

資料リスト

ベトナム森林整備計画開発調査 プロジェクト形成調査

番号	分野	資料名	発行機関または収集先	発行年 月	ページ数	オリジナル /コピー別	取扱区分	図書館記入欄
1	植林無償	Brief report about implementation of PACSA	DARD Quang Nam 省	2003	4	デジタル		
2	植林無償	The Summary of Forestry Development Projects financed by Japan in Quang Nam province	DARD Quang Nam 省	2003	2	デジタル		
3	JBIC セクタ ーローン	The Brief Report about the JBIC's Project for Afforestation in Quang Nam Province	DARD Quang Nam 省	2003	3	デジタル		
4-1	JBIC セクタ ーローン	PRE-FEASIBILITY PROJECT FOR PROTECTION FOREST ESTABLISHMENT IN WATERSHED AREA OF LARGE RIVER IN QUANG NAM PROVINCE (本文)	DARD Quang Nam 省	2003	13	デジタル		
4-2	JBIC セクタ ーローン	同上：データ・テーブル	DARD Quang Nam 省	2003	10	デジタル		
5-1	JBIC セクタ ーローン	PLANTATION OF PROTECTION FOREST IN WATERSHED AREA OF WATER RESERVOIRS IN QUANG NAM PROVINCE UNDER JBIC's LOAN (SECTOR LOAN III)	DARD Quang Nam 省	2003	26	デジタル		

5-2	JBIC セクタ ーローン	同上：データ・テーブル	DARD Quang Nam 省	2003	5	デジタル		
6	組織図	Appendix4 HUE DARD organization chart	DARD Thua Thien Hue 省	2003	1	デジタル		
7	造林実績	Summary of implementation of silviculture works in 2002	DARD Thua Thien Hue 省	2003	1	デジタル		
8	造林実績	The Works amount implemented under 661 program	DARD Thua Thien Hue 省	2003	1	デジタル		
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10	組織図	HUE DARD's Forestry Units	DARD Thua Thien Hue 省	2003	1	デジタル		
11	造林実績	Forestry projects in Thua thien Hue	DARD Thua Thien Hue 省	2003	1	デジタル		
12	樹種	Main Forestry tree spp. in Thua Thien Hue Province	DARD Thua Thien Hue 省	2003	1	デジタル		
13	造林実績	Change of stock volume of forests	DARD Thua Thien Hue 省	2003	1	デジタル		
14	造林実績	Area of three types forest by districts	DARD Thua Thien Hue 省	2003	1	デジタル		
15	造林実績	The area of three forest types by status	DARD Thua Thien Hue 省	2003	1	デジタル		
16	森林面積	The area managed by forestry units in Thua Thien Hue province	DARD Thua Thien Hue 省	2003	1	デジタル		
17	森林面積	The inventory of planted forest in Thua Thien Hue until 2001	DARD Thua Thien Hue 省	2003	1	デジタル		
18	樹種	The inventory of planted forest in Thua Thien Hue until 2001	DARD Thua Thien Hue 省	2003	1	デジタル		
19	社会経済デー ータ	Administrative units, area and population	DARD Thua Thien Hue 省	2003	1	コピー		
20	人口	The Statistical data about ethnic minority groups by district of Thua thien Hue province	DARD Thua Thien Hue 省	2003	1	デジタル		

21	地図	District administrative map of Thua Thien Hue Province by	DARD Thua Thien Hue 省	2003	1	コピー		
22	地図	Map indicating locations of FEs in Thua Thien Hue Province	DARD Thua Thien Hue 省	2003	1	コピー		
23	予算実績	The summary of implementation results of 661 Program (1999 - 2002) of Thua Thien Hue province	DARD Thua Thien Hue 省	2003	1	コピー		
24-1	林業公社改革	THE RENOVATION OF ORGANIZATION AND MANAGEMENT MECHANISM OF STATE-OWNED FORESTRY ENTERPRISES OF THUA THIEN HUE	DARD Thua Thien Hue 省	2002	34	デジタル		
24-2	林業公社改革	同上：データ・テーブル	DARD Thua Thien Hue 省	2002	8	デジタル		
25-1	JIBIC セクタ ーローン	PROJECT ON INVESTMENT IN PROTECTION FOREST PLANTATION IN WATERSHED AREA IN THUA THIEN HUE PROVINCE	DARD Thua Thien Hue 省	2002	30	デジタル		
25-2	JIBIC セクタ ーローン	同上：データ・テーブル	DARD Thua Thien Hue 省	2002	5	デジタル		
26-1	プログラム 661	PROJECT PROTECTION FOREST PLANTATION IN WATERSHED AREA OF HUONG RIVER	DARD Thua Thien Hue 省	1999	12	デジタル		
26-1	プログラム 661	同上：データ・テーブル	DARD Thua Thien Hue 省	2002	12	デジタル		

27	JBIC セクタ ーローン	Information for the project – A Luoi district Establishment of Afforestation Plan in Different Levels in Vietnam to use the JBIC's loan	DARD Thua Thien Hue 省	2002	3	デジタル		
28	質問票に対す る回答	The responses to the questionnaire on the forestry	DFD	2003	2	デジタル		
29	造林実績	Sumarized data about forest management and protection in 2002	DARD Thua Thien Hue 省	2002	1	デジタル		
30-1	質問票に対す る回答	Breif report about forestry works in Hoa Binh prov.	Hoa Binh 省	2003	9	デジタル		
30-2	回答	同上：データ・テーブル	Hoa Binh 省	2003	1	デジタル		
31	植林	Technical guidelines for planting, tending, managing	Hoa Binh 省					
32	植林	Cost estimate for afforestation in 1 ha by hybrid Acacia (density 1660 trees/ha)	Hoa Binh 省	—	1	デジタル		
33	植林	Cost estimates for afforestation 1 ha by Acacia mangium (density 1660 trees/ha)	Hoa Binh 省	—	1	デジタル		
34	植林	Summary of plan for plantation of forest to produce raw material in 2003 of Hoa Binh forestry Company	Hoa Binh 省	2003	1	デジタル		
35	植林	Summary of the plan allocated for harvesting and thinning in 2003 Hoa Binh forestry company	Hoa Binh 省	2003	1	デジタル		
36	Forest Company	Summary of plan allocated to affiliates of Hoa Binh Forestry Company for rending and protection of forest producing raw materials in 2003	Hoa Binh 省	2003	1	デジタル		

