvement of and services from the government agencies because of their capability, experiences and reliability and lack of alternative in forestry sector. The functions and experiences of key government agencies to be involved in the proposed project are briefly described below:

Government agencies	**Functions and experiences**
NAFEC (National Agriculture Fishery Extension Center)	NAFEC was established in May 2008 merging National Agriculture Extension Center under MARD and National Extension Center under the former Ministry of Fishery. It is a non-profit organization under MARD now. The Center has 16 years experiences and has played a leading role in technical transfer of agriculture, forestry, animal husbandry and fishery sectors. Main tasks of the center are (i) development of policies, plans and technical materials, (ii) capacity building of field extension workers, (iii) implementation of key extension activities, (iv) provision of guidance to for organizations and agencies regarding extension and training activities, and (v) provision of extension services under the contracts with domestic and foreign organizations. NAFEC has 82 officers as of 2009. Of which six have doctoral degree, 15 master degree and 54 university degree. They have coordinated with more than 200 agencies including agricultural research institutions, educational institutions, and provincial agriculture fishery extension centers (PAFEC) in implementing activities. NAFEC is on the top of national extension system composed of central level down to provincial, district and commune levels. The staff are specialists in agriculture, forestry, and fishery extension and the center has accumulated technical materials, extension methods and field models.
PAFEC (Provincial Agriculture Fishery Extension Center)	PAFEC is an agency under DARD and responsible for planning and implementing agriculture, forestry and fishery extension activities including provision of training and guidance to extension staff at district and commune levels. On average, PAFEC has 25 extension staff and 18 extension workers. Around 70% of the extension staff has university degree.
FIPI (Forest Inventory and Planning Institute)	FIPI is an institution under MARD and specialized in implementing and managing forest inventory and planning work aiming at supporting forest management and development in the country. FIPI has carried out national forest inventory every five years since 1990. As of 2009, the 4th cycle of inventory was on-going and updated forest classification maps were prepared. They has capability of satellite image analysis for forest classification and Spot 5 images was being used for classification and mapping under the on-going inventory. FIPI has six sub-offices spread throughout Viet Nam's six eco-regions and 4 research centers with the total staff of about 760. All DARDs in 12 provinces has relied on the services of FIPI for preparation of forest classification maps and forest inventory survey.
PFMB (Protection Forest Management Board)	PFMB is an agency under PPC and responsible for protection and management of protection forests. PFMBs were originally state forest enterprises (SFE). Hence they have long experiences in developing and utilizing forests and are know well about the forest situation of the areas and local communities under their jurisdication. Most of PFMBs participated in implementation of 661 program, SPL-III Afforestation project, and other state and ODA funded forestry projects and programs.

Tables

Table 3-1: Overview and Key indicators of Socio Economic Development Plan (mid term or long term) of 12 Target Provinces

Province	Plan period	Outline/ Key Indicator
Than Hoa	Socio Economic Development Plan (2011-2015)	Overview: Based on the assessment of the achievement of socio-economic development plan (2006-2010), the provincial government will develop the plan for the forthcoming period of (2011-2015). In the plan, industrial development is the driving force to achieve rapid economic growth. More labour force from the agriculture sector will be shifted to the service sectors. Improvement of the social services is also another priority issue, especially education. The anticipated economic growth rate during the planned period would be 17.0-18.0% per year. The poverty rate is to e reduced 3.0% to 5.0%. Environmental sustainability is also acknowledged as an important issue.[1]
Nghe An	Master plan of socio economic development, Nghe An for 2020	Overview: With the reduced poverty rate, Nghe An province plans to become an industrial province. It plans to develop its economy through the enhanced service sector and by adopting environmentally sound development strategies. Key indicators Economic sector: • GDP per capita: 850-1000 USD (2010); 1,560 USD (2015); 3,100 USD (2020) • GDP growth rate: 12.0-13.0% (2006-2010); 12-12.5 %(2011-2015); 11.5 – 12.0% (2016-2020) • Sector wise GDP: Construction/ industry: 39% (2010)/ 41.4%(2015)/ 43% (2020); service: 37% (2010)/ 40.4% (2015)/ 43.0% (2020); and agriculture-forestry- fishery: 24% (2010)/ 18.2% (2015)/ 14.0% (2020) Social sector • Reduce average birth rate by 0.2-0.3% with population growth rate of 0.97% • Poverty rate: 11-12% (2010)/ 5% (2020) • Universal secondary education • Ensuring the adequate provision of healthcare services. • Improvement of social infrastructure (water/ transportation/ electricity) • 90% with access to clean water (2010)/ 98% with access to electricity (2010). By 2020, both will reach 100% of the households in the province. Environment: • Forest coverage: 53% (2010)/ 60% (2020). • Promote the production forest (furniture, plywood and pulp production) • Priority on forest protection • Ensure the waste treatment and business/ industries complying with the environmental standards

[1] Source: Plan economic development - social 5 years 2011 - 2015 (Thanh Hoa Portal) - On 13-7, Chairman People's Committee issued Directive No. 16/CT-UBND on plan economic development - social 5 years from 2011 to 2015.
http://www.thanhhoa.gov.vn/web/guest/kinhte?p_p_id=news_view_INSTANCE_8ovS&p_p_action=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_pos=0&p_p_col_count=1&_news_view_INSTANCE_8ovS_struts_action=%2Fnews_view%2Fview_news&_news_view_INSTANCE_8ovS_newsId=2043&_news_view_INSTANCE_8ovS_itemIndex=10&_news_view_INSTANCE_8ovS_columnId=98&

Province	Plan period	Outline/ Key Indicator
Ha Tinh	Agriculture and Rural Development Plan (2006-2010)	Overview: The 5 year plan of the province mandates to achieve the livelihoods improvement of the farm households and their well being during the period through commercial oriented agriculture production and improving productivity and market access by adopting the new technologies. Further, alleviation of poverty and hunger remains as an priority area. The province will continue to implement the relevant interventions such as Programme 135 and others. Especially, the investment on the rural industries for income generation and establishing sufficient infrastructures for production and social services are planned. Key indicators: Agriculture: • Annual growth of agriculture sector 4% • Implement the models worth 50 million VND • Improved food production • Paddy productivity: total paddy planted area of 95,000ha with output of 620,000 tons • Localised intensive production of short term industrial crops (ground nuts, green bean, sesame, chili etc.) • Establishment of multi purpose irrigation system to cater for the productive and domestic water requirement • Establishment of irrigation facilities in order to maximize the efficient uses of available water sources Poverty • Introduction of off farm activities • Increase the income of the farm households 1.7-2 times • Percentage of the poor households to be bellow 5% Forestry: • Develop sustainable forest for production (for paper pulp an furniture) and protection • Increase the forest coverage area to 55% by 2010 • Improve the value addition system for forest products • Improved salt production system Rural industry: • Enhance the traditional industries, cooperatives and households and private enterprises to develop handicraft and off farm industries
Quang Binh	Socio Economic Development Plan (2011-2015)	Overview: Based on the assessment of the achievement of Socio Economic Development Plan (2006-2010), the province intends to further improve the socio economic well being of its people. The anticipated GDP growth between 2011-2015 is 12.5%. Poverty rate to be reduced by 2-2.5%. Industrialisation being the key to its economic growth, the province is intending to take advantage of the abundance of the agriculture, forestry and fishery products by improving its quality and value addition.[2]

[2] Source: Implementing Directive No. 751/ CT-TTg on 03/6/2009 the provincial People's Committee issued Directive No. 13/ CT-UBND about developing 5 year Socio Economic Development Plan (2011-2015) http://www.quangbinh.gov.vn/3cms/?cmd=130&art=1247650915694&cat=1179712066985

Province	Plan period	Outline/ Key Indicator
Quang Tri		Document not found.
T. T. Hue	Socio Economic Development Plan for 2020	Overview: T. T. Hue has developed a long term strategy up to 2020. It aims at becoming an economic centre in the south east Asia taking advantage of its location. Export oriented economy is going to be the main driving force of its economic growth. Further to achieve the wholistic well being of the people in the province, improved provision of the social services is planned. Key indicators: Economic sector: • Economic growth rate: 15 - 16% (2006-2010)/ 12 - 13% (2011-2020) • GDP per capita: 1,000 USD (2006-2010/ 2005 price constant)/ 4,000 USD (2020/ current price) • Sector GDP (2010): service sector: 45.9%/ industry-construction: 42.0%/ agriculture, forestry, fishery: 12.0% • Sector GDP (2015): service sector: 45.4%/ industry-construction: 46.6%/ agriculture, forestry, fishery: 8.0% • Sector GDP (2020): service sector: 47.4%/ industry-construction: 47.3% / agriculture, forestry, fishery: 5.3% Social sector: • Population growth: 2006 - 2010 below 1.2%/ beyond 2010 - 1.1 - 1.2%. • % of households having access to electricity: 98% (2010) • % of households having access to clean water: 95% (2010) • The poverty rate to be below 10% (2010); below 3% (2020) Environment • Forest cover: 55% (2010)/ 60% (2020) • Compliance to the environmental standards and avoid pollution • Protect forests along the coastal area and protected lagoon
Quang Nam	Socio Economic Development Plan (2006-2010)	Overview: Considering the diverse socio-economic characteristics within the province, Quang Nam province has adopted various approaches to suit its local specificity in achieving its goal. Reflecting the national SEDP, the province plans to transform itself into an industrial province taking advantage of a few economic cnetres located within the vicinity. The province plans to invest in both economic and social infrastructures to attract more investment as well as to develop the quality labour force. In agriculture, livestock being a main driving force of the sector, it will be promoted to the scale of 45% of the agriculture GDP in 2010. Forest protection and its productive uses will be promoted through land allocation. The development of the fishery sector will be export oriented. Key industries include; processing of agriculture produce, wood products, leather shoes, garments, construction materials etc. Key indicators Economic sector • Annual average GDP Growth: 14% (2010) • Reduced poverty rate to 18% (2010) • Non agriculture labour force 45% Social sector • Universal secondary education

Province	Plan period	Outline/ Key Indicator
		• Sufficient provision of social infrastructure • 90% of the households will have access to clean water • 97% of the households will have access to electricity Environment • Increase the forest coverage from 42.8% to 45% in 2010
Quang Ngai	Socio- Economic Development Plan for 5 years (2006-2010)	Overview: Quang Ngai takes national level SEDP fully into consideration. The priority is given to the development of industrial sector while the modernization of agriculture is also discussed. Key indicators Economic sector: • Average GDP growth rate: 17-18% • GDP per capita: 950 – 1,000 USD • Average growth of agriculture - forestry – fishery production: 4.5 to 5%/ industry and construction:32-33%/ industry-manufacturing : 32-33% • Sector wise GDP in 2010: Industry - Construction: 62 - 63%; Agriculture - forestry - fishing: 15 - 16% • Employment structure: Industry 14.61%; service 21.59% and agriculture 63.8%. • Increase of tourists every year 15.63%, in 2010 reached over 300,000 tourists. • The production of food in 2010: reaching 420,000 tons. • The production of sugarcane plants in 2010: 500,000 tons achieved. • The production of aquatic products in 2010: reaching 95,000 tons. Social sector: • Sufficient provision of social services. • Population growth rate 1.02% (2010) • 85% of rural households have access to clean water • Reduce the poverty rate bellow 20% in 2010 (new standard). Environment • Forest coverage: 45% (2010) • Land certification of agriculture, forestry land in 2007
Binh Dinh	Planning Socio-Economic Development for 5 years (2006 – 2010)	Overview: The plan of the Binh Dinh province indicates the emphasis on the industrialization and enhancement of the service sector. To achieve economic development, the province intends to reorient its labour structure from agriculture to service sector. For the well being of the people, the province plans to emphasise on livelihoods improvement in the remote area, ethnic minorities and areas disaster affected areas. Potential area of development includes; tourism, foreign trades and other manufacturing. Key indicators Economic sector: • GDP per capita in 2010: 900 USD+

Province	Plan period	Outline/ Key Indicator
		• Agriculture, forestry and fishing: 27-28% • Industry, construction: 37-38% • Services: 34-35% • Trained work force: 50% in 2010 Social sector: • Universal secondary education • Poverty rate: bellow 10% Environment: • Forest coverage: 44%+ • Access to clean water: 95% in urban, 85% in rural population • Ensure treatment of urban, industrial and medical wastes and comply with the environmental standards.
Phu Yen	Plan of social-economic development for 5 years (2006-2010)	Overview:Taking advantage of the province being located within the vicinity of Ho Chi Minh City, Phu Yen Province plans to strive towards its economic development and alleviate poverty by 2010. To achieve that, the emphasis will be placed upon enhancing market and export oriented economcy ; to develop technical, educational and human resources ; improvement of health services; reducing unemployment and poverty. Key indicators : Economic sector: • Annual sector GDP • Agriculture- forestry- fishery growth is 21.5%/year • Industry-construction : 41%/year • Service : 37.5%/year • GDP in 2010: 670-720 USD/ person. • Local export turnover: 18%/year/ 130 million USD. Social sector : • Population growth rate: 1.26%/year. • Annual birth rate reduced by 0.5%/year. • Unemployment rate: 4% • Trained labour: 40% • Poverty rate: 9%. Environment: • Households with access to clear water: 80%, in which: • Rural area: 75% • Urban area: 95%; • Ensure waste treatment and compliance to environmental standards • Forest cover is 45% in 2010.

Province	Plan period	Outline/ Key Indicator
Ninh Thuan	The overall socio economic development plan for Ninh Thuan (2006 – 2010)	Overview: With the emphasis on the tourism, services, agriculture and fishery/ aqua culture, the Ninh Thuan province aims at achieving the socio economic development. Current labour force in agriculture sector will be shifted to services and other economic sector. The plan also includes the area specific economic development strategies for delta, coastal and mountainous area and investment plan for infrastructure including the irrigation facilities to cover 45% f the agriculture land. Key indicators Economic sector: • Growth rate: 11-12% • GDP per capita: 600 USD • Sector GDP: Agriculture and forestry products: 30%; Industrial construction: 35%; Services: 35% • Export value: 90-100 USD • Promotion of cultural and eco tourism Social sector: • Population growth rate: 1.2-1.3% • Poverty rate: 13% bellow • Access to clean water: 90% of urban population/ 85% of rural population Environmental: • Ensure forest coverage of 52%
Binh Thuan	Socio Economic Development Plan (2006-2010)	Overview: To improve per capita income, the plan aims at the development of industrial and service sector as well as modernization of agriculture and promotion of traditional industries/ handicrafts. Key indicators: Economic sector: • Annual GDP growth rate: 14-14.5%. • Sector wise growth rate: Agriculture, forestry, fishing: 6.5-7%/ Industry - Construction: 19.5-20%/ Service: 15. 5-16%. • Sector GDP: Construction: 39.5-40%/ services account for 39-40% and Agriculture, forestry and fishing accounted for 20-21% of GDP • GDP per capita in 2010: 1,000 USD Social sector • Population growth rate: 1.14% • % of households having access to clean water in 2010: 95% (rural areas 90%) • % of households having access to electricity: 99.5% • Poverty rate in 2010 to be reduced by 5% Environment: • Forest coverage in 2010: 52%

Table 6-1 Comparison of Original Proposals and Revised Plans of the Target Areas for Forest Development/Improvement Components