37	Forest Company	Hoa Binh PPC's decision to rename Ky Son FE in to Hoa Binh Forest Company and integration of Kimboi, Lung Son, Lac Thuy, and Tuly FEs to the company	Hoa Binh 省		2			
38	Forest Company	Organizational chart of Hoa Binh Forestry Company	Hoa Binh 省	2003	1	デジタル		
39	Forest Company	The decision for establishment of state enterprise for Hoa Binh Forestry Company	Hoa Binh 省		1			
40	JBIC セクタ ーローン	Job description of relationship of Project Management Unit of JBIC afforestation project with other relevant organizations	MARD	2003	1	デジタル		
41	植林	Technical transfer for plantation of Hybrid Acacia	Hoa Binh 省	-	1	オリジナル		
42	植林	Technical transfer for plantation of Acacia mangium	Hoa Binh 省	-	1	オリジナル		
43	森林面積	The inventory of land area by administrative units	Hoa Binh 省	2000	1	デジタル		
44	契約書	The guidance to households and economic organizations about procedures for plantation of forest producing raw material	Hoa Binh 省	1998	6	デジタル		
45-1	植林	Report on The current status of plantation forest managed by Hoa Binh Forestry Company	Hoa Binh 省	2002	1	デジタル		

45-2	植林面積	No.48-Table attached to Report 235-HB F.C.	Hoa Binh 省	2002	2	デジタル		
46	資産書	Accountance Balance Sheet of 2002	Hoa Binh 省	2003	1	デジタル		
47	苗畑 プログラム 661	Summary of seedling production serving afforestation activities under 661 program	Hoa Binh 省	2003	1	デジタル		
48	質問票に対する回答	Quang Nam prov.'s answer to questionnaire	Quang Nam 省	2003	9	デジタル		
49	農村開発	Advancing Rural Development From Vision to Action	世界銀行	1998	100	デジタル		
50	アクションプラン	Tropical Forestry Action Program Vietnam	FAO		107	デジタル		
51	国立公園	Review of Protected Area in Vietnam	Asian Bio Diversity		9	デジタル		
52	社会経済	Statistical Data	世界銀行		28	デジタル		
53	パートナーシップ	5MHRP Work Plan	5MHRP パートナーシップ		20	デジタル		
54	土地改革	Land reform and the development of commercial agriculture in Vietnam: policy and issues	Sally P. Marsh and T. Gordon MacAulay		28	デジタル		
55	法律	LAW ON FOREST PROTECTION AND DEVELOPMENT	ベトナム政府	1991	12	デジタル		
56	予算	Program 661 Budget	MARD	2003	16	デジタル		
57	土地改革	Land reform and food security in Vietnam	Reihana Mohideen		6	デジタル		
58	森林政策	Forest Policy Trends in Vietnam	Do Dinh Sam and Le Quang Trung	2001	5	デジタル		
59	土地改革	Sweden-Vietnam Cooperation on Land Administration Reform in Vietnam	SIDA		9	デジタル		

60	土地改革	Land Administration	AusAID	2000	25	デジタル		
61	PRA-GTZ	PRA Tool	GTZ		39	デジタル		
62	Guideline	GUIDELINE On community-based PARTICIPATORY PLANNING FOR SOCIO-ECONOMIC DEVELOPMENT	GTZ		49	デジタル		
63	Guideline	Guideline on review of commune extension workers' activities in 2002	GTZ	2003	5	デジタル		
64-1	Program661	Song Da FE Program 661	Hoa Binh 省		18	デジタル		
64-2	Program661	同上：データ・テーブル	Hoa Binh 省		28	デジタル		
65-1	Program661	Song Da WMB Program 661	Hoa Binh 省		3	デジタル		
65-2	Program661	同上：データ・テーブル	Hoa Binh 省		28	デジタル		
66	Program661	Hoa Binh Land Use Data Table	Hoa Binh 省		4	デジタル		
67	森林政策	Overview of Forestry of Hoa Binh province	Hoa Binh 省	1996	50	デジタル		
68	Master Plan	MASTER PLAN FOR THE SOCIO-ECONOMIC DEVELOPMENT	Hoa Binh 省	1996	50	デジタル		
69	Research Paper	Do Forests Protect Watershed? A short summary of current thinking on the links between land use, hydrological functions of watersheds and local livelihoods in Vietnam	FSIV	2002	14	コピー		
70	Research Paper	Research on the Development of Technology and Model for Sustainable Sloping Land Cultivating Practice in North-West of Vietnam	Ngo Dinh Que FSIV	2000	21	コピー		
71	Research Paper	Farm Forestry and Agroforestry Technologies, Extension, and Marketing in Asia-Pacific	Ngo Dinh Que	1994	19	コピー		

72	Report	Report by Forest Economy Department of FSIV	FSIV		12	オリジナル		
73	Master Plan	Summary Report Master Plan on Socioeconomic Development of Hoa Binh Province 2001-2010	Hoa Binh 省	2000	25	オリジナル デジタル		
74	Decision Paper	Master Plan of Da Bac dist	Hoa Binh 省 Da Bac 郡	1996	7	オリジナル デジタル		
75	Workshop results	Workshop on Media Production Techniques for Extension	Helvetas	1999	26	オリジナル		
76	契約書	Contract for Protection of Song Da FE	Song Da FE	1999	3	オリジナル デジタル		
77	Decision Paper	Decisions by Hoa Binh People's Committee on grant of financial ownership rights to revenue -based Public service providing institutions	Hoa Binh 省	2002	2	オリジナル		
78-1	Project Document	Extension and Training Support for Forestry and Agriculture in the Uplands	Helvetas	2002	32	オリジナル		
78-2	Project Document	同上：パワーポイント説明資料	Helvetas	2002	31	コピー		
79	FAO Publication	Code of Practice for Forest Harvesting in Asia-Pacific	FAO	1999	133	オリジナル		
80	FAO Publication	Regional Strategy for Implementing the Code of Practice for Forest Harvesting in Asia-Pacific	FAO	2000	31	オリジナル		

3. 資料集No.1 ~ 8

Hòa Bình Provincial People's Committee
 Number: 4790/QD-UB

Socialist republic of Vietnam
 Independence- freedom - Happiness

HoaBinh December 12, 2000

Decision by Hoa Binh provincial People's Committee on the approval of Song Da Watershed Plan project

Hòa Bình Provincial People's Committee

- In accordance with law on the organization of People's Committee and People's Council on June 21, 1994;
- In accordance with regulations on investment and construction management attached to Decree number 52/1999/ND-CP on July 8, 1999 by the Government;
- In accordance with Decision number 1505/QD-UB on December 30, 1999; Decision number 1508/QD-UB on December 30, 1999 and Decision number 1297/UD-UB by Hoa Binh provincial People's Committee on planning 3-types of forest in Da Bac, Mai Chau and Tan Lac district;
- On the consideration of Department of Planning and Investment's idea in official letter number 613TT/KHDT on November 9, 2000 on the approval of forest planning in Song Da watershed area.

Decide

Article 1: Approve the project of forest planning in Song Da watershed area to 2010.

1. Project name: project of forest planning in Song Da watershed area
2. Location: in the area of 16 communes: Dong Nghe, Suoi Nanh, Muong Tuong, Tan Dan, Tien Phong, Dong Ruong, Dong Chum, Muong Chieng, Yen Hoa, Hien Luong, Toan Son (Da Bac District), Phuc San Ba Khan, Tan Lac (Mai Chau District), Trung Hoa, Ngoi Hoa (Tan Lac District)
3. Forest planning in watershed area.

NO	Item	Situation in 1999 (ha)	Planning to 2010 (ha)
	Total area planned for protection forest	44511	44511
	Forest land		
A	Natural forest	27207	36207
1	- Timber forest	18920	25902
	- Bamboo forest	6833	13833
	- Mixed forest	2322	2322
	- Mountains with trees	2453	2453
	Plantation forest	7294	7294
2	- Plantation forest in the Protection project	2155	9155
	- Plantation forest in 747 project	3586	5586
	- other projects	2386	2386
	- PAM		
	- Mountains with bushes	230	230
	Bare land and hills	953	953
B	- Land capable of forestry production	1150	1150
		17304	8304

4. Work amount and investment

NO	Investment item	Amount	Investment
	Total		15192
I	Forestry		13629
	- Forest protection	27207 ha	6802
	- Forest regeneration	7000	1890
	- Forest plantation	2000	5000
2	Infra-structure		500
	- Road construction	20 km	500
3	Management expense		1000

5. Capital source: from 5 million ha project

6. Duration: 2001 -2010

7. Investment managing agency: Song Da Watershed Management Board
 Article 2: Head of People's Committee Office, Director of Department of Planning, Investment and Director of DARD, Director of Department of Finance and Price, Director of Provincial Bank, Chairmen of Mai Chau, Dab ac and Tan Lac districts, Head of Provincial 5 million ha project are responsible for the implementation of this decision.

Receivers
 As mentioned in
 article 2
 Chairman as Vice
 chairmen of
 Provincial PC
 Head of PC office

On behalf of Hoa Binh People's Committee
 Per procurationem the Chairman Hoa Binh People's Committee
 Vice Chairman

Nguyen Huu Duyet

HoaBinh December 12, 2000

Number: 24
Official statement

On the approval of the project of establishment and development of forest in critical watershed area in Hoa Binh Province (2000-2010)

I. Situation and the project scale

1. Project name: project of establishment and development of forest in critical watershed area in Hoa Binh Province

2. Location in 16 communes of 3 district: Tan lac, Da Bac and Mai Chau

3. Situation and the project scale

3.1. Area, soil conditions and resources

Total area	57626 ha
- Forestry land	27207.3 ha
+ Forest land	26058 ha
Natural forest	18901.8 ha
Plantation forest	7156.2 ha
+ Mountains with bushes	1149.3 ha
- Non-forest land	17857.7 ha
- Agriculture land	4272 ha
Other types of land	8295 ha

3.2. Population and labour

Muong ethnic	13380 people equivalent to 49.76%
Tay ethnic	7374 people equivalent to 27.42%
Kinh ethnic	1910 people equivalent to 7.1%
Dao ethnic	4227 people equivalent to 15.72%
Other ethnic groups	

Total of labourers: 10924

+ Labourers in agriculture : 95%

+ Labourers in industry and handicraft: 0.59%

+ Labourers in other fields: 4.1%

II. Project direction and target

1. Direction

- Reestablish and create and system of protection forest to rehabilitate the environment and ecology; exploit and use the natural resources properly; establish the area with forest canopy of 75% to ensure the safety of Hoa Binh Power Plant

- Reconstruct the management mechanism and species structure in forestry sector; reorganize the management system of forest protection and forest establishment.

- Protect the available forest area and regenerate forest, rehabilitate the protection system in Song Da river source, contributing to ecology rehabilitation and gene conservation.

2. Objectives

- Environment objectives

Protect and rehabilitate 31592.6 ha of available protection forest.

Improve the environment conditions in the area of bare land and hills; regenerate forest in the critical protection area to protection Hoa Binh Power work, clean water system and road system; increase the forest canopy to 75% in 2010.

- Economic objectives

Enrich the forest, exploit the non-timber products and forest by-products to meet the current need of local people, provide material to outside market, create jobs for local people contributing to poverty reduction and hunger alleviation.

- Social objectives

Create jobs and increase people's income; eliminate the bad and outdated customs to build a secure and developed life.

- Security and defense objectives

Together with local authorities, army and police forces to protect the security in the project area; strictly obey the state law and regulations especially the law and regulation on forest protection and development.