A. Original Proposal submitted by DARDs of the 12 Provinces: July 31, 2009 (Unit: ha)

Sub-component and Activities	Thanh Hoa	Nghe An	Ha Tinh	Quang Binh	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Binh Dinh	Phu Yen	Ninh Thuan	Binh Thuan	**Total**
Development of Watershed Protection Forest													
(1) Afforestation	1,200	6,500	4,086	2,500	3,000	3,000	970	3,500	4,622	3,390	2,406		**35,174**
(2) Improvement of existing plantations	2,500	2,650	2,233			600							**7,983**
(3) Forest Protection	25,000	62,500	13,289		4,000	8,000	9,000	5,000	6,397	11,080	7,890	3,600	**155,756**
(4) ANR + Enrichment	1,000				1,300	500	2,100	630	2,415		1,633		**9,578**
(5) ANR	3,000			1,000	1,500	2,000	1,100	3,300	5,635	1,900	1,575	4,200	**25,210**
Improvement of SPL-3 forests													
(1) Forest Protection					4,485	4,135	1,550	4,787		4,221			**19,178**
(2) Enrichment planting					400			700		765			**1,865**
(3) Vegetation clearing & thinning					3,000	3,426	1,550	3,087					**11,063**
Development of Coastal Protection Forest													
(1) Afforestation	800		288	500		600					50	1,100	**3,338**
(2) Mangrove plantation			390										**390**
(3) ANR/ Enrichment Planting				1,600		100						1,600	**3,300**

B. Revised Plan drafted by the Survey Team: March 31, 2010 (Unit: ha)

Sub-component and Activities	Thanh Hoa	Nghe An	Ha Tinh	Quang Binh	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Binh Dinh	Phu Yen	Ninh Thuan	Binh Thuan	**Total**
Development of Watershed Protection Forest													
(1) Afforestation	1,270	2,300	1,960	1,600	2,900	3,000	970	3,500	2,480	1,500	1,610		**23,090**
(2) Improvement of existing plantations	1,400	900	1,000										**3,300**
(3) Forest Protection	6,600	4,100	8,510	3,000	4,000	8,000	7,000	3,200	3,710	4,350	7,900	3,600	**63,970**
(4) ANR with Enrichment planting					300	500	2,100	600			1,200		**4,700**
(5) ANR	900			800	2,450	2,000	1,100	2,700	4,700	900	1,500	4,200	**21,250**
Improvement of SPL-3 forests													
(1) Forest Protection					1,610	700	120			2,020			**4,450**
(2) Enrichment planting					400					600			**1,000**
(3) Vegetation clearing & thinning					1,600	3,400	1,430	3,790					**10,220**
Development of Coastal Protection Forest													
(1) Afforestation				400							50	1,100	**1,550**
(2) Improvement of plantation				800									**800**
(3) Forest Protection													
(4) ANR with Enrichment planting												1,600	**1,600**

Table 6-2 (1) Results of Evaluation of the Target Sites proposed by the 12 Provinces

A: Original proposals from 12 DARDs in August 2009.

Province	Forest Owner	District (Target site)	Communes involved	Original Target			
				Afforestation (ha)	Improvement of Plantation (ha)	ANR (ha)	Protection (ha)
Thanh Hoa	Thach Thanh PFMB	Thach Thanh	Thach Toung, Thach Lam, Ngoc Trao (Watershed)	150.0	250.0	850.0	2,200.0
	Ha Trung PFMB	Ha Trung	Ha Linh (Watershed)	150.0	400.0	50.0	1,300.0
	Song Chang PFMB,	Nhu Xuan	Cat Van, Thanh Hoa (Watershed)	500.0		300.0	5,000.0
	A new PFMB will be established.		Thanh Quan (Watershed)			300.0	5,000.0
	Sim PFMB	Nhu Thanh	Phuong Nghi (Watershed)		250.0	250.0	2,000.0
	Nhu Xuan PFMB	Nhu Thanh	Xuan Thai (Watershed)		250.0	50.0	1,500.0
	Thanh Ky PFMB	-	-	-	250.0	100.0	1,500.0
	Song Dan PFMB	Thuong Xuan	Xuan Cao, Xuan Thang, Luan Thanh, Luan Khe (watershed)	100.0	250.0	1,300.0	2,000.0
	Hau Loc District People's Committee	Hau Loc	(Coastal)	300.0			300.0
	Tinh Gia District People's Committee	Tinh Gia	(Coastal)	50.0	400.0	250.0	3,500.0
	Nga Son District People's Committee	Nga Son	(Coastal)	450.0	300.0		
	Quang Hoa District People's Committee	Quang Hoa	(Watershed)	200.0	150.0	450.0	2,700.0
	Lang Chanh District People's Committee	Lang Chanh	(Watershed)	100.0		400.0	3,000.0
		Total		**2,000.0**	**2,500.0**	**4,300.0**	**30,000.0**
Nghe An	Tuong Duong PFMB	Tuong Duong	Tam Thai, Tam Dinh, Tam Hop, Thach Giamm, Yen Na, Yen Thang, Yen Thinh (Watershed)	2,155.4	400.0	5,878.8	22,871.2
	Quy Chau PFMB	Quy Chau	Châu Bình, Châu Bính, Chau Nga, Nghia Mai, Chau Hoan, Chau Phong (Watershed)	369.6	400.0	2,239.0	17,327.9
	Quy Hop PFMB	Quy Hop	Bac Son, Chau Hong, Chau Thanh (Watershed)	48.5	200.0	98.1	1,401.2
	Nam Dan PFMB	Nam Dan	Nam Giang, Nam Nghia, Nam Thai, Nam Hung, Nam Thanh (Watershed)	45.6	100.0		896.0
	Nghi Loc PFMB	Nghi Loc	Nghi Dong, Nghi Cong Bac, Nghi Quang, Nghi Thiet, Phuc Tho, Nghi Cong Nam, Nghi Yen, Nghi Lam (Watershed)	290.0			3,231.7
	Yen Thanh PFMB	Yen Thanh	Dong Thanh, Hau Thanh, Minh Thanh, Thinh Thanh (Watershed)	204.2	350.0	1,575.0	1,047.0
	Tan Ky PFMB	Tan Ky	Dong Van, Giai Xuan, Nghia Dung (Watershed)	1,391.9	400.0	585.3	1,635.9
	Thanh Chuong PFMB	Thanh Chuong	Hanh Lam, Thanh Huong, Thanh Thuy (Watershed)	32.6	300.0	204.9	12,576.2
	Dien Chau PFMB	Dien Chau	Dien Hai, Dien Hung, Dien Kim, Dien Thanh, Dien Thinh, Dien Trung (Watershed)	24.0			408.3
	Quynh Luu PFMB	Quynh Luu	Quynh Thang, Tan Son, Quynh Bang, Quynh Luong, Quynh Lap, Quynh Lien, Quynh Minh, Quynh Nghia, Qunyh Phuong, Quynh Tho, Tien Thuy, Tan Thang (Watershed)	1,854.2	500.0	388.2	1,100.3
		Total		**6,416.0**	**2,650.0**	**10,969.3**	**62,495.7**
Ha Tinh	Hong Linh PFMB	Nghi Xuan	Cuong Gian, Xuan Lien, Co Dam, Xuan Vien, Xuan Linh, Xuan Hong, Xuan Lam, Xuan An (Watershed)	349.7	400.0		2,136.0
		Can Loc	Thien Loc, Thuan Thien, Vuong Loc (Watershed)	95.0	240.0		1,970.8
		Loc Ha	Hong Loc, Tan Loc, An Loc, Thinh Loc (Watershed)	20.0	40.0		648.5
		Hong Linh town ship	Trung Luong, Dau Lieu, Duc Thuan, Bac Hong, Nam Hong (Watershed)	35.0	30.0		966.8
	Cam Xuyen PFMB	Cam Xuyen	Cam Linh, Cam Minh, Cam Lac, Cam Son, Cam Thinh, Cam Hung, Cam Quan, Cam Duong, Cam My, Cam Hoa	1,286.5	208.1		1,816.5
	Thach Ha PFMB	Loc Ha	An Loc, Thinh Loc (Watershed)				55.8
		Cam Xuyen	Cam Thach (Watershed)	89.0	23.0		169.8
		Thach Ha	Thach Ban, Thach Dinh, Ngoc Son, Bac Son, Thach Xuan, Nam Huong, Thach Dien, Thach Bang, Thach My, Thach Hai (Watershed)	402.3	424.1		1,921.8
	Ngan Pho PFMB	Huong Son	Son Lam, Son Tra, Son Ham, Son Le , Son Tien, Son Thinh, Son Thuy, Son Giang (Watershed)	1,808.2	867.8		3,602.9
	Nghi Xuan District Peoples Committee (DPC)	Nghi Xuan	Xuan Hai, Xuan Pho, Xuan Dan, Xuan Truong, Xuan Hoi (Coastal & Mangrove)	71.0			
	Cam Xuyen District Peoples Committee (DPC)	Cam Xuyen	Cam Linh, Cam Duong, Cam Hoa, Cam Loc, Cam Ha, Cam Nhuong, Thien Cam township (Coastal & Mangrove)	285.0			
	Thach Ha Disrict Peoples Committee	Thach Ha	Thach Khe, Thach Ban, Thach Dinh, Thach Lac, Thach Hoi, Thach Van, Thach Thi(Coastal & Mangrove)	272.0			
	Loc Ha District Peoples Committee (DPC)	Loc Ha	Ho Do, Thach My, Thach Bang, Thach Kim, Thach Chau(Coastal & Mangrove)	40.0			
		Total		**4,085.7**	**2,233.0**		**13,288.9**

Table 6-2 (1) Results of Evaluation of the Target Sites proposed by the 12 Provinces

A: Original proposals from 12 DARDs in August 2009.

Province	Forest Owner	District (Target site)	Communes involved	Original Target			
				Afforestation (ha)	Improvement of Plantation (ha)	ANR (ha)	Protection (ha)
Quang Binh	Quang Trach PFMB	Quang Trach	Quang Hop, Quang Kim, Quang Luu, Quang Thach (Watershed)	1,600.0			
	Ba Ren PFMB,	Quang Ninh	Truong Xuan, Truong Son (Watershed)	500.0	500.0		
	Long Dai PFMB	Quang Ninh	Truong Xuan, Truong Son (Watershed)	400.0	500.0		
	Ven Bien Nam PFMB	Quang Ninh	Vo Ninh, Gia Ninh, Hai Ninh (Coastal)	450.0		1,500.0	
	Ven Bien Nam PFMB	Le Thuy	Hong Thuy, Thanh Thuy, Cam Thuy, Hung Thuy, Sen Thuy, Ngu Thuy Bac (Coastal)				
	Bo Trach District Peoples Committee	Bo Trach	Trung Trach (Coastal)	50.0		100.0	
		Total		**3,000.0**	**1,000.0**	**1,600.0**	
Quang Tri	Huong Hoa-Dakrong PFMB	Huong Hoa	Huong Phung, Huong Tan, Huong Linh, Tan Thanh, Huong Son, Tan Hop (Watershed)	1,300.0		400.0	1,500.0
	Huong Hoa-Dakrong PFMB	Dakrong	Huong Hiep, Dakrong, Mo O, Krong Klang (Watershed)			200.0	500.0
	Ben Hai River PFMB	Vinh Linh	Vinh Ha, Vinh O (Watershed)			550.0	1,000.0
	Ben Hai River PFMB	Gio Linh	Linh Thuong (Watershed)	1,500.0		400.0	1,000.0
	Thach Han River PFMB	Hai Lang	Hai Lam, Hai Son (Watereshed)	200.0		950.0	
	Thach Han River PFMB	Trieu Phong	Trieu Thuong (Watershed)				
	Thach Han River PFMB	Quang Tri (township)	Hai Le (Watershed)			300.0	
		Total		**3,000.0**		**2,800.0**	**4,000.0**
T.T. Hue	Huong River PFMB, Bo River PFMB	Huong Tra	Huong Van , Hong Tien, Binh Thanh, Binh Dien, Huong Tho (Watershed)	1,100.0	50.0	1,000.0	2,910.0
	Huong Thuy PFMB Huong River PFMB	Huong Thuy	Duong Hoa (Watershed)	1,100.0	550.0	1,000.0	3,410.0
	Bo River PFMB	Phong Dien	Phong Xuan, Phong Son (Watershed)	800.0		500.0	1,680.0
	Ven Bien PFMB	Phu Loc	Vinh My, Vinh Hien, Vinh Hai (Coastal)	300.0		50.0	
	Ven Bien PFMB	Phu Vang	Vinh My, Vinh Hien, Vinh Hai, Phu Thuan, Phu Hai, Phu Dien, Vinh Xuan, Vinh Thanh, Vinh An(Coastal)	300.0		50.0	
		Total		**3,600.0**	**600.0**	**2,600.0**	**8,000.0**
Quang Nam	Kon river PFMB	Dong Giang	Song Kon, Jo Ngay, A Ting, Xa Ba (Watershed)	300.0		700.0	1,000.0
	A Vuong PFMB	Dong Giang	Ma Cooi (Watershed)			500.0	1,000.0
	Dak Mi PFMB	Phuoc Son	Phuoc Hiep, Phuoc Hoa (Watershed)	370.0		200.0	1,000.0
	Tranh River PFMB	Bac Tra My	Tra Bui (Watershed)			500.0	2,500.0
	Phu Ninh PFMB	Phu Ninh	Tam Dai, Tam Dan, Tam Lanh (Watershed)	300.0		510.0	
	Phu Ninh PFMB	Nui Thanh	Tam Son, Tam Thanh, Tam Tra (Watershed)			290.0	1,500.0
	One PFMB will be established.	Duy Xuyen	Duy Trung, Duy Son, Duy Hoa, Duy Phu (Watershed)			500.0	2,000.0
		Total		**970.0**		**3,200.0**	**9,000.0**
Quang Ngai	Ba To East PFMB	Ba To	Ba Trang, Ba Lien (Watershed)	400.0		1,000.0	500.0
	Ba To West PFMB	Ba To	Ba Xa, Ba Ngac, Ba Tieu, Ba Dinh (Watershed)	600.0		1,280.0	1,000.0
	Thach Nham PFMB	Son Ha	Son Ba, Son Ky, Son Linh (Watershed)	1,500.0		750.0	1,800.0
	Son Tay PFMB	Son Tay	Son Bue, Son Mua, Son Dung (Watershed)	300.0			800.0
	Tay Tra PFMB	Tay Tra	Tra Khe, Tra Lanh, Tra Xinh, Tra Tho (Watershed)	700.0		900.0	900.0
		Total		**3,500.0**		**3,930.0**	**5,000.0**
Binh Dinh	Hoai Nhon PFMB	Hoai Nhon	Hoai Son (Watershed)	852.1			
	Hoai An PFMB	Hoai An	Bok Toi, An Nghia, An Son (Watershed)	778.2		4,241.0	
	Phu My PFMB	Phu My	My An, My Hiep, My Phong, My Hoa (Watershed)	900.4		423.9	
	Vinh Thanh PFMB	Vinh Thanh	Vinh Kim (Watershed)	1,751.0		3,384.8	494.5
	Tay Son PFMB	Tay Son	Tay Phu, Vinh An (Watershed)	340.5			5,902.5
		Total		**4,281.7**		**8,049.7**	**494.5**
Phu Yen	Son Hoa PFMB	Son Hoa	Phuoc Tan (Watershed)	525.0		1,050.0	550.0
	Dong Xuan PFMB	Dong Xuan	Phu Mo (Watershed)	2,740.0		565.0	4,925.0
	Song Hinh PFMB	Song Hinh	Ea Trol, Song Hinh (Watershed)	125.0		295.0	5,605.0
		Total		**3,390.0**		**1,910.0**	**11,080.0**
Ninh Thuan	Song Trau PFMB	Thuan Bac Bac Ai	Phouc Chien, Phuoc Khang, Phuoc Thanh (Watershed)	628.3		540.4	
	Krongpha PFMB	Ninh Son	Lam Son (Watershed)	1,267.0		910.6	4,380.6
	Tan Giang PFMB	Ninh Puoc	Phuoc Ha (Watershed)			776.0	2,630.3
	Nimh Phuoc PFMB	Ninh Puoc	Phuoc Nam (Watershed)	280.0			656.7
	Nimh Phuoc PFMB	Ninh Puoc	Phuoc Nam (Coastal)	50.0		674.2	890.8
	Bui Chua PFMB	Ninh Hai	Nhon Hai (Coastal)	50.0			
		Total		**2,275.3**		**2,901.2**	**8,558.4**

Table 6-2 (1) Results of Evaluation of the Target Sites proposed by the 12 Provinces

A: Original proposals from 12 DARDs in August 2009.