3. Project contents

3.1. Agriculture and forestry production

a. Silviculture:

- Plantation of protection forest	3787.4 ha
- Protection of natural forest	25572.6 ha
- Forest maintenance	6557.6 ha
- Forest regeneration	3639.5 ha
- Forest enrichment	940.2 ha

b. Agriculture production

Plantation of fruit trees

3.2. Infra-structure construction

- Road for the project	20 km
- Construction of forest protection station	3 stations
- Establishment of nursery	1000m ²

3.3. Population transmigration: 100 households

3.4. Equipment for the project

- Boat: 1; computer: 1

4. Investment: VND 30192.2 million

a. Silviculture: VND 27070.7 million

- Plantation of protection forest	VND 9468.5 million
- Protection of natural forest	VND 14001 million
- Forest maintenance	VND 1699.1 million
- Forest regeneration	VND 1139.7 million
- Forest enrichment	VND 762.4 million

b. Agriculture production

Plantation of fruit trees

c. Infra-structure construction VND 725 million

- Road for the project	VND 500 million
- Construction of forest protection station	VND 150 million
- Establishment of nursery	VND 75 million

d. Office expense: VND 2396.5 million

- Population transmigration	VND 80 million
- Management expense	VND 2236.5 million
- Equipment for the project	VND 80 million

5. Investment division according to capital sources

a. Basic construction capital	VND 27720.7 million
+ Capital from state budget	VND 27720.7 million
+ Loans	
b. Capital for office expense	VND 2471.5 million

III. Implementing measures

1. Organization

- Managing agency: Hoa Binh provincial People's Committee
- Investment managing agency: Hoa Binh WMB
- Rearrange the management structure to keep the close relationship between WMB and local authorities and relating organizations; implement the forest inventory into 3 types of forest in accordance with Decree 02/TTg on may 2, 1994 and Decree on January 4, 1994 by the Prime Minister.

2. Silviculture

Implement measures in forest rehabilitation, protection, regeneration and plantation; strictly follow the forest management and protection regulations and procedures.

3. Capital

Capital for project implementation is from state budget. This capital source in combination with the labour force from local people is used to establish a protection system in Hoa Binh critical watershed area.

WMB establishes this project to submit to Hoa Binh provincial PC for approval.

Request for approval of Forest Enterprise protection forest project
in Hoa Binh (1999- 2010)

To: Hoa Binh Provincial People's committee.

- On implementation of decision number 661/QĐ -TTg on 29 July, 1998 by Government Prime Minister on objective, duty, policy and organization of implementation of 5 million ha forest plantation project;
- On implementation of inter-sector circular by Ministry of Agriculture and Rural Development, MPI, Ministry of Finance number 28/1998 TT-LT on 3 February, 1999 on the guideline of implementation of decision number 661/QĐ-TTg on 29 July, 1998 by Government Prime Minister on objective, duty, policy and organization of implementation of 5 million ha forest plantation project;
- Basing on overall scheme of forestry development in Hòa Bình Province in 1996-2010 by Hoa Binh approved by Ministry of Agriculture and Rural Development in official document number 2009/NN/ PTNT on 13 September, 1996;
- Basing on overall socio-economic plan in Hòa Bình town, Đà Bắc District, Kỳ Sơn District and project for very critical protection area - Protection of Hòa Bình Dam;
- With the consultation to the results of 327 project, 3352 project and 747 project with the statistic document of experimental plantation in 1991 and document for land use allocation and the decision of forest classification into 3 types in 1999 by Hoa Binh People's Committee;

Sông Đà Forest Enterprise protection forest management board established the project for forest protection in the area of Hòa Bình Town, Vầy Nưa commune, 4 communes in Kỳ Sơn district and Forest Enterprise submitting to province People's Committee for approval with following contents:

Project name: Sông Đà Forest Enterprise protection forest Project

I. Project location:

The project is in 10 communes: Vây Nưa, Bình Thanh, Thung Nai, Thái Thịnh, Thống Nhất, Dân Chủ, Sủ Ngòi, Hòa Bình, Yên Mông and 4 quarters: Chăm Mát, Phương Lâm, Đông Tiến and Thịnh Lng.

II. Project scale

1. **Project total area: 25268 ha**

a. forestry area	14983,7 ha
- forest lans	9693,1 ha
+Natural forest	4993,9 ha
+ Plantation forest	3798,1 ha
+ Mountains with bushes	801,1 ha
- Bare land	5390,6 ha
+ Land capable for plantation of protection forest	4022,2 ha
+ Land capable for plantation of production forest	1368,4 ha
b: Agriculture area	3323,1 ha
c. Other types of land	6961,2 ha

2. Population and labour

a. Total of population in project area	78397 people
+ Hòa Bình town	73828 people
+ Vây Nưa commune (Đà Bắc district)	1321 people
+ Bình Thanh + Thung nai communes	3248 people
b. Total of labourers	9720 people
+ Agriculture and forestry production	5610 people
+ Handy craft and small scale industry production	1536 people
+ Trade and services	614 people
+ Local management	920 people
+ Other occupation	1040 people

III. Project objectives

1. Environment objectives

Rapidly create the protection capability for protection forest in project area by protection of current forest area, new plantation of native long trunk timber species, fruit and industrial trees with methods of agro-forestry.

Protect 7704,4 ha of current forest; new plantation of 2250 ha; regeneration of 224 ha increase the forest coverage to 55% to the year 2010.

2. Economic objectives

- Quickly create a secure income and gradually increase the living standard of households in project area by products from supporting, fruit and industrial trees. At the beginning state the plantation of short-term agriculture species is exploited
- To alleviate hunger and poverty, help people become rich from income from forest. The objective is: income per capita reaches USD 350/person/year in 2001 and USD 800/person/year in 2010.

3. Social objectives

- Create secure jobs for more than 4500 households and create 700 jobs each year.
 - Contribute to social and cultural development, increase of people's intellectual level, security stabilization and national defense.
- IV. Production allocation in the project area

1.1. Forest protection: 7704.4 ha

- Natural forest	4734.5 ha
- Mountains with bushes	801 ha
- Plantation forest under PAM project	876.8 ha
- Plantation forest under 747 project	366.6 ha
- Plantation forest under 327 project	754.5 ha
- Plantation forest under other projects	170.9 ha

1.2 Regeneration: 1772 ha

- Low level regeneration	1548 ha
- High level regeneration	224 ha

1.3 Plantation of protection forest

- Plantation with forestry trees	2000 ha
- Plantation with fruit trees of protection capability	250 ha

2. Construction of infrastructure

+ Construction of forest protection stations	60 m ²
+ Road construction for forest plantation	20 km

V. Capital investment

Capital investment total: VND 13857.66 million

1. Division by construction items

- Silviculture construction	VND 12126.35 million
+ Forest protection	VND 5157.75 million
+ Forest plantation	VND 5625 million
+ Low level regeneration	VND 337.65 million
+ High level regeneration	VND 314 million
+ Forest enrichment	VND 600 million
+ Forest maintenance	VND 91.95 million
- Infrastructure construction	VND 660 million
- Office expenses	VND 1071.31 million
+ Management expense	VND 1022.91 million
+ Project preparation	VND 3 million
+ Plantation forest inventory	VND 45.4 million

2. Division by capital sources

- Total of capital investment	VND 13857.66 million
+ Basic infrastructure capital	VND 660 million
+ Capital from state budget	VND 12126.35 million
+ Capital for office work	VND 1071.31 million

VII. Progress of project implementation

1. Year 2000

Total		VND 856.58 million
- Silviculture construction		VND 790.35 million
+ Forest protection	6455 ha	VND 322.75 million
+ Forest plantation	100 ha	VND 250 million
+ Low level regeneration	513 ha	VND 25.65 million
+ High level regeneration	100 ha	VND 100 million
- Capital for office work		VND 66.23 million
+ Management expense		VND 63.23 million
+ Project preparation		VND 3 million

2. Period of 2001 - 2005

Total		VND 6865.06 million
- Silviculture construction		VND 5904.5 million
+ Forest protection	7614 ha	VND 1903.5 million
+ Forest plantation	1150 ha	VND 2785 million
+ Low level regeneration	1248 ha	VND 312 million
+ High level regeneration	214 ha	VND 214 million
+ Forest enrichment	500 ha	VND 600 million
+ Plantation of fruit trees	200 ha	VND 500 million

- Infrastructure construction	VND 410 million
+ Construction of forest protection stations	VND 60 million
+ Roads for plantation and silviculture	VND 250 million
+ Equipment	VND 100 million

- Capital for office work	VND 550.56 million
+ Management expense	VND 505.16 million
+ Expense for forest inventory	VND 45.4 million

3. Period of 2006 - 2010

Total		VND 6136.02 million
- Silviculture construction		VND 5431.5 million
+ Forest protection	11726 ha	VND 2931.5 million
+ Forest plantation	1000 ha	VND 2500 million
- Construction of roads		VND 250 million
- Office and management expense		VND 454.52 million

4. Labour for project implementation

Number of laborers for project implementation from 2000 - 2010 is 5464 people.

Division by project progress

+ Year 2000	389 people
+ Year 2001 - 2005	2609 people

VIII. Solutions for project implementation

1. Investigation of forest contract and allocation

All of forest areas are contracted and allocated to people but in the field, many people don not know precisely about the forest or forest land allocated or contracted. Some very critical protection area is allocated to people. This is against the regulation of 661 Program by the government. That is why it is necessary to have re-investigation to adjust the contract or allocation according to 3 types forest classification.

2. Technical solutions on silviculture and agro-forestry applying 4silviculture technical methods to establish protection forest.

- Protection of current forest area
- Regeneration
- Plantation of protection forest
- Implementation of agro-forestry

3. Capital solutions

Almost all households participate in establishment of protection forest are in remote area, they are poor and lack of capital. Therefore, government needs to have capital preparation at the beginning of the project. It is necessary to have priority policy to let people get loans with low or no interest rate. This contributes to stabilize people's life and forest protection.

4. Organization solutions

Management agency: Hoa Binh People's Committee

Project implementing agency: Song Da Forest Enterprise

- Project management board needs to consult District People's ideas. The direct participation of commune chairman of People's Committee in the project area is necessary.
- Management board needs to have enough capability and knowledge for managing project's activities.

IX. Project's effects

1. Protection and environment effects

- Increase the coverage to 50% to crease a protection area for Hoa Binh lake and transportation works in Hoa Binh town area; at the same time create the good view for Hoa Binh town.

2. Economic effects

- Create a fruit trees area of 400 ha around Hoa Binh town giving 2000 tons of fruit with billions VND worth.
- Create 2250 ha of protection forest, 1722 ha of regeneration, 7700 of protection. The forest area will be 11700ha with 800000m³ wood reserve and hundreds of billion VND worth.
- Ever year the total forestry value will be over 1 billion VND and local people can have products from doing agro-forestry. This helps to improve people's living standard and protect protection forest sustainably.
- All mentioned above are contents of project of Song Da Forest Enterprise protection forest. Province People's Committee is requested to study and approve so that the project can be implemented soon.

Project management board of Song Da Forest Enterprise protection forest Project

Nguyễn Đức Sỹ

SONG DA Forest Enterprise PROTECTION FOREST PROJECT

INTRODUCTION. THE NECESSITY AND BASES OF PROJECT ESTABLISHMENT

I. Introduction

Hòa Bình Town is the socio-economic and cultural center of Hòa Bình province. This is the intersection place for road and water transportation from the province to northwest provinces. The hydro-power work is in Hòa Bình. Therefore the establishment of the project is necessary to protect and develop the very critical protection area for Hòa Bình lake and contribute to the creation of better environment and ecology for Hòa Bình Town.

II. Bases for the project

On the basis of project "Forest Enterprise development of agriculture, forestry and fishery in the very critical area around Hòa Bình lake" approved by Hoa Binh People's Committee at decision number 341 QD/UB on 29 September, 1993. implementation of decision 327-CT on 15 September, 1992 by Prime Minister on policy of use of bare land and hills; water surface and seaside alluvial ground. From the project of using special use protection forest in 327 - CT established by the decision 556-TTg on 12 September, 1995 by Prime Minister on the amendment and addition to decision 327 - CT and decision 200 - QD/UN on 2 April, 1997 by Hoa Binh People's Committee on joining projects in 327 program in Hòa Bình province.

- Basing on decision 661/QD - TTg on 29 July, 1998 by Prime Minister on objectives, duties and implementation of 5 million ha forest plantation project;
- Basing on circular 28/1999 TT-LT on 3 February by Ministry of Agriculture and Rural Development, MPI and Ministry of Finance on implementation of decision 661/QD - TTg on 29 July, 1998 by Prime Minister on objectives, duties and implementation of 5 million ha forest plantation project;
- Basing on Official document 2361/ BNN / PTLN on 30 June, 1999 by Ministry of Agriculture and Rural Development and document 37/ CV/ DA on 15 July, 1999 by Management Board of 5 million ha project in Hòa Bình province on guideline of establishment of 5 million ha project plan in 2000;
- Basing on overall scheme of forestry development in Hòa Bình Province in 1996-2010 by Hoa Binh approved by Ministry of Agriculture and Rural Development in official document number 2009/NN/ PTNT on 13 September, 1996;
- Basing on overall socio-economic plan in Hòa Bình town, Đà Bắc District, Kỳ Sơn District and project for very critical protection area - Protection of Hòa Bình Dam;
- With the consultation to the results of 327 project, 3352 project and 747 project with the statistic document of experimental plantation in 1991 and document for land use allocation by Forest Projection department;

Management board of Forest Enterprise protection forest establishes the 5 million ha project with the following contents

Part one:

Natural, people and socio-economic characteristics in project area.