Province	Forest Owner	District (Target site)	Communes involved	Original Target			
				Afforestation (ha)	Improvement of Plantation (ha)	ANR (ha)	Protection (ha)
Binh Thuan	Tuy Phong PFMB	Tuy Phong	Phan Dung (Watershed)			200.0	800.0
	Tuy Phong PFMB		Chi Cong (Coastal)	100.0			
	Long Song Da Bac		Phong Phu (Watershed)			500.0	800.0
	Le Hong Phong PFMB	Bac Binh	Hoa Thang (Coastal)	650.0		1,600.0	
	Ca Giay PFMB		Phan Lam (Watershed)			700.0	100.0
	Dong Giang PFMB	Ham Thuan Bac	Thuan Minh (Watershed)			900.0	800.0
	Song Quao PFMB		Don Tien (Watershed)			800.0	900.0
	Ham Thuan Dami		Da Mi (Wateshed)			1,100.0	200.0
	Hong Phu PFMB		Hong Son (Coastal)	350.0			
		Total		**1,100.0**		**5,800.0**	**3,600.0**
Grand				**37,618.7**	**8,983.0**	**48,060.2**	**155,517.5**

Table 6-2 (2) Results of Evaluation of the Target Sites
B: Agreed targets between MARD and JICA in March 2010

Province and Scoping	Forest Owners	District (target site)	Communes involved	Site No.		Revised Target (31/March/2010) Afforestation	Improvement of Plantation	Protection	ANR without enrichment	ANR with enrichment	Silviculture infrastructure Forestry Road	Fire Break Line	Fire Watch Tower	Forest Protection Station	Forest Protection Board	Nursery (No)	Rural infrastructure Rural Road (km)	Irrigation System (ha)	Water supply system (unit)	Prioritization 1 Top, 2 Second, 3 Third, 4 Fourth, 5 Fifth, 6 Sixth, 7 Seventh	Evaluation Effectiveness (Location of the site)	Effectiveness (Availability of facilities)	Contiguity Is the target area over 100 ha?	Sustainability Accessibility Is the surrounding area managed by local people with short-term contract	Cause of foerst degredation	Impact Poverty ratio
Thanh Hoa	Thach Thanh PFMB **(Watershed)**	Thach Thanh	Ngoc Trao Thanh Long	1	Watershed protection	50.0	100.0	650.0			2.0		1	1	1		3.0	18.0		**1**	The target area is located along one of the tributaries of Lung river, which is further a tributary of the biggest river (Ma river) in the province. Lung river flows in the steep sloping area and thus a flash flood has often takes place. Stabilization of water flow is really important.	There is no significantrly important facility found in the nearby area.	Yes Reforestation areas are rather fragmented and dispersed.	Yes	Vietnam war and extraction by local people	5%
			Thanh Tam	2	Watershed protection	100.0			150.0		1.0						1.5			**1**		ditto	Yes Target area for afforestation is contiguous and composed of several types of afforestation activities (afforestation are	Yes	ditto	5%
	Ha Trung PFMB **(Watershed)**	Ha Trung	Ha Linh	3	Watershed protection	50.0	200.0	550.0			2.0	1.0	1	1	1		1.0			**1**	The target area is located along one of the tributaries of Lung river, which is further a tributary of the biggest river (Ma river) in the province. Lung river flows in the steep sloping area and thus a flash flood has often takes place. Stabilization of water flow is really important.	ditto	Yes. The target area is contiguous along the administration borders. However, the area is not necessarily effective in generating the watershed function since the area does not	Yes	ditto	3%
	Song Chang PFMB **(Watershed)**	Nhu Xuân	Thanh Hoa	4	Watershed protection	150.0		1,750.0	200.0		2.0		1		1		3.0			**1**	The target area is located in the upstream of Chang river, which is used for irrigation.	ditto	Yes The target areas are rather fragmented and scattered. Although the average size of one cluster area is less than 100 ha, the target areas are still important and expected to contribute to the protection of the Dinh Binh	Yes	ditto	9%
	A new PFMB will be established **(Watershed)**	Nhu Xuân	Thanh Quan			The area is cancelled by DARD of Thanh Hoa.															Watesheds of Chang river (for irrigation)		Contiguous	Normal		9%
	Sim PFMB **(Watershed)**	Nhu Thanh	Phuong Nghi																		Watershed of Ma river (fore irrigation)		The area for protection is contiguous, but that for afforestation is rather fragmented.	Normal		6%
			Mau Lam			Geographical contiguity of the target areas are less than 100 ha in each commune (Xuan Tho 30ha, Thuong Ninh70ha). Hence, these areas are jusdged "not eligible."																				
			Xuan Tho																							
		Nhu Xuan	Thuong Ninh																							
	Nhu Xuan PFMB **(Watershed)**	Nhu Thanh	Xuan Thai	5	Watershed protection	250.0	150.0	1,300.0			3.0	2.0		1	1		2.0	15.0		**1**	The target area is located in the upper catchment of the Ben En reservour which is one of the largest reservours in Thanh Hoa (for irrigation). Afforestation in the area will contributes to reducing the sediment flow into the reservoir, which helps maintain the function of the reservoir.	The target area is located in the upper steep sloping area of Ben En reservour. The protection of natural forest and afforestation in the area will prevent soil erosion and inflow	Yes Although the target area for afforestation is geographically separated from that for protection of natural forest, but its size is as	Yes	Forest exploitation/extraction by local people	6%
	Thanh Ky PFMB	-	-			There is no detailed information of the proposed site. Hence, it is excluded from the proposal.															Watershed of irrigatoin					
	Song Dan PFMB **(Watershed)**	Thường Xuân	Luan Khe	6	Watershed protection	100.0	150.0	500.0	150.0		1.0	1.0	1	1	1		0.8	31.0		**1**	The target area is located in the catchment of Chu river (5km from Chu river).	There is no significantrly important facility found in the nearby area.	Yes The target areas for the sub-components (Afforestation, improvement of plantation, protection and ANR) are located closely as a cluster.	Yes	Forest exploitation/extraction by local people	10%
			Luan Thanh	7	Watershed protection		100.0				1.0									**4**	ditto	ditto	Yes The target areas are contiguous	Yes	ditto	10%
				8	Watershed protection	120.0	100.0	400.0			2.0						1.0			**1**	The area is located in the upstream branch of Dat river (2 kim from Dat river) which is one of the major tributary of Chu river. Dat river flows to Cua Dac reservour which is the one of the oldest and most important reservoirs in the country.	ditto	Yes The target areas for the sub-components (Afforestation, improvement of plantation, protection and ANR) are located closely as	Yes	ditto	10%
				9	Watershed protection	100.0														**1**	ditto	ditto	Yes The target areas for the repsective sub-component are scattered and separated from each other, but each area has more than 100	Yes	ditto	10%
				10	Watershed protection		100.0													**4**	ditto	ditto	ditto	Yes	ditto	10%
				11	Watershed protection			500.0			1.0		1							**3**	ditto	ditto	ditto	Yes	ditto	10%
				12	Watershed protection				250.0								0.8			**6**	ditto	ditto	ditto	Yes	ditto	10%
	Song Dan PFMB **(Watershed)**	Thường Xuân	Luan Thanh		Watershed protection	Target area is less than 100 ha. (20 ha was proposed)																				10%
Added after SAPROF DFR	Tinh Gia PFMB **(Watershed)**	Tinh Gia	Nguyen Binh Dinh Hai	13	Watershed protection	300.0	200.0	750.0	150.0		2.0	2.0	1	1	1		3.5	21.0		**1**	The target area is located in the plane area and protects small reservours for local people.	Small reservours for irrigation.	Yes The target areas for all the sub-components are located together as a cluster.	Yes	Forest exploitation/extraction by local people	
			Truc Lam	14	Watershed protection		150.0	100.0			1.0									**3**	ditto	ditto	ditto	Yes	ditto	
			Truong Lam	15	Watershed protection	50.0	150.0	100.0			1.0				1					**1**	ditto	ditto	ditto	Yes	ditto	
	Hau Loc DPC	Hau Loc	(Coastal)																							
	Tinh Gia DPC	Tinh Gia	(Coastal)																							
	Nga Son DPC	Nga Son	(Coastal)																							
	Quang Hoa DPC	Quang Hoa	(Watershed)			PFMBs have not been established yet in these proposed sites, namely Hau Loc, Tinh Gia, Nga Son, Quang Hoa and La																				
	Lang Chanh DPC	Lang Chanh	(Watershed)																							
	Total (Watershed)	**12**	**Xã**			**1,270.0**	**1,400.0**	**6,600.0**	**900.0**		**19.0**	**6.0**	**6**	**5**	**7**		**16.6**	**85.0**								
	Total (Coastal)		**Xã**																							
Nghe An	Tuong Duong PFMB **(Watershed)**	Tuong Duong	Tam Thai Tam Dinh Tam Hop Thach Giam Yen Na Yen Thang	16	Watesheds protection	1,000.0	200.0				14.0			1	1	1	3.0	15.0		**1**	The target area is located in the catchment of Lam river which is the largest river flowing across Nghe An from northwest to southeast of the province.	There is no significantrly important facility found in the nearby area.	Yes There are seven target areas in the same PFMB. All of these areas are composed of afforestation and/or improvement of plantion	Partly Yes Southern part of the target area in Tam Hop commune is currently managed directly by PFMB but other areas are managed by	Slash and burn cultivation in the past (currently, slash and burn cultivation is strictry controlled by the government.)	59%
	Quy Chau PFMB **(Watershed)**	Quy Chau	Châu Bính Châu Bính Chau Nga Nghia Mai Chau Hoan			Quy Chau district is located in a remote area from the provincial capital (Vinh), which makes the management and monitoring activities by PPMU difficult. It also seems to be true that there would not be large bareland for reforestation. Hence it is canceled from the proposal.															Watesheds of Hieu river (for irrigation)	Upstream of the watershed.	The areas for Reforestation are fragmented on a small scale.	The area is remote from the provincial capital in the coastal land. The road condition is tough through a year.		
	Quy Hop PFMB **(Watershed)**	Quy Hop	Bac Son Chau Hong Chau Thanh			Quy Hop district is located in a remote area from the provincial capital (Vinh),which makes the management and monitoring activities by PPMU difficult. It also seems to be true that there would not be large bareland for reforestation. Hence it is canceled from the proposal.															Watesheds of Nam Thong river (for irrigation)	Upstream of the watershed (but the target for protection of natural forest presently covers the plantation forests.)	The areas for Reforestation are fragmented on a small scale.	The area is remote from the provincial capital in the coastal land. The road condition is tough through a year.		
	Quynh Luu PFMB **(Watershed)**	Quynh Luu	Quynh Thang Tan Son Quynh Bang Quynh Luong Quynh Lap Quynh Lien	17	Watesheds protection	500.0	500.0		-		16.0		1	1	1	1	3.0	15.0		**1**	The target area is located in the catchment of Vuc Mau river (currently used for irrigation) which is rather small but very important forthe district since there is no large river in the district.	a small reservoir being used for irrigation.	Yes	Yes Easy to access	Forest fire, insects attach and human exploitation/extraction	14%
		Quynh Luu	Quynh Minh Quynh Nghia Qunyh Phuong Quynh Tho Tien Thuy Tan Thang	18	Watesheds protection			446.0												**3**	Some of the target areas located in coastal protection forest including mangrove forest which will contribute to the the provision of a source of enegy to fishrery communities.	ditto	Protection of natural forest is the sole sub-component proposed. The area, especially magrove forest, is worth protecting since it has contributed to coastal protection, livelihood support to local communities,	Yes Easy to access	ditto	14%