I. Natural characteristics

1. Location and border

Location of the project

- 20^o45' to 20^o56' north latitude
- 105^o08 to 105^o23 west longitude
- In the north the project area is next to Tu lý, Hào Lý communes and Thanh Sơn communes (Phú Thọ province)
- In the south the project area is next to Ngòi Hoa, Trung Hòa communes (Tân Lạc District) and Bắc Phong - Thu Phong (Kỳ Sơn district).
- In the east the project area is next to Hợp Thành, Dân Hạ, Trung Minh, Độc Lập (Kỳ Sơn district) and Tú Sơn (Kim Bôi district)
- In the east the project area is next to Toàn Sơn and Tiên Phong (Đà Bắc district)

2. Topography

There are low mountains (300m - 500m) in the project area. The average slope level is 20^o-30^o, there are some flat and large valleys such as: Thung Chung, Thung Bang, Thung Bồng in Thung Nai commune, especially Quỳnh Lâm valley is thousands of hectares large this is the center of Hòa Bình town. In this valley, the population is large; the soil is fertile suitable for growing fruit, industrial trees and good for establishment of forest farm.

The whole project area is in Đà river basin in which there are 4 communes around Sông Đà lake.

3. Climate and hydrography

a. Climate:

The project area is in tropical zone with monsoon climate, there are 2 different seasons rainy (or hot) season from April to October. Dry (or cold) season is from November to March of the following year.

- Average temperature is 23^oC; temperature is highest in June and July about 39^oC, lowest in December about 12^oC.
- Average rainy level is 4207mm. It often rains in July, August, and September.
- Average humidity is 85%; highest is 89%, and lowest is 79%. Since the formation of Hòa Bình lake, there has been no hoarfrost.

b. Hydrography

Communes in the lake area are good for water transportation. There are many streams in the area; these can be used for supplying water for trees and daily needs.

4. Geology and soil condition

There are 3 types of soil in the project area

- Feralit soil group developed from base neutral magma. This group is allocated mainly on hillside with thick floor. This type of soil is spongy, good for many species.
- Feralit soil group developed from slope alluvial of limestone. This type is allocated below limestone mountains and in valleys. The area total is 800-1000 ha. The fertility is medium.
- Feralit soil group developed from slope alluvial of limestone
- Feralit from slope alluvial below hills

- In general, the project area has high mountains; the topography is steep and the area is remote. These make it difficult for forest plantation, protection and management. On the other hand, there is no hoarfrost and soil condition is good this is advantageous for developing forest farm growing industrial and fruit trees.

II. Situations of socio-economic, population and labour of the project area.

1. Situations on population and labour

- The project area has population of 78397 people.
- Hòa Bình town has 73828 people; Vây Nưa (Đà Bắc) has 1321; Bình Thanh and Thung Nai have 3248 people.
- Except for some communes and quarters don't have forestry land, there are 14 communes have forestry land with total of people is 21058 people. Hòa Bình town including 6 communes and 4 quarters has 16489 people; Vây Nưa (Đà Bắc) has 1321 people and 2 communes in Kỳ Sơn district have 3248 people. There are 3 ethnic races in the project area.

+ Mường	17120 people equivalent to 81.3%
+ Kinh	2653 people equivalent to 12.6%
+ Dao	1285 people equivalent to 6.1%
- Density	71 people/km ²

- Total of households participating in the project is 4675 households. Hòa Bình town has 3454 households; Vây Nưa (Đà Bắc) has 433 households and 2 communes in Kỳ Sơn district have 788 households.

- Total of labourers in project area is	9720 people
+ Agriculture and forestry production	5610 people
+ handy craft and small scale industries	1536 people
- Services and trade	614 people
- local management	920 people
- Other occupations	1040 people

GDP/head/year in 1995 is VND 1.515 million (USD 140)

2. Transportation

Project area is located in Hòa Bình town. This is the socio-economic and cultural center, the transportation is easy. However, in some remote communes, transportation is very difficult. Vây Nưa and Thái thịnh can not access by roads.

- Roads	89 km
+ National roads	16 km
+ Province roads	38 km
- Inter-commune roads	35 km

Water transportation in the area around Song Da lake is very convenient but other streams are small and impossible for water transportation.

3. Irrigation

In the area of Hòa Bình town, the system of dikes (Đà Giang and Quỳnh Lâm), system of canal are good for agriculture production. In other remote areas, there are some small dams. In almost all communes, people have to rely on streams to get water for daily need and productions. This makes the intensive cultivation difficult.

4. Power system

The project area is next to Hòa Bình hydro-electric system and 747 Project has supported to stabilize the people's life so almost all communes have power supply except for Vây Nưa communes and some remote villages.

5. System of telecommunication, TV and radio

Communes in Hòa Bình town are near the province TV and radio centers; other communes have TV and radio retransmitting stations. So all people in the project area have chance to access to TV and radio. This is a favorable condition for improving people's intellectual level and propagating economic, scientific and technical information.

6. Healthcare

Almost all communes have healthcare stations but the healthcare staff are limited in terms of number and knowledge meanwhile the facilities are insufficient. Therefore, the healthcare system does not satisfy the needs of local people.

7. Education

Education system in the project area is quite good. All villages in communes have primary schools, kindergarten, and junior secondary school. In addition, with the investment of 747 project the schools facilities are quite good.

8. Forestry production

In the socio-economic over plan in Hòa Bình province in 1996 - 2000 and plan of very critical protection area, all the forest and forest land in Bình Thanh, Vây Nưa, Thung Nai and Thái Thịnh are in the very critical protection areas; in Hòa Bình town, there are a few of production forest, most of the areas are critical protection area and others are for creation of landscape along sides of roads in the province. In the past years, in forestry sector, households in the area participated in forest plantation, protection and management under 327 program, bareland greening project PAM 3352, 747 project.