Province and Scoping	Forest Owners	District (target site)	Communes involved	Site No.		Revised Target (31/March/2010) Afforestation	Improvement of Plantation	Protection	ANR without enrichment	ANR with enrichment	Silviculture infrastructure Forestry Road	Fire Break Line	Fire Watch Tower	Forest Protection Station	Forest Protection Board	Nursery (No)	Rural infrastructure Rural Road (km)	Irrigation System (ha)	Water supply system (unit)	Prioritization 1 Top, 2 Second, 3 Third, 4 Fourth, 5 Fifth, 6 Sixth, 7 Seventh	Evaluation Effectiveness (Location of the site)	Effectiveness (Availability of facilities)	Contiguity Is the target area over 100 ha?	Sustainability Accessibility Is the surrounding area managed by local people with short term contract	Cause of foerst degredation	Impact Poverty ratio
	Tan Ky PFMB **(Watershed)**	Tan Ky	Dong Van Giai Xuan Nghia Dung	19	Watesheds protection	800.0					8.0			1	1	1	3.0			**1**	The target areas are located in the catchment of Con river (currently used for irrigation) and around the reservoirs for irrigation in Tan Ky districts, which is the largets rice production area in the province.	ditto	Yes	Yes Rather good	ditto	27%
	Thanh Chuong PFMB **(Watershed)**	Thanh Chuong	Hanh Lam Thanh Huong Thanh Thuy			Thanh Chuong district does not have large bareland for reforestation. It mainly proposed the forest protection of natural forests which are currently maintained well by the community. Hence it is excluded from the propos															Watesheds of Giang river (for irrigation)	Midstreams of the watershed	Reforestatoin area is too small.	Good		
	Dien Chau PFMB **(Watershed)**	Dien Chau	Dien Hai Dien Hung Dien Kim Dien Thanh Dien Thinh			Dien Chau district is located in lowland. It does not have large bareland for reforestation. Hence it is canceled from the proposal.															Small scale warer source for lowland rice cultivation.	Downstreams of the watershed	Reforestatoin area is too small.	Good		
	Yen Thanh PFMB (to be established)	Yen Thanh	Dong Thanh Hau Thanh Minh Thanh Thinh Thanh	20	Watesheds protection		200.0				4.0		1		1		3.0			**4**	The target areas are located in the catchment of Ca river (used for irrigation) and also in those of other small reservoirs in Yen Thanh district which is very famous for agricultural production. Since there are local communities residing near the target areas, forests have faced human pressure (extract and exploitation)	Small reservoirs for irrigation.	Yes The areas for afforestation are fragmented on a small scale, but that for protection is contiguous	Yes Rather good	Forest fire, insects attach and human exploitation/extraction	15%
			Dong Thanh Hau Thanh Minh Thanh Thinh Thanh	21	Watesheds protection			456.0												**3**	ditto	ditto	ditto	Yes Rather good	ditto	
	Nghi Loc PFMB **(Watershed)**	Nghi Loc	Nghi Dong Nghi Cong Bac Nghi Quang Nghi Thiet Phuc Tho Nghi Cong Nam Nghi Yen	22	Watesheds protection			2,200.0			4.0			1	1		3.0			**3**	The target area is located in the downstream wateshed area of Lam river (currently used for irrigation) and need to be protected since the area is adjacent to the capital city of the province (Vinh city).	The target area lies to the east ofVinh City.	ditto	Yes Easy to access	ditto	18%
	Nam Dan PFMB **(Watershed)**	Nam Dan	Nam Giang Nam Nghia Nam Thai Nam Hung Nam Thanh	23	Watesheds protection			995.0			4.0		1	1	1		3.0	15.0		**3**	The target areas are strategically located in important locations to protect Vinh city from south west hot wind flow from Lao and to protect reservoirs for water supply to Vinh City from soil contamination. In addition, tLam river whose watershed is the target area is the largest river in the province.	Nam Dan district has naturally (special use forest) and socially (Ho Chi Minh mother's tumbe) important places to be protected.	Partly Yes Although the total area for protection of natural forest is less than 100 ha, the same component is selected for implementation. The area is located in strategly important locations and effevtive in protecting Nam	Yes Easy to access	ditto	15%
	Total (Watersheo	**39**	**Xã**			**2,300.0**	**900.0**	**4,097.0**			**50.0**		**3**	**5**	**6**	**3**	**18.0**	**45.0**								72%
	Total (Coastal)		**Xã**																							
Ha Tinh	Ngan Pho PFMB **(Watershed)**	Huong Son	Son Lam Son Le Son Tien	24	Watershed Protection	862.4	250.0	2,439.8			5.8	9.0	1	1	1	1		15.0		**1**	The target area is located in the upstream of Ngan Pho river which is one of the biggest river in the province.	There are many small reservoirs around target areas.	Yes Most of the areas are contiguous. However there are some fragumented area with less than 100 ha but these areas can complement the function of the contiguous area	Yes Easy to access	Extraction/exploitation for more than 20 years. Deforestation due to the wars.	32%
	Hong Linh PFMB **(Watershed)**	Nghi Xuan Can Loc	Co Dam Xuan Linh Xuan Hong Xuan Vien Thien Loc	25	Watesheds protection	250.0	500.0	3,135.0			17.2	9.0	2	2	2			45.0		**1**	The target area is located in the catchment of Nghen river (currently used for irrigation) which is a tributary of Lam river.	Hong Linh city and many irrigation reservoirs are located near the target areas.	Yes The target areas are contiguous in general, but they are rather fragmented, especially in protection of natural forest.	ditto	ditto	21%
	Hong Linh PFMB **(Watershed)**	Loc Ha	Hong Loc Tan Loc An Loc Thinh Loc																		Small water sources for irrigation.	From up- to midstream of the watershed	Reforestation area is too small.	Easy to access		
	Hong Linh PFMB **(Watershed)**	Hong Linh town ship	Trung Luong Dau Lieu Duc Thuan Bac Hong Nam Hong				The areas proposed for afforestation in Loc Ha district and Hong Linh township are quite small. Since the sites just focus on the protection, their priority becomes low as compared to other sites.														Small water sources for irrigation.	From up- to midstream of the watershed	Reforestation area is too small.	Easy to access		
	Cam Xuyen PFMB **(Watershed)**	Cam Xuyen	Cam Linh Cam Minh Cam Lac Cam Quan	26	Watesheds protection	550.0	190.0	1,400.0			5.0		1		1		3.0	15.0		**1**	The target areas are located in the sand-and tide-shielding forest, inland watershed of Ke Go lake and catchment of Ga Hon river (used for irrigation).	The caoacities of Black lake and Thuong tuy lake are 150,000 m3 and 12,000 m3, respectively.	Yes	Yes Easy to access	Extraction/exploitation for more than 20 years. Deforestation due to the wars.	29%
	Thach Ha PFMB	Thach Ha	Thach Ban Bac Son Thach Xuan Thach Dien	27	Watesheds protection	205.0	60.0	1,369.6			6.0	2.0	1	1	1	1	3.0	15.0		**1**	The target areas are located in wacatchment of Kenh Can river (used for irrigation) which has several small lakes being used for irrigation in the upstream of Ke Go lake.	Small reservoirs for irrigation	Yes	ditto	ditto	26%
		Cam Xuyen	Cam Thach	28	Watesheds protection	89.0		169.8				10.0	1	1	1		3.0			**1**	The target areas are located in the upper catchments of small water sources for irrigation.	ditto	Yes Contiguous	ditto	ditto	26%
		Loc Ha	An Loc Thinh Loc																		Small water sources for irrigation.	From up- to midstream of the watershed	Protection area is fragmanted.	Easy to access		
	Nghi Xuan DPC **(Coastal & Mangrove)**	Nghi Xuan	Xuan Hai Xuan Pho Xuan Dan Xuan Truong Xuan Hoi																							
	Cam Xuyen DPC **(Coastal & Mangrove)**	Cam Xuyen	Cam Linh Cam Duong Cam Hoa Cam Loc Cam Ha Cam Nhuong Thien Cam			PFMBs have not been established yet in these proposed sites namely, Hau Loc, Tinh Gia, Nga Son, Quang Hoa and Lang Chanh districts. Hence all the areas were excluded in the revised proposal.																				
	Thach Ha DPC **(Coastal & Mangrove)**	Thach Ha	Thach Khe Thach Ban Thach Dinh Thach Lac Thach Hoi Thach Van																							
	Loc Ha DPC **(Coastal & Mangrove)**	Loc Ha	Ho Do Thach My Thach Bang Thach Kim Thach Gia																							
	Total (Watersheo	**18**	**Xã**			**1,956.4**	**1,000.0**	**8,514.2**			**34.0**	**30.0**	**6**	**5**	**6**	**2**	**9.0**	**90.0**								76%
	Total (Coastal)		**Xã**																							
Quang Binh	Quang Trach PFMB **(Watershed)**	Quang Trach	Quang Hop Quang Kim Quang Luu Quang Thach	29	Watesheds protection	1,400.0		2,000.0			10.0	14.0	3	3	3	1	5.0			**1**	The catchment of Nha Le river (currently used for irrigation) is important.	5-10 km upstream of the reservoir	Contiguous	Yes Easy to access	Human exploitation.	23%
	Ba Ren PFMB **(Watershed)**	Quang Ninh	Truong Xuan Truong Son	30	Watesheds protection	200.0			200.0		5.0	5.0	1		1	1				**1**	The catchment of Lang Dai river (used for irrigation) which is the biggest river flowing in the southern part of the province.	No major facility fround in the nearby areas.	Fragmented	Yes Good	ditto	18%
				31	Watesheds protection			500.0	200.0				1	1			5.0			**3**	The target area is the catchment of a tributary of Lang Dai river (for irrigation) which is the biggest river flowing southern part of the province	Irrigation reservoir		ditto	ditto	
	Long Dai PFMB **(Watershed)**			32	Watesheds protection			500.0	400.0		5.0	5.0		1	1					**3**	ditto	ditto	Contiguous on a large scale	ditto	ditto	18%
	Ven Bien Nam PFMB **(Coastal)**	Quang Ninh	Vo Ninh Gia Ninh Hai Ninh	33	Coastal Protection	350.0	300.0				2.0	2.0	1	1	1					**2**	The target areas are sand- and tide-shielding protection forests in the south part of Dong Hoi city, caipital of the province. A sandy area around 5km in width and 30km in length lies adjucent to the target areas.	Dong Hoi city	ditto	Yes Easy to access	ditto	18%
		Le Thuy	Hong Thuy Thanh Thuy Cam Thuy Hung Thuy Sen Thuy	34	Coastal Protection	50.0	500.0				3.0	4.0	1	1	2	1	10.0			**2**	ditto	ditto	The areas for reforestation and improvement of plantation are rather small but located in the important locations for protection of coastal communities from sands and wind.	ditto	ditto	54%

Province and Scoping	Forest Owners	District (target site)	Communes involved	Site No.		Revised Target (31/March/2010)					Silviculture infrastructure						Rural infrastructure			Prioritization	Evaluation			Sustainability		Impact
						Afforestation	Improvement of Plantation	Protection	ANR without enrichment	ANR with enrichment	Forestry Road	Fire Break Line	Fire Watch Tower	Forest Protection Station	Forest Protection Board	Nursery (No)	Rural Road (km)	Irrigation System (ha)	Water supply system (unit)	1 Top, 2 Second, 3 Third, 4 Fourth, 5 Fifth, 6 Sixth, 7 Seventh	Effectiveness (Location of the site)	Effectiveness (Availability of facilities)	Contiguity Is the target area over 100 ha?	Accessibility Is the surrounding area managed by local people with short term contract	Cause of foerst degredation	Poverty ratio
	Bo Trach DPC **(Coastal)**	Bo Trach	Trung Trach (Coastal)																		Sand- and tide-shielding	Located on sandy coastal area	Area for reforestation is small but important to stabilize the sand moving around Hoan Lao township.	Easy to access		
	Total (Watershec	**6**	**Xã**			**1,600.0**		**3,000.0**	**800.0**		**20.0**	**24.0**	**5**	**5**	**5**	**2**	**10.0**									59%
	Total (Coastal)	**9**	**Xã**			**400.0**	**800.0**				**5.0**	**6.0**	**2**	**2**	**3**	**1**	**10.0**									71%
Quang Tri	Huong Hoa-Dakrong PFMB **(Watershed)**	Huong Hoa	Huong Phung Huong Tan Huong Linh Tan Thanh Huong Son Tan Hop	35	Watesheds protection	1,300.0		1,500.0	300.0	100.0	15.0	45.0	2	1	2		4.0			**1**	The target areas are the catchment of the upstream of ofThach Hãn river (used for irrigation) which is one of the two largest rivers in the province.	Some target areas are located in the catchment of one of the biggest reservoir in the province.	Yes	Yes The area is away from residential areas. But accessibility is rather good because of the well-developed roads network.	Forest fire caused by land mines.	20%
		Dakrong	Huong Hiep Dakrong Mo O Krong Klang	36	Watesheds protection			500.0	200.0			5.0			1		2.0			**3**	ditto	There is no major facility found near from the site.	Yes	Yes Rather poor	Forest fire caused by land mines.	18%
	Ben Hai River PFMB **(Watershed)**	Vinh Linh	Vinh Ha Vinh O	37	Watesheds protection			1,000.0	450.0	100.0					2		2.0			**3**	The target areas are the catchment of the upstream of oBến Hải river (used for irrigation) which is one of the two largest rivers in the province.	ditto	Yes	Yes Rather poor	Military operations in the wars	19%
		Gio Linh	Linh Thuong	38	Watesheds protection	1,400.0		1,000.0	400.0		18.0	55.0	1	1	2		6.0			**1**	ditto	ditto	Yes	Yes The area is away from residential areas. But forest roads network are well	ditto	21%
	Thach Han River PFMB (Watershed)	Hai Lang Trieu Phong	Hai Lam Hai Son Trieu Thuong	39	Watesheds protection	200.0			800.0	100.0	7.0	25.0	1	1	1					**1**	Watesheds of middle to down stream of Thach Hãn river (for irrigation). The areas are a few km upstream of irrigation reservoirs contributing to the agricultural production in plane area	ditto	Yes	Yes Rather good	Human exploitation and operations in the wars	25%
		Quang Tri (township)	Hai Le	40	Watesheds protection				300.0			10.0			1		1.0			**7**	Watesheds of middle to down stream of Thach Hãn river (for irrigation). The areas are a few km upstream of irrigation reservoirs contributing to the agricultural production in plane area	There is no major facilities found in a few km from the area (rather near Dong Ha town)	Yes	Yes Rather good	ditto	22%
	Total (Watershec	**17**	**Xã**			**2,900.0**		**4,000.0**	**2,450.0**	**300.0**	**40.0**	**140.0**	**4**	**3**	**9**		**15.0**									124%
	Total (Coastal)		**Xã**																							
T.T. Hue	Bo River PFMB **(Watershed)**	Huong Tra	Huong Van Hong Tien Binh Thanh Binh Dien Huong Tho	41	Watesheds protection	300.0		690.0	150.0		3.0	4.0	1		2		1.0			**1**	The target areas are located in the upstream catchment of the large dam along Bo river (used for hydropower and irrigation). The dam is one of the three major dams in the province which has control/reduce the occurence of flood.	Adjacent to the Binh Dien dam.	Yes	No. Need a boat to access	Deforestation in the war and human exploitation	2%
		Phong Dien	Phong Xuan, Phong Son	42	Watesheds protection	800.0		1,680.0	500.0		6.0	10.0	2	2	5		2.0		1	**1**	ditto	Adjacent to the dam on Bo river.	Yes	ditto	Deforestation in the war, human exploitation, and sluch and burn cultivation	1%
	Huong River PFMB **(Watershed)**	Huong Tra	Huong Van Hong Tien Binh Thanh Binh Dien Huong Tho	43	Watesheds protection	800.0		2,220.0	350.0	500.0	6.0	10.0	2	2	5		4.0		1	**1**	The target areas are located in the upstream catchment of the large dam along Tha Trach river (used for hydropower and irrigation). The dam is one of the three major dams in the province which has control/reduce the occurence of flood.	Adjacent to the Binh Dinh dam and Tha Trach dam	Yes	ditto	ditto	54%
		Huong Thuy	Duong Hoa	44	Watesheds protection	300.0		640.0	150.0		2.0	4.0	1		2		1.0			**1**	ditto	ditto	Yes	ditto	ditto	54%
	Huong Thuy PFMB **(Watershed)**		Duong Hoa	45	Watesheds protection	800.0		2,770.0	850.0		6.0	10.0	2	2	5		4.0	13.0	2	**1**	ditto	ditto	Yes	ditto	ditto	54%
	Ven Bien PFMB **(Coastal)**	Phu Loc	Vinh My Vinh Hien Vinh Hai			Cancelled to reduce the total project cost of the province.															Sand- and tide-shielding	Located on sandy coastal area.		Road network is developed		11%
		Phu Vang	Phu Thuan Phu Hai Phu Dien Vinh Xuan Vinh Thanh			Cancelled to reduce the total project cost of the province.															Sand- and tide-shielding	Located on sandy coastal area.		Road network is developed		2%
	Total (Watershec	**14**	**Xã**			**3,000.0**		**8,000.0**	**2,000.0**	**500.0**	**23.0**	**38.0**	**8**	**6**	**19**		**12.0**	**13.0**	**4.0**							
	Total (Coastal)		**Xã**																							
Quang Nam	Kon river PFMB **(Watershed)**	Dong Giang	Song Kon Jo Ngay A Ting	46	Watesheds protection	300.0		1,000.0	700.0		10.0	15.0	2	1		1	7.0			**1**	The target areas are located in the northern part of the irrigation reservoir in the Jo Ngay wateshed of Vu Gia river, which is one of the biggest river in the province. The areas consist of two parts: i) upstream of the reservoir and ii) upon	The target sites are disparsed and adjacent to the reservoir.	Yes Slightly fragmented	Yes However, the area is away from residential areas.	Exploitation/extraction by loal people and it has been driven by poverty.	46%
	A Vuong PFMB **(Watershed)**		Ma Cooi	47	Watesheds protection			1,000.0	200.0	300.0	2.0		1	1		1	1.0			**3**	The area is located in the upper catchment of the reservoir 10 km down stream from the above-mentioned reservoir of Vu Gia river.	ditto	ditto	Yes The target area is near Ma Cooi commune	ditto	46%
	Dak Mi PFMB **(Watershed)**	Phuoc Son	Phuoc Hiep, Phuoc Hoa	48	Watesheds protection	370.0		1,000.0	200.0		6.0	5.0	1	1		1	7.0			**1**	The area is located in the upper stream of Vu Gia river which is the tributary of Cai river. Hydropower station is going to be built in the area so that the area needs to be protected as the catchment of a reservoir of the hydropower statio	The target sites are disparsed and located in the upper catchments of the reservoir	ditto	ditto	ditto	61%
	Tranh River PFMB	Bac Tra My	Tra Bui	49	Watesheds protection			2,500.0	500.0		8.0		1	1		1	5.0			**3**	The area is located in the upper stream of Tranh river which is a tributary of Cai river, where a hydropower station is going to be built	The target sites are disparsed and located adjuacent to the reservoir	ditto	ditto	ditto	30%
	Phu Ninh PFMB **(Watershed)**	Phu Ninh	Tam Dai, Tam Dan, Tam Lanh	50	Watesheds protection	300.0				800.0			1	1		1	2.0			**1**	The area is located in the catchment of Phu Ninh dam (currently used for hydropower, irrigation and water supply to Tam Ky city) and 5km south from the city. The dam is one of the most important water resources for Tam Ky city and agricultural production in the province.	Adjacent to the reservoir.	Yes	Yes Road network is relatively developed	ditto	17%
		Nui Thanh	Tam Son, Tam Thanh Tam Tra	51	Watesheds protection			1,500.0			10.0			2						**3**	ditto	Adjacent to the reservoir.	Yes	ditto	ditto	23%
	One PFMB will be established **(Watershed)**	Duy Xuyen	Duy Trung, Duy Son, Duy Hoa, Duy Phu Duy Thu	52	Watesheds protection				500.0		8.0		2	2		1		15.0		**6**	The area is located in the catchment of many small reservoirs for irrigationalong Vu Gia river and near agricultural lands in plane areea only 20km from sea. The area is under severer natural condition. The irrigation system would be constracted near target villages which will engage in the project activities.	The target sites are disparsed and located adjuacent to the reservoir.	Yes Slightly fragmented	ditto	ditto	23%
	Total (Watershec	**19**	**Xã**			**970.0**		**7,000.0**	**2,100.0**	**1,100.0**	**44.0**	**20.0**	**8**	**9**		**6**	**22.0**	**15.0**								246%
	Total (Coastal)		**Xã**																							
Quang Ngai	Ba To East PFMB **(Watershed)**	Ba To	Ba Trang, Ba Lien	53	Watesheds protection	400.0		600.0	1,000.0		6.0	6.0	2	1	1	1	2.0			**1**	The target area is located in the catchment of Thach Nam reservoir alongVe river (for hydropower and irrigation) which is the biggest river in the province.	The east area is adjacent to Thach Nam reservoir.	Yes	Yes However, the area is away from residential areas with poor accessibility	Exploitation and extraction by loal people driven by poverty	51%
			Ba Xa Ba Dinh	54	Watesheds protection	600.0		600.0	650.0	600.0	7.0	7.0	2	1		1	2.0			**1**	The target areas is located in the catchment of Trà Khúc river (for irrigation) which is the largest tributary of Tra Kuch river. The area is located in the nearest upstream of the river.	No remarkable facility found in and around the target area. A large Thach Nham irrigation weir is located in the downstream	Yes	ditto	ditto	51%
	Thach Nham PFMB **(Watershed)**	Son Ha	Son Ba Son Ky	55	Watesheds protection	1,500.0		800.0	750.0		17.0	18.0	2	1	1	1	6.0			**1**	The target area is located in the east and west parts of the upstream catchment of Tra Khuc river (for irrigation) which is the largest river in the province. The location of the area is 10-20 km downstream from the target area of No. 54	ditto	Yes	ditto	ditto	61%
	Son Tay PFMB **(Watershed)**	Son Tay	Son Bue	56	Watesheds protection	300.0		300.0			6.0	3.0	1		1					**1**	The target area is located in the nearest upstream part of the catchment ofTrà Khúc river (for irrigation). The area is adjucent to the SPL III project area along a tributary of Tra Khuc river	ditto	Yes	ditto	ditto	54%
	Tay Tra PFMB **(Watershed)**	Tay Tra	Tra Lanh Tra Xinh	57	Watesheds protection	700.0		900.0	300.0		4.0	6.0	2	1	1	1				**1**	The target area is located in the upper catchment of Trà Khúc river (for irrigation).	ditto	Yes	ditto	ditto	82%
	Total (Watershec	**9**	**Xã**			**3,500.0**		**3,200.0**	**2,700.0**	**600.0**	**40.0**	**40.0**	**9**	**4**	**4**	**4**	**10.0**									
	Total (Coastal)		**Xã**																							
Binh Dinh	Hoai Nhon PFMB **(Watershed)**	Hoai Nhon	Hoai Son	58	Watesheds protection	466.9					8.0	9.0	1	1	1	1	5.0			**1**	Hoai Son commune is located 5 km inward from the coastal line. There is no large river aroung the commune and the reservoir is the sole water resource for the commune. Since target areas are located in the catchment of the resrvoir, the necessity of the project is quite high.	The targer areas are located in the upper catchments of the Can Hau reservoir (for irrigation) and Dong Tranh reservoir (for irrigation)	Yes	Yes	The main cause is deforestation in the wars, followed by human extraction/exploitation.	18.7%
	Hoai An PFMB **(Watershed)**	Hoai An	Bok Toi	59	Watesheds protection	191.0			537.0		11.2	6.0	2	1	2	1	5.0			**1**	The target areas are mostly located in the upper catchment of Lai Gian river. However, only small scale reservoirs, scuh as Van Ho reservoir (for irrigation), Lai Cing reservoir (for irrigation), and Ban Ne reservoir (for irrigation), can be benefited by the project	There is no remarkable facility found in and around the target area, but several small reservoirs around the target area	Yes	Yes	ditto	35.9%
				60	Watesheds protection				245.0											**6**	The target areas are mostly located in the upstream of Lai Gian river. However, only small reservoirs, such as Van Ho reservoir (for irrigation), Lai Cing reservoir (for irrigation), and Ban Ne reservoir (for irrigation), can be benefite	ditto	Yes	Yes	ditto	35.9%
			An Son	61	Watesheds protection	38.0			110.8											**1**	Thetarget areas are located in the catchment of Van Hoi reservoir, a small reservoir for irrigation, in the upstream catchment of Lai Gian river.	ditto	Yes However, the area is rather small scale	No. (because of a shortage of fund)	ditto	41.70%
			An Nghia	62	Watesheds protection	65.0			900.0						1					**1**	The target area is located in the upper part of the catchment of Lai Giang river.	There is no remarkable facility found in and around the target area.	ditto	ditto	ditto	23.60%