III. evaluatin of socio-economic situations which affect directly to the project establishment

1. Advantages

- Location of project area is the gate of northwest provinces. This is very good for improving commodities exchange and production.
- Climate and soil conditions are good for agriculture and industrial species. Especially, there is no hoarfrost in the area, this is very good for intensive cultivation.
- Hòa Bình provincial communist party passed a resolution on forest establishment and development; in addition the concerns of authorities are great support for the development in the area.

2. Difficulties

- Standard of living is low; annual income is only enough for the need of food. In remote area, many households do not have enough food. People in the area are lack of capital, technical knowledge in intensive cultivation and husbandry to improve the economic development.
- The area of natural forest is shrunken. A lot of valuable trees are cut down. This makes the forest poor in terms of species structure, wood reserve and canopy. The canopy is only 32% now. Therefore, the effects of protection, environment and ecology are low. This also affects to people's living standard and health.

With mentioned issues, the need of establishment of protection forest is necessary to promote the protection function and increase people's living standard.

PART II:
IMPLEMENTATION RESULT OF PROTECTION PROJECT UNDER 327
(1993 - 1998) AND PLAN OF FOREST CLASSIFICATION INTO 3 TYPES.

I. Implementation result of protection project under 327 (1993 - 1998) (refer to report on the implementation of CT 327 of the project)

II. Result on forest classification into 3 types

In accordance with the decision 1506 QD/ UB on 30 December, 1999 by Hòa Bình People's Committee on forest classification into 3 types (refer to new table of planning and implementation)

1. Area total: 25268 ha

- Forestry land	14983.7 ha
+ Forest land	9593.1 ha
+ Natural forest	4993.9 ha
+ Plantation forest	3798.1 ha
+ Mountains with bushes	801.1 ha
+ Bare land	5390.6 ha
- Agriculture land	3323.1 ha
- Other types of land	6961.2 ha

2. Protection forest

Area total: 16390.5

- Forestry land	11762.6 ha
+ Forest land	7704.4 ha
+ Natural forest	4734.5 ha
+ Plantation forest	2168.8 ha
+ Bare land	4022.2 ha
- Agriculture land	1512.2 ha
- Other types of land	3151.7 ha

3. Production forest

Area total: 8877.5 ha

- Forestry land	3257.1 ha
+ Forest land	1888.7 ha
+ Natural forest	259.4 ha
+ Plantation forest	1629.3 ha
+ Bare land	1368.4 ha
- Agriculture land	1810.9 ha
- Other types of land	3809.5 ha

III. Comments

As the plan of 3 types of forest, the forest area receives capital investment for establishment of protection forest is 11726.6 ha

Invested forest land: 6908 ha; remaining area 79.6 ha

Bare land needs investment to an area of 4002.2 ha.

Part III:

Plan of methods of forest establishment with the protection purpose

I. Project location and scale

1. Location

Project is established in 7 communes: Thái Thịnh, Hòa Bình, Yên Mông, Sù Ngòim Dân Chủ, Thống Nhất, Thái Bình and 4 quarters: Hữu Nghị, Chăm Mát, Phương Lâm and Tân Thịnh in Hòa Bình Town.

2 communes in Kỳ Sơn district are Bình Thanh and Thung Nai and 1 commune in Đà Bắc: Vầy Nưa.

2. Project scale

a. Area total: 25268 ha

- Forestry land	14983.7 ha
- Agriculture land	3323.1 ha
- Other types of land	6961.2 ha

b. Vầy Nưa commune (Đà Bắc district)

- Area total	6119 ha
- Forestry land	3472 ha

c. Bình Thanh and Thung Nai communes (Kỳ Sơn district)

- Area total	5805 ha
- Forestry land	3788.1 ha

d. Hòa Bình town

- Area total	13344 ha
- Forestry land	7723.6 ha

e. Forest enterprise

- Area total	1334 ha
- Forestry land	1277.68 ha

II. Project objectives

1. Environment objectives

Rapidly create the protection capability for protection forest in project area by protection of current forest area, new plantation of native long trunk timber species, fruit and industrial trees with methods of agro-forestry.

Protect 7704,4 ha of current forest; new plantation of 2250 ha; regeneration of 224 ha increase the forest coverage to 55% to the year 2010.

2. Economic objectives

- Quickly create a secure income and gradually increase the living standard of households in project area by products from supporting, fruit and industrial trees. At the beginning state the plantation of short-term agriculture species is exploited

- To alleviate hunger and poverty, help people become rich from income from forest. The objective is: income per capita reaches USD 350/person/year in 2001 and USD 800/person/year in 2010.

3. Social objectives

- Create secure jobs for more than 4500 households and create 700 jobs each year.

- Contribute to social and cultural development, increase of people's intellectual level, security stabilization and national defense.

III. Production allocation, capital need and implementation progress

A. Production allocation

1. Construction of Silviculture works

a. Forest protection: 7704.4 ha

- Natural forest	4734.5 ha
+ Poor forest	533.4 ha
+ Rehabilitation forest	723.3 ha
+ Mixed forest + bamboos	2225.4 ha
+ Rocky forest	1252.4 ha

- <i>Mountains with bushes</i>	801 ha
- <i>Plantation forest under PAM project</i>	876.8 ha
- <i>Plantation forest under 747 project</i>	366.6 ha
- <i>Plantation forest under 327 project</i>	754.5 ha
- <i>Plantation forest under other projects</i>	170.9 ha

b. Regeneration: 1772 ha

- Low level regeneration	1548 ha
- High level regeneration	224 ha

c. Plantation of protection forest

- Plantation with forestry trees	2000 ha
- Plantation with fruit trees of protection capability	250 ha

2. Construction of infrastructure

+ Construction of forest protection stations	60 m ²
+ Road construction for forest plantation	20 km

B. Capital investment

Capital investment total: VND 13857.66 million

1. Division by construction items

a. Silviculture construction

+ Forest protection	VND 12126.35 million
+ Forest plantation	VND 5157.75 million
+ Low level regeneration	VND 5625 million
+ High level regeneration	VND 337.65 million
+ Forest enrichment	VND 314 million
	VND 600 million

b. Infrastructure construction

VND 660 million

+ Construction of forest protection stations	VND 60 million
+ Roads construction for forest plantation	VND 500 million
+ Equipment	VND 100 million

c. Office expenses	VND 1071.31 million
+ Management expense	VND 1022.91 million
+ Project preparation	VND 3 million
+ Plantation forest inventory	VND 45.4 million