Province and Scoping	Forest Owners	District (target site)	Communes involved	Site No.		Revised Target (31/March/2010) Afforestation	Improvement of Plantation	Protection	ANR without enrichment	ANR with enrichment	Silviculture infrastructure Forestry Road	Fire Break Line	Fire Watch Tower	Forest Protection Station	Forest Protection Board	Nursery (No)	Rural infrastructure Rural Road (km)	Irrigation System (ha)	Water supply system (unit)	Prioritization 1 Top, 2 Second, 3 Third, 4 Fourth, 5 Fifth, 6 Sixth, 7 Seventh	Evaluation Effectiveness (Location of the site)	Effectiveness (Availability of facilities)	Contiguity Is the target area over 100 ha?	Sustainability Accessibility Is the surrounding area managed by local people with short term contract	Cause of foerst degredation	Impact Poverty ratio
				63	Watesheds protection				1,000.0											6	The target areas are located in the catchment of Dong Quang reservoir and at the same time in the upper part of the catchment of Lai Giang river	ditto	ditto	Yes	ditto	23.60%
	Vinh Thanh PFMB **(Watershed)**	Vinh Thanh	Vinh Kim	64	Watesheds protection	875.5		247.3	1,692.4		8.0	17.0	1	1	2	1	5.0			1	The target areas are located in the catchment of the biggest resrevoir in Binh Dinh province, namely Dinh Binh reservoir (for irrigation). Some target areas are located far from the residential areas, but some lie direcly on the upper slopes of the reservoirs.	Some areas lie direcly on the upper slopes of the reservoir.	Yes The target areas are rather fragmented and some are less than 100 ha. However, it is judged that the project needs to afforest and protect as many catchment areas of Binh Binh resorvoir as possible to protect and	Yes. There is a road network	ditto	64.2%
	Phu My PFMB **(Watershed)**	Phu My	My Hoa		Watesheds protection	Too fragumented 20.4, 38.5 and 30.4 and each site do not have relationship																				
	Phu My PFMB **(Watershed)**	Phu My	My Phong	65	Watesheds protection	104.0					2.0	3.0	1		1		2.5			1	The target areas are located in the watersheds of Hoa Ninh reservoir (for irrigation), Ho Da reservoir (for irrigation), Dai Son reservoir (for irrigation), Chi Hoa reservoir (for irrigation), Dap Pho reservoir (for irrigation), Hoc Cau reservoir (for irrigation) and Hoa Sinh reservoir (for irrigation).	The target areas are disparsed but located in the upper catchments of the reservoirs.	The areas are rather fragmented on a small scale.	Yes. There is a road network	ditto	6.90%
			My Hiep	66	Watesheds protection	136.0			212.0			2.0	1	1	1					1	The target areas are located between plane and mountainous area along coastal plane area but in the upper catchment of small scale irrigation reservoir.	There is a small resrevoir for irrigation.	Some of the target areas were less than 100 ha but accepted because all the sites are expected to contribute to the protection of the functions of Dap Pho, Dai Son and Chi	ditto	ditto	11.90%
	Phu My PFMB **(Watershed)**	Phu My	My An	67	Watesheds protection	259.8					2.5	3.5	1		1					1	The target areas are located along the coastal plane area and the uppercatchment of very small irrigation reservoirs in the areas.	There are two very small reservoirs along the coastal line.	Yes	ditto	ditto	6.70%
	Tay Son PFMB **(Watershed)**	Tay Son	Vinh An	68	Watesheds protection	340.5		2,439.0			8.0	9.0	1		1	1	5.0			1	The target areas are located in the upstream of a tributary of Con river named Phu Phong river (for irrigation). But many parts of the areas for ANR are located far from residential areas.	There is no remarkble facility found in and around the target areas.	Yes	ditto	ditto	57.20%
			Tay Phu	69	Watesheds protection			1,022.0					1	1	1					3	ditto	ditto	Yes	Yes	ditto	12.20%
	Total (Watershec	**10**	**Xã**			**2,476.7**		**3,708.3**	**4,697.2**		**39.7**	**49.5**	**9**	**5**	**11**	**4**	**22.5**									
	Total (Coastal)		**Xã**																							
Phu Yen	Son Hoa PFMB **(Watershed)**	Son Hoa	Phuoc Tan	70	Watesheds protection	300.0		550.0	300.0		5.0	5.0		1			4.0	50.0		1	The areas are mostly located in the catchment of Gia Lai river (flowing into Ba Ha Reservoir used for Hydropower generation) and Calui river (currently used for irrigation of rice field), which are in the north west region of the province.	The target ares are located in the upper slopes of the catchment of Gia Lai and Calu river.	The areas are contiguous on a large scale.	Parts of the target areas are rather away from communities/residential areas, but still accessible	Slash and burne cultivation in the past (10-20 years before) and damage by wild	39.4%
	Dong Xuan PFMB **(Watershed)**	Dong Xuan	Phu Mo	71	Watesheds protection	1,100.0		800.0	300.0		25.0	25.0		1			8.0	50.0		1	The area is located in the catchment of Ky Lo river which is one of the most important river in the province, since it is also the catchment of La Heng reservoir for Hydropower generation and irrigation.. The area extends in the northwestern part of the province.	The target areas lie on the upper catchment of the La Heng reservoir	ditto	The target areas are away from the residential sites in general. Furthermore, some parts of the areas are difficult to access.	ditto	74.5%
	Song Hinh PFMB **(Watershed)**	Song Hinh	Ea Trol Song Hinh	72	Watesheds protection	100.0			300.0					1			6.0	50.0		1	The target areas are located in the west part of the catchment of Song Hing reservioir (used for Hydropower generation and irrigation), which is the biggest reservoir in the province.	The target areas are adjacent to the Song Hin reservoir	ditto	The target areas are away from the residential sites in general. Furthermore, some parts of the areas are difficult to access.	ditto	36.8%
				73	Watesheds protection			3,000.0												3	The target areas are located in the eastern part of Song Hing reservoir along a river flowing into the reservoir. The target area streches for more than 10 km length and still has thick natural forests within it.	Target areas are adjacent to the Song Hin reservoir.	ditto	The target areas are away from the residential sites in general. Furthermore, some parts of the areas are difficult to access.	ditto	32.1%
	Total (Watershec	**4**	**Xã**			**1,500.0**		**4,350.0**	**900.0**		**30.0**	**30.0**		**3**			**18.0**	**150.0**								
	Total (Coastal)		**Xã**																							
Ninh Thuan	Song Trau PFMB **(Watershed)**	Thuan Bac Bac Ai	Phouc Chien Phuoc Khang Phuoc Thanh	74	Watesheds protection	327.0			340.7	300.0	7.0	10.0	1	1				20.0	1	1	The target areas are located in the upper catchment (or mountainous areas) of Song Trau resrevoir, (used for irrigation), whose capacity is as large as 31million m3 .	The target site lies directly on the upper slopes of the Song Trau reservoir.	Yes. The areas are lightly fragmented on a medium scale.	No. (Because of a lack of budget) Parts of the target sites are away from communities/residential areas and difficult to access. . In those areas, only protection under the	Deforestation in the wars and extraction/exploitation by human	Phuoc Chien: 38.3% Phuoc Thanh: n.a.
	Krongpha PFMB **(Watershed)**	Ninh Son	Lam Son	75	Watesheds protection	805.8		2,360.6	371.3		13.0	18.0	2	2		1			1	1	The target areas are located in the upper catchment of one of the major tributaries of Cai river, which is the largest river in the province.	The target area is surrounding Da Nhim hydropower station 1 and located in the upstream of Don Duong reservoir for irrigation.	Yes The areas are contiguous on a large scale.	Yes.	ditto	24.8%
				76	Watesheds protection			2,020.0												3	ditto	ditto	ditto	Yes. However, part of the target areas are away from communities/residential	ditto	24.8%
	Tan Giang PFMB **(Watershed)**	Ninh Puoc	Phuoc Ha	77	Watesheds protection	50.0		2,630.3	660.0				1	1				50.0		1	The target areas are located in the catchment of Tan Giang reservoir with a capacity of 13 million m3, which is one of the most biggest reservoir in the province. The areas are placed in the south western part of the province close to the border of Binh THuan province.	The areas are supposed to protect the watershed of Tan Giang reservoir (for irrigation). One exsiting dam (13 million m3) and another dam under construction (30 million m3) can be benefited by	ditto	Yes. However, part of the target areas are away from communities/residential areas and difficult to	ditto	45.8%
				78	Watesheds protection				128.0								1.0			6	The target ares are located in the upstream of Lanh river which is another tributary of Gia river	The area is the upstream of Lanh Ra reservoir.	Yes	Yes.	ditto	45.8%
	Nimh Phuoc PFMB		Phuoc Nam Phuoc Dinh	79	Watesheds protection	430.0						4.0					8.0	90.0		1	The target areas are located in the south east castal hilly areas with the highest peak of 437 m. The areas are surrounded by residential and agricultural areas. In particular, national raod No. 1 runs and is adjacent to the western part of the areas. Protection forests in the areas have a protective function for the national road No. 1 and other socio-economic facilities.	The target are is located 3-8km upstream from Bau Ngu reservoir and Nui Mot resrevoir which are the important reservoirs in the province.	Yes The areas are ontiguous on a medium scale.	Yes. Parts of the target areas are far from the residential area, but some are rather accessible from	ditto	10.0%
				80	Watershed Protection			890.8		900.0		2.0								3	The target area is located in the mountain next to coastal line. There is a town with 10,000 population in the foot of the mountain. The people living in the village rely on rain water for water supply to local communities during the dry season and need to buy water from outsides during the dry season. The government is constructing a reservoir in the foot of the mountain to keep water for dimostic and agricltural uses by people living in the town. The target areas are located in the catchment of the constructing reservoir.	The reservoir in the downstreams of target area are under construction since December 2009. It is expected to provide water foragriculture, acquaculture and drinking ourposes for about 10,000 persons living in Phuoc Dinh	Yes The areas are contiguous on a large scale.	Yes .	ditto	16.8%
				81	Coastal Protection	50.0														2	The target area is located along the coastal line. There is a 400ha of sandy area categorized as protection forest. The area is surrounded by shrimp farms, agricultural farm and residential areas. The target area aims to protect the shrimp farm, residences, and other economic development facilities that are expected to be developed in the future.	There are shimp farms, houses, and other socio-economic infrastructure available near the target areas.	No. Total area is less than 100ha, but a proposed area with 50 ha is contiguous.	Yes	ditto	
	Bui Chua PFMB (Coastal)	Ninh Hai	Nhon Hai																		Protection of national road	The target site is located along the national road.	Very small	The site for reforestation is easy to access.		16.8%
	Total (Watershec	**6**	**Xã**			**1,612.8**		**7,901.7**	**1,500.0**	**1,200.0**	**20.0**	**34.0**	**4**	**4**		**1**	**9.0**	**160.0**	**2.0**							
	Total (Coastal)	**1**	**Xã**			**50.0**																				
Binh Thuan	Tuy Phong PFMB	Tuy Phong	Phan Dung	82	Watershed Protection			800.0	200.0		8.0			1			3.0			3	The target ares are located in the catchment of Long Song reservoir for irrigation. The areas lie in the north east part of the province.	The target areas are located in the upper part of the catchment of the reservoir.	Yes The areas are contiguous on a large scale.	Yes Parts of the target areas are away from communities/residential areas, but still can be used for protection or ANR under the contract with	Extraction/exploitaiton by people, frequent drought and forest fires, and wars	8.6%
			Chi Cong	83	Coastal Protection	100.0						2.0							1	2	The target areas are located in the catchments of small reservoirs in Hoa Thand commune. The reservoirs are small and scattered but critically important for livelihood of people living there because annual average rainfall is more or less 300 ml a year so that avairable source of water is quite limited in the area.	The target areas are adjacent to the residential areas of Chi Coms and Binh Than commune.	Yes Slightly fragumented on a small scale since it is coastal protection forest	Yes The target site is close to communities and easy to access from the residential	ditto	Chi Coms: 5.3 % Binh Thanh: 6.7 %

Province and Scoping	Forest Owners	District (target site)	Communes involved	Site No.		Revised Target (31/March/2010)					Silviculture infrastructure						Rural infrastructure			Prioritization	Evaluation			Sustainability		Impact
						Afforestation	Improvement of Plantation	Protection	ANR without enrichment	ANR with enrichment	Forestry Road	Fire Break Line	Fire Watch Tower	Forest Protection Station	Forest Protection Board	Nursery (No)	Rural Road (km)	Irrigation System (ha)	Water supply system (unit)	1 Top, 2 Second, 3 Third, 4 Fourth, 5 Fifth, 6 Sixth, 7 Seventh	Effectiveness (Location of the site)	Effectiveness (Availability of facilities)	Contiguity Is the target area over 100 ha?	Accessibility Is the surrounding area managed by local people with short term contract	Cause of foerst degredation	Poverty ratio
	Long Song Da Bac PFMB **(Watershed)**		Phong Phu	84	Watershed Protection			800.0	500.0		4.0			1						**3**	The target ares arelocated in the catchment of Da Bac reservoir for irrigation. The areas lie in the north east part of the province.	The target areas are located in the catchment of the reservoir.	Yes The areas are contiguous on a large scale.	Yes Parts of the target areas are away from communities/residential areas, but still can be used for protection or ANR	ditto	26.8%
	Le Hong Phong PFMB **(Coastal)**	Bac Binh	Hoa Thang	85	Coastal Protection	650.0			1,600.0		6.0	13.0		1			6.0			**2**	The target areas are located in the catchments of small reservoirs in Hoa Thand commune. The reservoirs are small and scattered but critically important for livelihood of people living there because annual average rainfall is more or less 300 ml a year so that avairable source of water is quite limited in the area.	The target areas are adjacent to the reservoir and would contribute to protection of the reservoir from inflow of sand.	ditto	Yes The target site is close to communities and easy to access from the residential	ditto	7.0%
	Ca Giay PFMB **(Watershed)**		Phan Lam	86	Watershed Protection			100.0	700.0		3.0			1						**3**	The target areas are located in the catchment of Ca Giay reservoir for irrigation with a capacity of 10million m3.	The target areas lie directly on the upper slopes of the reservoir.	ditto	ditto	ditto	22.7%
	Dong Giang PFMB	Ham Thuan Bac	Thuan Minh	87	Watershed Protection			800.0	900.0		4.0			1			2.0			**3**	The target areas are located in the catchments of small scale irrigation reservoirs in Dong Giang commune.	The target areas are adjacent to the reservoir and lie directly on the upper slopes of the reservoir.	ditto	ditto	ditto	8.5%
	Song Quao PFMB **(Wateshed)**		Don Tien	88	Watershed Protection			900.0	800.0		4.0			1			2.5			**3**	The target areas are located in the catchment of Song Quao with a capacity of 70 million m3 (=10,000ha agricultural land, drinking water supply for phan thiet city)for irrigation and hydropower generation.	The target areas are located in the upper part of the catchment of the reservoir.	ditto	ditto	ditto	Don Tien: 14.7% Dong Giang: n.a
	Ham Thuan Dami PFMB **(Watershed)**		Da Mi	89	Watershed Protection			200.0	1,100.0		4.0			1						**3**	Catchment of watershed of Ham Thuan reservoir (forirrigation and hydropower generation) near La Nga river.	The target areas are adjacent to the reservoir and lie directly on the upper slopes of the reservoir.	ditto	ditto	ditto	4.7%
	Hong Phu PFMB **(Coastal)**		Hong Son	90	Coastal Protection	350.0					5.0	7.0		1					1	**2**	The target area is located few kilometers north east from Phan Ri Phan Thiet City so it contributes to the protection of environment of the city, inaddition to the protection of farm land, shrimp farms, and houses in Hong Song commune.	The target areas are adjacent to the residential areas of Hong Song.	ditto	Yes Parts of the target site are bit away from communities/residential	ditto	5.2%
	Total (Watershed	**6**	**Xã**					**3,600.0**	**4,200.0**		**27.0**			**6**			**7.5**									
	Total (Coastal)	**3**	**Xã**			**1,100.0**			**1,600.0**		**11.0**	**22.0**		**2**			**6.0**		**2.0**							
Rounded total (Watershed)						**23,085.9**	**3,300.0**	**63,971.2**	**22,247.2**	**3,700.0**	**386.7**	**411.5**	**62**	**60**	**67**	**22**	**169.6**	**558.0**	**6.0**							
Rounded total (Coastal)						**1,550.0**	**800.0**		**1,600.0**		**16.0**	**28.0**	**2**	**4**	**3**	**1**	**16.0**		**2.0**							

Table 6-3 List of Taraget Districts and Communes concerned with the Project Areas

Province	District	Management Board	Commune
Total			
12 Provinces	57 PFMB		
54 district			
1 township			
167 commune			
Thanh Hoa	Thuong Xuan	PFMB of Song Dan	Luan Khe, Luan Thanh, (2)
6 districts	Nhu Xuan	PFMB of Song Chang	Thanh Hoa (1)
6 PFMBs	Nhu Thanh	PFMB of Nhu Xuan	Xuan Thai (1)
12 communes	Thach Thanh	PFMB of Thach Thanh	Ngoc Trao, Thanh Long, Thach Lam (3)
	Thinh Gia	PFMB of Tinh Gia	Nguyen Binh, Dinh Hai, Truc Lam, Truong Lam, (4)
	Ha Trung	PFMB of Ha Trung	Ha Linh (1)
Nghe An	Tuong Duong	PFMB of Tuong Duong	Tam Thai, Tam Dinh, Tam Hop, Thach Giam, Yen Na, Yen Thang, Yen Thinh, (7)
6 districts	Nam Dan	PFMB of Nam Dan	Nam Giang, Nam Nghia, Nam Thai, Nam Hung, Nam Thanh, (5)
6 PFMBs	Nghi Loc	PFMB of Nghi Loc	Nghi Dong, Nghi Cong Bac, Nghi Quang, Nghi Thiet, Phuc Tho, Nghi Cong Nam, Nghi Yen, Nghi Lam, (8)
39 communes	Yen Thanh	PFMB of Yen Thanh	Dong Thanh, Hau Thanh, Minh Thanh, Thinh Thanh, (4)
	Tan Ky	PFMB of Tan Ky	Dong Van, Giai Xuan, Nghia Dung, (3)
	Quynh Luu	PFMB of Quynh Luu	Quynh Thang, Tan Son, Quynh Bang, Quynh Luong, Quynh Lap, Quynh Lien, Quynh Minh, Quynh Nghia, Quynh Phuong, Quynh Tho, Tien Thuy, Tan Thang, (12)
Ha Tinh	Nghi Xuan	PFMB of Hong Linh	Co Dam, Xuan Linh, Xuan Hong, Xuan Vien, (4)
5 districts	Can Loc		Thien Loc, Thuan Thien, (2)
4 PFMBs	Cam Xuyen	PFMB of Cam Xuyen	Cam Linh, Cam Minh, Cam Lac, Cam Quan, (4)
18 communes		PFMB of Thach Ha	Cam Thach, (1)
	Thach Ha		Thach Ban, Bac Son, Thach Xuan, Thach Dien, (4)
	Huong Son	PFMB of Ngan Pho	Son Lam, Son Le, Son Tien, (3)
Quang Binh	Quang Trach	PFMB of Quang Trach	Quang Hop, Quang Kim, Quang Luu, Quang Thach, (4)
3 districts	Quang Ninh	PFMB of Ba Ren	Truong Xuan, Truong Son (2)
4 PFMBs		PFMB of Long Dai	
15 communes		PFMB of Ven Bien Nam	Vo Ninh, Gia Ninh, Hai Ninh, (3)
	Le Thuy		Hung Thuy, Hong Thuy, Ngu Thuy Bac, Thanh Thuy, Cam Thuy, Sen Thuy, (6)
Quang Tri	Huong Hoa	PFMB of Huogn Hoa - Dakrong	Huong Phung, Huong Tan, Huong Linh, Tan Thanh, Huong Son, Tan Hop, (6)
6 districts	Dakrong		Dakrong, Huong Hiep, Mo O, Krong Klang, (4)
1 township	Vinh Linh	PFMB of Ben Hai	Vinh Ha, Vinh O, (2)
3 PFMBs	Gio Linh		Linh Thuong, (1)
17 communes	Hai Lang	PFMB of Thach Han River	Hai Lam, Hai Son, (2)
	Trieu Phong		Trieu Thuong, (1)
	Quang Tri (Town)		Hai Le, (1)
T.T.Hue	Huong Thuy	PFMB of Huong Thuy	Duong Hoa, (1)
3 disticts		PFMB of Huong River	Duong Hoa, (1)
3 PFMBs	Huong Tra		Huong Van, Hong Tien (SA 127), Binh Thanh, Binh Dien (SA 137,141,142,143,144,145, 146), Huong Tho, (5)
8 communes		PFMB of Bo River	Huong Van, Hong Tien (SA126), Binh Thanh, Binh Dien (SA 136,138,139), Huong Tho, (5)
	Phong Dien		Phong Xuan, Phong Son, (2)
Quang Nam	Dong Giang	PFMB of Kon River	Song Kon, Jo Ngay, A Ting, (3)
6 districts		PFMB of A Vuong	Ma Cooih, (1)
6 PFMBs	Phuoc Son	PFMB of Dak Mi	Phuoc Hiep, Phuoc Hoa, (2)
19 communes	Bac Tra My	PFMB of Tranh River	Tra Bui, (1)
	Phu Ninh	PFMB of Phu Ninh	Tam Dai, Tam Dan, Tam Lanh, (3)
	Nui Thanh		Tam Son, Tam Thanh, Tam Tra, (3)
	Duy Xuyen	PFMB will be established	Duy Trung, Duy Son, Duy Hoa, Duy Phu, Duy Thu, Duy Trinh, (6)
Quang Ngai	Ba To	PFMB of Ba To East	Ba Trang, Ba Lien, (2)
4 districts		PFMB of Ba To West	Ba Xa, Ba Dinh, (2)

Table 6-3 List of Taraget Districts and Communes concerned with the Project Areas

Province	District	Management Board	Commune
Total			
12 Provinces	57 PFMB		
54 district			
1 township			
167 commune			
5 PFMBs	Son Ha	PFMB of Thach Nham	Son Ba, Son Ky, (2)
9 communes	Son Tay	PFMB of Son Tay	Son Bua, (1)
	Tay Tra	PFMB of Tay Tra	Tra Lanh, Tra Xinh, (2)
Binh Dinh	Hoai Nhon	PFMB of Hoai Nhon	Hoai Son, (1)
5 districts	Hoai An	PFMB of Hoai An	Bok Toi, An Nghia, An Son, (3)
5 PFMBs	Phu My	PFMB of Phu My	My Hiep, My Phong, My An, (3)
10 communes	Vinh Thanh	PFMB of Vinh Thanh	Vinh Kim, (1)
	Tay Son	PFMB of Tay Son	Tay Phu, Vinh An, (2)
Phu Yen	Dong Xuan	PFMB of Dong Xuan	Phu Mo, (1)
3 districts	Song Hinh	PFMB of Song Hinh	Ea Trol, Song Hinh, (2)
3 PFMBs	Son Hoa	PFMB of Son Hoa	Phuoc Tan, (1)
4 communes			
Ninh Thuan	Bac Ai	PFMB of Song Trau	Phuoc Thanh, (1)
4 districts	Thuan Bac		Phuoc Chien, Phuoc Khang, (2)
4 PFMBs	Ninh Son	PFMB of Krongpha	Lam Son, (1)
7 communes	Ninh Phuoc	PFMB of Tan Giang,	Phuoc Ha (1)
		PFMB of Ninh Phuoc	Phuoc Nam, Phuoc Dinh, (2)
Binh Thuan	Tuy Phong	PFMB of Tuy Phong,	Phan Dung, Chi Cong (2)
3 districts		PFMB of Long Son Da Bac	Phong Phu (1)
8 PFMBs	Bac Binh	PFMB of Le Hong Phong	Hoa Thang (1)
9 communes		PFMB of Ca Giay	Phan Lam (1)
	Ham Thuan Bac	PFMB of Dong Giang	Thuan Minh (1)
		PFMB of Song Quao	Don Tien (1)
		PFMB of Ham Thuan Dami	Da Mi (1)
		PFMB of Hong Phu	Hong Son (1)

Part III

Chapter 1 Project Areas

1.1 Location and Administrative Divisions

The target twelve provinces lie between latitudes N 10°35' - 20°00' and longitude E 103°55' - 109°30' and stretch to north and south in the coastal part of the country as shown in the .location map of the project area. On a provincial level, the project areas are widely spread in the provinces from the coastal plains to steep mountain peaks as shown in Figure 1-1.

The project areas are administratively located in 167 communes within 54 districts and one township in the 12 provinces as shown below. **Table 1-1** shows the names of the communes and the corresponding project areas covered in the provinces.

Number of District, Communes and the Project Area

Province	No. of Districts & Township	No. of Communes	Project Area (ha) #
1. Thanh Hoa	6	12	10,170
2. Nghe An	6	39	7,300
3. Ha Tinh	5	18	11,470
4. Quang Binh	3	15	6,600
5. Quang Tri	7	17	13,260 *(3,610)*
6. T.T. Hue	3	8	17,600 *(4,100)*
7. Quang Nam	6	19	12,720 *(1,550)*
8. Quang Ngai	4	9	13,790 *(3,790)*
9. Binh Dinh	5	10	10,890
10. Phu Yen	3	4	9,370 *(2,620)*
11. Ninh Thuan	4	7	12,260
12. Binh Thuan	3	9	10,500
Total	**54 district & 1 township**	**167**	**135,930**

#: Project area indicates the total area of forest development including improvement of SPL-3 forest. Figures in ( ) are the area for improvement of SPL-3 forests.
Source: JICA Survey Team

1.2 Natural Conditions

1.2.1 Rainfalls

The rainfall data of each province shows the rainfall pattern of the project areas as shown below.

Monthly Rainfall at Meteorological Station in the Target Provinces (mm/month)

Province	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1. Thanh Hoa #	3	21	25	68	196	205	189	313	221	332	12	9	1,595
2. Nghe An	90	23	57	65	141	107	110	205	300	694	119	40	1,952
3. Ha Tinh	101	47	52	77	173	44	29	154	373	1,109	140	176	2,476
4. Quang Binh	53	18	36	14	165	45	12	66	698	682	353	97	2,240
5. Quang Tri	38	49	15	33	142	28	56	41	423	999	394	174	2,392
6. T.T. Hue	118	85	80	74	195	24	26	63	479	1,524	608	510	3,786
7. Quang Nam #	7	225	207	35	150	18	47	225	301	891	1,196	153	3,455
8. Quang Ngai #	197	1	102	48	132	48	41	244	107	797	1,328	78	3,123
9. Binh Dinh	258	26	35	23	80	23	27	76	425	520	851	251	2,596

Province	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
10. Phu Yen	48	7	82	46	162	14	13	130	101	678	1,428	29	2,789
11. Ninh Thuan	n.a.												
12. Binh Thuan	0	0	0	4	266	164	170	231	201	114	176	2	1,328
Average	83	46	63	44	164	65	65	159	330	758	605	138	2,521

Source: Department of Agriculture and Rural Development (DARD) of each of the twelve provinces, #: Data in 2007. Other data is for 2008.

1.2.2 Present Land Use

The present forest land use/forest classification in the protection forests in the target communes are presented in **Table 1-2,** and Figures 1-3 to 1-13. The summary is given below.

Present Forest Land Use in Protection Forests in the Target Communes

Unit: ha

Province	Natural Forest	Plantation	Bare land (Ia)	Bare land (Ib)	Bare land (Ic & others)	Total
1. Thanh Hoa	13,080	5,768	742	428	1,220	21,149
2. Nghe An	26,530	5,282	4,058	6,385	3,117	45,371
3. Ha Tinh	2,284	9,301	822	3,836	1,376	17,619
4. Quang Binh	28,382	11,147	389	1,360	6,712	47,990
5. Quang Tri	44,825	24,040	17,461	9,791	9,466	105,582
6. T.T. Hue	7,589	1,537	*	*	84	9,210
7. Quang Nam	42,825	9,188	190	7,499	29,952	89,654
8. Quang Ngai	25,907	1,512	855	4,574	5,423	38,271
9. Binh Dinh	26,991	1,137	2,918	4,567	3,527	39,138
10. Phu Yen	24,872	3,936	7,186	1,813	4,495	42,302
11. Ninh Thuan	25,307	1,911	3,595	10,218	17,266	58,298
12. Binh Thuan	61,979	628	1,485	3,499	9,574	77,165
Total	**330,570**	**5,295**	**39,700**	**53,971**	**92,212**	**591,749**

Source: JICA Survey Team.

* In the current land use planning in T.T. Hue province, the bare lands (Ia & Ib) categorized as the "unused land". They will be converted to the protection forest land in the next update of the land use planning in 2010.

1.2.3 Forest Types and Major Species

As described in Chapter 3.3.1 in Part II of this report, the natural forests in the 12 target provinces broadly comprised of five forest types: i) lowland evergreen forest, ii) mountain broadleaved forest, iii) lowland semi deciduous / humid deciduous forest, iv) dry deciduous forest, and v) savanna. The following table shows the major species found in each forest type of the project areas.

Major Forest Species in the Forest Types in the Project Areas

Forest types	Major Forest Species
Lowland evergreen forest	*Fokienia bodginsii, Cunninghamia lanceolata, Excentrodendron tonkinense*
Mountain broadleaved forest	*Afzelia xylocarpa, Dalbergia oliveri, Hopea sinensis, Panex vietnamensis*
Lowland semi deciduous/humid deciduous forest	*Shorea falcata, Dipterocarpus caudatus, Dalbergia barensis, Lithocarpus dinhensis*
Dry deciduous forest	*Dipterocarpas alatas, Dipterocarpas spp.*
Savanna	*Baeckia frutescens, Melaluca leucadendron*

Source: JICA Survey Team

1.3 Socio-economic Conditions

This section is based on the data collected from the field survey done by the survey team in July 2009. Since data availability and accessibility vary among provinces, the data reported in this section are obtained from the compilations from various sources. Said data sources include the statistical yearbooks of province and district, direct interviews with relevant officials, and documents prepared by the local authorities. Despite this limitation, the data still serves the purpose of showing the picture related to socio-economics, particularly general livelihoods, of the target communes.

To further enhance the understanding on the livelihoods of local communities in the target communes, the survey team has also conducted a sample household survey in six provinces with 180 households which were purposely selected. The results of the survey have also been incorporated into this section where relevant.

1.3.1 Population and Households

The project intends to cover 167 communes in 54 districts and one township across 12 provinces. The total population of the target communes in the provinces accounts for 811,210 in 188,363 households. It is difficult to estimate the number of households participating in the project now. But the number would be far less than the total households in the target communes.

Demography of the Target Communes

Province	No. of District	No. of Commune	Total Population	No. of HHs
Thanh Hoa	6	12	56,170	14,340
Nghe An	6	39	244,571	55,821
Ha Tinh	5	18	46,260	11,701
Quang Binh	3	15	71,417	16,334
Quang Tri	7	17	55,551	12,573
T.T. Hue	3	8	36,301	7,824
Quang Nam	6	19	98,800	22,988
Quang Ngai	4	9	26,162	6,356
Binh Dinh	5	10	57,255	16,051
Phu Yen	3	4	10,829	2,417
Ninh Thuan	4	7	47,843	9,244
BinhThuan	3	9	60,051	12,714
Target area total	**54 district & 1 township**	**167**	**811,210**	**188,363**

Source: JICA Survey Team

The ethnic composition of the target communes has been diverse. Although the nature of the data collected vary among the provinces, an attempt was made to indicate the ethnic profile of the population in the target communes by calculating the proportion of the household or population of each ethnic group. While figures may not be suitable for accurate comparison, it is still sufficient for understanding the general demographic characteristics of the target communes.

Kinh ethnicity, the dominant among the target communes, accounts for 67% in the target communes. The remaining 33% of the population is comprised of ethnic minority groups. Such ethnic groups found in the project target communes include Bru-Van keu in Quang Binh, Cham in Phu Yen, Ninh Thuan and Binh Thuan, Rac lay in Ninh Thuan, and others. Each group has their own unique social structure, language and culture. Among other things, Ede and Bana groups are matriarchal societies, in which the women play a major role in earning income for the household, according to the results of the sample commune survey. A complete list of the number of households of all the ethnic groups reported in the survey is presented in **Tables 1-3** and **Table 1-4**.

Ethnic Composition of the Households in the Target Communes

Province	% of Kinh households out of the total households	% of other ethnic groups out of total households
Thanh Hoa	34.3 %	65.7 %
Nghe An	90.8 %	9.2 %
Ha Tinh	100.0 %	0.0 %
Quang Binh	82.4 %	17.6 %
Quang Tri	n.a.	n.a.
T.T. Hue	99.1 %	0.9%
Quang Nam	88.3 %	11.7 %
Quang Ngai	6.5 %*	93.5 %*
Binh Dinh	94.2 %	5.8 %
Phu Yen	25.6 %	74.4 %
Ninn Thuan	46.9 %	53.1 %
Binh Thuan	80.3 %*	19.7 %*
Target area total	67.0%**	3.0%**

Notes: n.a.: Data were not available.
* Quang Ngai: The proportion of ethnic groups has been calculated based on the ethnic population data of the target communes.
**The figure is calculated based on the proportion of households and population of ethnic groups.
Source: JICA Survey Team

1.3.2 Labor

On average, 74.8% of the total number of households in the target communes engages in agriculture, forestry and fisheries activities. Quang Ngai, Phu Yen and Quang Tri have very high proportion of households engaged in the sector, while Ninh Thuan has high proportion (58%) of the households engaged in the service sector, compared to other areas.

Summary of economic activities carried out by the households in the target communes

Provinces	Households engaged in productive activities	Proportion of households (%)			
		Agriculture	Forestry	Fisheries	Others
Thanh Hoa	-	-	-	-	-
Nghe An	-	-	-	-	-
Ha Tinh	-	-	-	-	-
Quang Binh	16,334	84.0	4.4	6.5	0.0
Quang Tri	15,818	86.6	0.0	0.0	13.4
T.T. Hue	21,315	55.3	7.1	4.7	32.8
Quang Nam	19,492	85.1	4.5	7.6	2.8
Quang Ngai	12,630	97.4	0.0	0.0	2.6
Binh Dinh	16,693	92.9	1.4	3.7	0.0
Phu Yen	2,407	97.9	0.2	1.9	0.0
Ninh Thuan	998	8.2	12.5	58.9	0.0
Binh Thuan	5,591	65.5	13.7	18.9	0.0
Total	111,278	74.8	4.9	11.4	5.7

Source: JICA Survey Team

1.3.3 Poverty Situation

Out of 188,363 households in 167 communes, 37,666 or 21 %, are reported to be below the poverty line. Among the target provinces, Quang Ngai (59%) and Phu Yen (46%) indicated the highest

proportion of households below poverty line. On the other hand, Binh Thuan province has the lowest proportion of households below poverty line of 9 %.

Households Below Poverty Line in the Target Communes

Provinces	Number of households below poverty line	
	No.	%
Thanh Hoa *	2,408	18 %
Nghe An *	9,181	18 %
Ha Tinh *	1,643	14 %
Quang Binh *	3,681	23 %
Quang Trii	3,512	28 %
T.T. Hue *	415	10 %
Quang Nam	6,063	26 %
Quang Ngai	3,775	59 %
Binh Dinh	2,570	16 %
Phu Yen	1,114	46 %
Ninh Thuan *	2,198	24 %
Binh Thuan	1,105	9 %
Target area total	37,666	21 %

Note: * Data in some target communes were not available.
Source: JICA Survey Team

The informants of the sample household survey indicated that 67.7% of them depend on agriculture, forestry, and fishery to generate income, with an average per capita income of VND 4.2 million/year. The main causes of poverty identified from the survey were: i) lack of investment capital; ii) lack of appropriate technologies and technical knowledge for production; and iii) lack of arable land. Among the sampled communes, Binh Dien and Duong Hoa in T. T. Hue showed the lowest poverty rate of 8.7% and 8.0%, respectively. The results of the survey indicated that about 60% of the total household income in Binh Dien commune is derived from the trade and services sectors.

Average Income and Income Sources of Households, and Average Poverty Rate of the Sample Communes

Province	Commune	Average Income/ Capita (million VND)	Proportion of Income Sources (%)				Poverty Rate of the Commune (%)
			Agriculture, Forestry, Fishery	Trading and Services	Handicrafts	Others	
Nghe An	Tam Thái	4.0	51.5	11.1	0.0	34.2	20.0
Nghe An	Đồng Văn	2.7	60.0	7.0	0.0	33.0	45.0
Quang Binh	Q. Thạch	3.0	86.0	-	-	0.1	67.2
Quang Binh	Hải Ninh	4.9	23.3	1.0	-	75.7	13.5
T. T. Hue	Bình Điền	8.6	27.9	60.1	7.4	4.6	8.7
T. T. Hue	Dương Hòa	5.5	80.0	5.0	5.0	10.0	8.0
Quang Ngai	Sơn Kỳ	2.5	85.0	-	-	0.2	43.0
Quang Ngai	Ba Giang	2.4	93.0	-	-	7.0	60.3
Phu Yen	Sông Hinh	4.5	90.0	5.0	0.0	5.0	34.5
Phu Yen	Phước Tân	1.4	84.2	-	-	15.8	41.7
Binh Thuan	Phong Phú	9.0	70.8	24.3	-	4.9	23.4
Binh Thuan	Hòa Thắng	1.8	60.0	-	-	30.0	25.0
Total average		4.2	67.6	16.2	2.5	18.4	32.5

Source: JICA Survey Team

1.3.4 Public Services

The state expenditure on social services in the 12 target provinces accounts for 29.9% on average. The highest expenditure was observed in Binh Dinh (39.7%) while the lowest in Ninh Thuan with 25.7%.

Percentage of Expenditure on Social Services in the Target Provinces (2007)

Unit: VND Million for Expenditures

Province	Local Budget Expenditure	Expenditure on Social Services	% of Total Expenditure
Thanh Hoa	7,927.0	2,096.0	26.4%
Nghe An	7,764.4	2,158.6	27.8%
Ha Tinh	2,872.9	820.6	28.6%
Quang Binh	2,404.6	604.1	25.1%
Quang Tri	2,055.8	557.7	27.1%
T.T. Hue	1,950.7	665.5	34.1%
Quang Nam	4,010.1	1,424.0	35.5%
Quang Ngai	2,415.4	-	-
Binh Dinh	2,859.2	1,135.3	39.7%
Phu Yen	2,292.8	588.9	25.7%
Ninh Thuan	1,789.3	416.7	23.3%
Binh Thuan	2,243.1	792.5	35.3%
Project Target Province Total	3,382.1	1,023.6	29.9%

Source: Statistical Publishing House (2009). Socio-Economic Statistical Data of 63 provinces and cities.

Access to electricity, health facilities, and schools has been reviewed and is presented below. In 12 provinces, the proportion of households having access to electricity was 86.3% on average. Communes in Quang Binh, T.T. Hue, Quang Nam, Ninh Thuan and Binh Thuan provinces reported over 90% electricity coverage. On the other hand, Phu Yen indicated the lowest coverage among the target communes (52.8%).

On average, 66.7% of the households in the target areas have access to clean water. It was indicated that the target communes in Phu Yen have the least access to clean water (39.9%), while that in Binh Thuan is 92%, the highest among the provinces.

Percentage of HH Having Access to Electricity and Clean Water in the Target Communes

Provinces	Electricity (%)	Clean Water (%)
Thanh Hoa	100	n.a.
Nghe An	99	n.a.
Ha Tinh	100	n.a.
Quang Binh	98	65.3
Quang Tri	n.a.	n.a.
T.T. Hue	98	n.a.
Quang Nam	92	58.8
Quang Ngai	71	70.2
Binh Dinh	97	75.3
Phu Yen	39	39.9
Ninh Thuan	99	65.0
Binh Thuan	58	92.6
Project Target Province Total	79	66.7

n.a.: Data are not available.
Source: JICA Survey Team

In terms of health care, there are 69 health centers in the target communes in eight provinces. On average, one health care unit exists per commune. The average distance from households to the nearest health care unit varies from 2.3 km to 8.5 km with an average of 5.5 km. The sample commune survey also indicated similar results. The average distance between households to the nearest health care unit is 1.1 km with a maximum of 6 km in Hoa Thang Commune of Binh Thuan Province.

One to two primary schools exist in each target commune. The average distance to primary schools from households is 1.6 km. On the other hand, secondary schools were found to be less in number. This suggests the difficulties in accessing the secondary school as the primary enrolment and completion rates rise. To achieve improved secondary enrolment as the government plans in SEDP (2006-2010), it is necessary to increase the number of available secondary schools in the locality.

Accessibility to the Health Care Units and General Education Facilities in the Target Communes

Province	Health Center		Primary School		Secondary School
	No (unit)	Distance (km)	No (unit)	Distance (km)	No (unit)
Thanh Hoa	n.a.	n.a.	n.a.	n.a.	n.a.
Nghe An	n.a.	n.a.	n.a.	n.a.	n.a.
Ha Tinh	n.a.	n.a.	n.a.	n.a.	n.a.
Quang Binh	9	5.5	8	1.0	3.0
Quang Tri	n.a.	n.a.	n.a.	n.a.	n.a.
T.T. Hue	16		28	1.0	2.0
Quang Nam	16	2.3	23	5.0	18.0
Quang Ngai	16	n.a.	16	n.a.	n.a.
Binh Dinh	4	n.a.	n.a.	n.a.	n.a.
Phu Yen	4	8.5	10		6.0
Ninh Thuan	5	6.5	13	3.5	4.0
Binh Thuan	3	6.8	6	1.0	3.0
Total/ average	69	5.5	104	1.6	36.0

Note: n.a.: No data were available in making this report.
Source: JICA Survey Team

1.3.5 Rural Infrastructure

Rural roads are the key infrastructure to support livelihood activities of local communities in the target communes. However, these are in poor condition in general and need to be repaired and/or improved. According to the results of the sample household survey, local communities face difficulties in transporting their farm and forest produce to the nearest market due to unpaved road condition. Discussions with DPCs and CPCs in the field survey also revealed that about 60% of the existing roads connecting to the target communes are still in unpaved form and 32 % of the unpaved roads need urgent improvement.

Ratio of Paved Rural Road in Project Area

Region	North Central Coast						South Central Coast				South East	
Province	Thanh Hoa	Nghe An	Ha Tinh	Quang Binh	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Binh Dinh	Phu Yen	Ninh Thuan	Binh Thuan
Ratio of Pavement (%)	55%*	n.a.	39%*	50%*	n.a.	n.a.	n.a.	n.a.	6%	24%	42%	17%

Note : * Average of all of Districts in the Province
Source: JICA Survey Team

Nearly half of the potential irrigable lands in the target communes are cultivated under rain-fed condition (or only in the rainy season without irrigation) due to the lack of irrigation facilities. Since

agriculture is the primary livelihood means of the target communes, the needs to develop irrigation and/or water resource utilization facilities with dam/head works and canal systems are quite high.

Availability of Irrigation Facilities in Potential Irrigable Land

Region	North Central Coast						South Central Coast				South East	
Province	Thanh Hoa	Nghe An	Ha Tinh	Quang Binh	Quang Tri	T.T. Hue	Quang Nam	Quang Ngai	Binh Dinh	Phu Yen	Ninh Thuan	Binh Thuan
Availability of Irrigation Facilities	67%*	41%*	78%*	50%*	n.a.	28%	90%	n.a.	49%	42%	37%	64%

Note : * Average of all of Districts in the Province
Source: JICA Survey Team

1.3.6 Forest and Livelihoods

People in the project area depend on forest resources in various ways. Some may harvest NTFPs and other products for selling to generate income, while collecting fire woods or harvesting timbers for house construction. However, their uses of forest resources in recent years had caused damage to the natural forests. Illegal and excessive wood harvesting, not necessarily by local people but encroachers, has been reported rampant. The results of the sample commune survey indicated that causes of forest degradation include cutting of firewood (36%), cutting timber for home use (19%) and other reasons (13%).

Introduction of bio-gas may be one of the options to mitigate human pressure on forest resources. By using bio-gas, fire wood collection in natural forests would be minimized. Value addition for NTFPs should also be considered as a possible intervention to provide local communities with alternative sources of income.

1.4 Issues on Forest Management in the Project Areas

1.4.1 Causes of Deforestation / Forest Degradation

Although there are no clear data/documents that show the causes and current trend of forest degradation in the project areas, the following are considered major threats that the project areas have faced regarding forest degradation based on the interviews with the PFMBs and DARDs concerned.

a. Deforestation during the war

b. Encroachment for farming by nearby communities

c. Illegal timber and firewood collection

d. Forest fire

e. Shifting cultivation (only in the area where ethnic minorities reside)

Human pressures made not only by local communities but also by those of nearby communes and neighboring districts/provinces are still major causes of forest degradation in the project areas. This would suggest that the involvement of local communities in the project along with awareness enhancement and improvement of their livelihood is requisite to materialize sustainable management of protection forests in the project areas.

1.4.2 Issues on Forest Management / Protection

(1) Limited application of long-term contract with local communities for protection, management and utilization of protection forests

Vietnam Forestry Development Strategy (2006-2020) gives priority for contracting out long-term protection, management and utilization of protection forests to local communities and households as a way for materializing the strategy. The strategy paper also states a financial policy that contract-based protection of protection forests shall be strengthened by promoting getting direct benefits from forest resources including agro-forestry and NTFP and other income sources such as payment for environmental services. It is an important paradigm shift from the current contract mechanism which uses money from the state budget.

Despite of pronouncement of the change in management mechanism of protection forests, no action has been taken at the field level. Many protection forests in the country are still under the direct management of PFMBs. Staff of DARDs of the target provinces still stick to the idea that the state shall pay money to communities contracted for protection and management of protection forests. The situation is attributable to:

a. Lack of orientation and guidance on the new management mechanism of protection forests;

b. Business as usual attitude of many staff of DARDs and PFMBs; and

c. Limited guidelines/regulations and investment for promoting long-term contract of protection forests

(2) Continuous exploitation of forest resources in protection forests

As described in Section 1.3.3 of this chapter, the average poverty ratio of the communes concerned in 2008 is as high as 30%. Poor households in the project areas rely on forest resources for their livelihood to a certain extent and cause degradation of protection forests. Forest degradation is conspicuous particularly where majority of households are of ethnic minorities. As forest degradation is closely related to insufficient livelihood opportunities of local communities, a holistic approach including livelihood improvement support is indispensable to materialize sustainable forest management and protection in the project areas.

The major reasons for the shortage of income in the project areas are considered as follows.

a. Limited opportunity in income generation or employment

b. Limited farm land per household

c. Low productivity/yield of crops due to insufficient water supply, low quality of seeds, and limited application of farm inputs

d. Limited market access due to poor road condition

(3) Capacity of forest owners (Protection Forest Management boards)

Protection forests in the project areas are currently under the direct management of state-owned management boards under DARDs or DPCs in the target provinces. As described in Section 6.2 of PART II, a total of 57 PFMBs are managing the project areas. Moreover, almost all the management boards are facing difficulties in managing their protection forests due to the following reasons:

a. The number of staff working in PFMB is insufficient to manage and safeguard protection forests under its jurisdiction.

b. Facilities and equipment owned by PFMB are also insufficient and many are either outdated or out of order. Such conditions have made the works of PFMB inefficient.

c. Due to the lack of staff, PFMBs have contracted out the forest development/improvement activities (e.g., afforestation, ANR and protection of natural forests) to local communities/households. However, in general PFMBs have not been given sufficient budget for forest protection and management activities, except those involved in national programs (e.g., 327 program and the Five Million Hectare Reforestation Program: 5MHRP) and foreign-funded projects (e.g., SPL-III/Afforestation Component). It would therefore be difficult for many PFMBs to fully manage protection forests under their jurisdictions, especially when the said projects end.

d. So far, none of the management boards has concluded a long-term agreement with local communities on protection and management of protection forest.

e. The prospects that many management boards have as to how to manage and protect their protection forests in the future still seem uncertain.

1.4.3 Potential Issues on Community-Based Forestry Development Project

The concept of community-based management is still new in Vietnam, although some donor-funded projects, such as KfW (KfW 7: Afforestation Project), WB (Forest Protection and Rural Development Project), and JICA (SPL-III/Afforestation Component), have introduced similar concepts as described in Chapter 4 of Part II.

The activities of these projects revealed the effectiveness of the "bottom-up approach" or "community participation in forest management". These also exposed the following critical issues, as listed below.

a. Forest management/protection should be linked with rural development to make the intervention more effective. However, it would be difficult for the forestry sub-division of DARD to take such an integrated approach unless multi-disciplinary coordination is institutionalized at the beginning of the project.

b. Participatory planning is an effective tool to enhance a sense of ownership among the communities and help them to comprehend their rights and obligations in the project. However, a certain capacity is required to carry out participatory planning in a proper manner. Training on participatory planning should be organized for provincial and district stakeholders at the beginning of the project.

c. Implementation of the community-based approach requires a certain level of decentralization of approval authority. In reality, securing approval from the higher authorities has caused delays in project implementation in many cases. Guidance on project implementation should be provided to CPMU/PPMUs and local government authorities at the beginning of the project.

Chapter 2 Project Context and Rationale

2.1 Contribution to the Existing Policies

2.1.1 Vietnam Forestry Development Policy

As described in Section 2.4.4 of Part II, the Vietnam Forestry Development Strategy (2006-2020) formulated in 2007 sets the following overall objectives of the forestry sector:

a. To sustainably establish, manage, protect, develop and use 16.2 million ha of land planned for forestry;

b. To increase the forest cover ratio up to 42-43% by 2010 and 47% by 2020;

c. To ensure a wider participation from various economic sectors and social organizations in forest development;

d. To increase contributions to socio-economic development, environmental protection, biodiversity conservation and provision of environmental services;

e. To reduce poverty and improve the livelihoods of rural mountain people; and

f. To contribute to national defense and security

It also gives development orientations to achieve its overall goals, which include:

a. Protection and restoration of watershed protection forests in the northern mountainous region, **northern central region,** **southern central coastal region**, and central highlands;

b. Protection and restoration of mangrove forests in the northern, **north central,** **central coastal regions** and Mekong River delta;

c. Development of sand- and wave-shielding forests in **central coastal region**;

d. Promotion of forest allocation and lease to various economic entities;

e. Promotion of changes in people's awareness from purely protection of forest trees to protection of contiguous ecosystems as well as ensuring of an optimal way to regenerate and utilize forests;

f. Collaboration with local communities and coordination with the state forestry management agencies as well as local authorities in forest protection and conservation; and

g. Promotion and use of NTFPs to expand opportunities of forest owners to gain substantial income from forest management.

Further, the Strategy provides important policies for management of protection forests as below:

a. The priority is given to land allocation, and allocation of and contracting protection forests to communities, cooperatives, and households for long-term protection, management and utilization according to approved planning and plan; and

b. The State strengthens contract-based protection for protection forests, by promoting getting direct benefits from forests and other income sources, including payment for environmental services. Sufficient investment will be given to developing agro-forestry and NTFP so as to replace the current contract mechanism, which uses money from the state budget.

The proposed project is expected to contribute to the achievement of all the overall objectives set above. Furthermore, the concepts and framework of the proposed project are in line with the above-mentioned development orientations of the strategy. The propose project could be a driving force for implementation of the strategy particularly in the northern central and southern central coastal regions after 5MHRP will end in 2010.

2.1.2 Socio-economic Development Policy

The major aims of the Five-year Socio-economic Development Plan (2006-2010) are to develop a conducive environment for stable economic growth and achieve socio-economic well being, particularly focusing on the reduction of the economic gap between the rich and poor. The said five-year plan also provides the following development orientations in the forestry sector.

a. Reform of the forestry sector with a strong link between protective and economic functions

b. Reduction of state-management forests

c. Afforestation / reforestation to increase forest coverage and establish raw material supply areas for forest processing industries

d. Examination and inspection of quality of forest product

e. Improvement of 5MHRP by introduction of afforestation with dual purposes of wood production and environmental protection

f. Completion of land and forest allocation

The proposed project has the same orientations with the five-year plan. The proposed project can also directly generate additional income for rural population by involving them in forest development and management works.

2.1.3 Compliance with International Conventions

The Government of Vietnamese (GoV) has worked actively on the mitigation and adaptation of climate change issues because Vietnam is one of the countries most vulnerable to climate change. Recognizing the importance and urgency of the actions against climate change, the government ratified several international conventions related to climate change, such the United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), and the United Nation Convention to Combat Desertification (UNFCCD). The government's action to climate change is not only for international commitment but also for national security.

The government also approved the National Target Program (NTP) to respond to climate change in 2008 and ministries have been preparing action plans for implementation starting 2011. Restoration and sustainable management of protection forests are important mitigation as well as adaptation measures to climate change in Vietnam.

2.1.4 Compliance with Japanese ODA Policy

The mid-term policy on Japan's ODA puts priority on (i) poverty reduction, (ii) sustainable growth, (iii) global issues particularly environmental problems and natural disasters, and (iv) peace-building. The project closely links with priority items (i) and (iii) through improvement of protection forests, and hence, it meets the Japanese ODA priority.

On the other hand, the JICA's ODA policy to Vietnam gives its focus on "promotion of economic development", "stabilization of socio-economic conditions," and "establishment of institutional set-ups," and identifies the following issues to be addressed in the agriculture and forestry sectors.

a. Issues on gender and ethnic minorities

b. Conservation of biodiversity

c. Conservation and restoration of forests

d. Extension and improvement of agricultural, aqua-cultural and forestry techniques in deprived areas

The project will contribute to the stabilization of socio-economic conditions especially in the mountainous areas, where many ethnic minorities reside. This involves restoration and sustainable management of protection forests and improvement of agriculture and forestry production techniques. Furthermore, the biodiversity of the project area is expected to be conserved and improved through the implementation of the proposed project.

2.2 Necessity of the Project Interventions

The Five Million Hectare Reforestation Program (5MHRP) that has been implemented since 1998 is expected to end in 2010. By 2008, the program has achieved 2.8 million ha of forest protection contract, 0.8 million ha of regeneration, 1.5 million ha of afforestation and 0.1 ha of industrial and fruit plantations. However, the quality of the forests is still at low level and further investment and efforts are necessary for the said sector. In view of such remarkable accomplishments made by the program and a fact that financial support from international donors to forestry sector has declined, the GoV is likely to formulate a new forestry program/project succeeding the 5MHRP before it ends, although such program/project has not been officially announced by the government yet.

The forest area in Vietnam has increased mainly as a result of the government's reforestation efforts. But it is said that the quality of forest is still low and thus, tangible benefits from the forest are not expected in the near future. There are still bare lands and poor natural forests within the protection forests. It is necessary to restore protection forests to improve its protective functions. It is also important to enhance the economic value of the protection forests for sustainable management by local communities. These actions would contribute not only to national security in terms of conservation of water resources, prevention of soil erosion, mitigation of natural disasters, poverty alleviation, etc. but also for mitigation of global climate change.

Unlike infrastructure projects, forest restoration and materializing sustainable forest management will need longer time, continuous efforts and a certain amount of fund. Momentum of forest protection and development achieved in the 2000's should be maintained and guided to better direction by the proposed project.

2.3 Necessity of JICA's Assistance

JICA has long experiences in assisting several forestry projects and is one of the largest donors in the forestry sector of Vietnam. Its accomplishments have been remarkable and notable, especially for the achievement of sustainable forest management. Recently, the following projects have contributed to the restoration and sustainable management of forests and capacity development of stakeholders in forest management.

a. The Project for Afforestation in Coastal Sandy Area

b. Rehabilitation of Natural Forest in Degraded Watershed Area in the North of Vietnam

c. The Project for Village Support for Sustainable Forest Management in the Central Highland

d. Capacity-Building for Preparing Feasibility Study and Implementation Plan for Afforestation Projects

e. Rural Infrastructure Development and Living Standard Improvement Project III (SPL-III)/ Afforestation Component Sector

e. Study on Capacity Development for AR-CDM Promotion in Vietnam

The activities planned under the proposed project covers forest planning, afforestation in watershed and coastal sandy area, assisted natural regeneration, support for livelihood improvement of mountain communities, among others. Hence, the experiences of JICA are quite useful and could best fit the project.