2. Division by capital sources

- Total of capital investment	VND 13857.66 million
+ Basic infrastructure capital	VND 660 million
+ Capital from state budget	VND 12126.35 million
+ Capital for office work	VND 1071.31 million

3. Progress of project implementation

a. Year 2000

Total	VND 856.58 million
- Silviculture construction	VND 790.35 million

+ Forest protection	6455 ha	VND 322.75 million
+ Forest plantation	100 ha	VND 250 million
+ Low level regeneration	513 ha	VND 25.65 million
+ High level regeneration	100 ha	VND 100 million

- Capital for office work	VND 66.23 million
+ Management expense	VND 63.23 million
+ Project preparation	VND 3 million

b. Period of 2001 - 2005

Total	VND 6865.06 million
- Silviculture construction	VND 5904.5 million

+ Forest protection	7614 ha	VND 1903.5 million
+ Forest plantation	1150 ha	VND 2785 million
+ Low level regeneration	1248 ha	VND 312 million
+ High level regeneration	214 ha	VND 214 million
+ Forest enrichment	500 ha	VND 600 million
+ Plantation of fruit trees	200 ha	VND 500 million

- Infrastructure construction	VND 410 million
+ Construction of forest protection stations	VND 60 million
+ Roads for plantation and silviculture	VND 250 million
+ Equipment	VND 100 million

- Capital for office work	VND 550.56 million
+ Management expense	VND 505.16 million
+ Expense for forest inventory	VND 45.4 million

c. Period of 2006 - 2010

Total	VND 6136.02 million
- Silviculture construction	VND 5431.5 million

+ Forest protection	11726ha	VND2931.5million
+ Forest plantation	1000 ha	VND 2500 million
- Construction of roads		VND 250 million
- Office and management expense		VND 454.52 million

C. Labour for project implementation

Number of laborers for project implementation from 2000 - 2010 is 5464 people.

Division by project progress

+ Year 2000	389 people
+ Year 2001 - 2005	2609 people
+ Year 2006 - 2010	2466 people

IV. Solutions for project implementation

1. Methods of forest contract and allocation

All of forest areas are contracted and allocated to people but in the field, many people do not know precisely about the forest or forest land allocated or contracted. Some very critical protection area is allocated to people. This is against the regulation of 661 Program by the government. That is why it is necessary to have re-investigation to adjust the contract or allocation according to 3-type forest classification.

Project implementing agency provides services for households in the protection forest establishment to increase the sustainability of protection forest and create a secure economy.

Continue to complete the forest contract and land allocation. Each household is contracted 1 - 1.5 ha for growing fruit and industrial trees. The contract should be clear about the rights and responsibilities of contracted households about participating in establishment and development of protection forest.

Increase the propaganda to people the policies by Communist Party and Vietnamese government on forestry economic development.

Support people to have plan for the use of forest and forest land to have effective production ensuring the protection capability and income creation of forest.

2. Technical solutions on silviculture and agro-forestry

2.1. Protection of current forest area

- Organize courses for learning forest protection regulations, laws and policies on benefit getting from protection contract.
- Establishment of Forest protection regulations
- Construct watchtower to prevent forest fire, forest destruction by people and animals; put warning sign posts and tables of regulations to instruct people to obey forest regulations
- Instruct on the collection of firewood and exploitation of forest specialties
- Give instructions on technical methods to increase the quality and protection capability of the forest.

2.2. Regeneration

The area with timber trees with the density of over 200trees/ ha can be used for forest regeneration to develop to valuable forest. The forest plots in remote area difficult for plantation can use regeneration combining with additional planting with native species with the density of 150 - 200 trees/ ha.

2.3. Forest enrichment

Following types of forest need enrichment

Poor forest needs additional planting with native species to create a forest structure with high value and good protection capability.

Forest planting short-term trees like acacia, eucalyptus... (PAM) needs to replace with long-term timber trees to ensure the protection function.

2.4 . Plantation of protection forest

Implementation of decision 661 by Government and inter-ministerial circular 28, the plantation should include 600 long-term timber trees or 400 long-term timber trees and 100 - 200 bamboos. Besides, plantation of supporting trees like acacia to ensure the economic value. To ensure the sustainability development of forest, following points should be taken into consideration:

- Selection of plantation trees with the criteria for protection purpose: tall, big and long-term species having large crown, developed roots and no seasonally leaf-falling.
- With mixed plantation, the understanding of characteristics of each species is necessary to ensure the co-development and avoid the competition among species.
- Allocate species in lines, contour, or group to ensure the fast growing supporting trees not to invade main species.
- All seedlings need selecting carefully obeying the technical criteria to ensure the forest equal development
- Plantation forest needs to have technically proper care.
- After finish the forest care phase, the plan for forest maintenance is needed to ensure the growth and protection function.

2.5. Implementation of agro-forestry

In reality, the forest with inter-cropping with agriculture species like rice, bean, peanuts... makes forest trees develop better. Meanwhile, forest inter-cropping with cassava, arrowroot, forest trees do not have enough light to develop.

Therefore in the beginning years, the inter-cropping with agriculture species is suitable for income raising.

Under the shade of planted trees, some shade-preferred species can be grown with no bad effects to the forest.

3. Capital solutions

Almost all households participate in establishment of protection forest are in remote area, they are poor and lack of capital. Therefore, government needs to have capital preparation at the beginning of the project.

It is necessary to have priority policy to let people get loans with low or no interest rate. This contributes to stabilize people's life and forest protection.

The protection forest establishment closely connects to the development of local economy. The government needs to combine the development projects to have synchronized development.

4. Organization solutions

Management agency: Hoa Binh People's Committee

Project implementing agency: Song Da Forest Enterprise

- Project management board needs to consult District People's ideas. The direct participation of commune chairman of People's Committee in the project area is necessary.

- Management board needs to have enough capability and knowledge for managing project's activities.

IV. Project's effects

- Protection and environment effects

Increase the coverage to 50% to create a protection area for Hoa Binh lake and transportation works in Hoa Binh town area; at the same time create the good view for Hoa Binh town.

- Economic effects

Create a fruit trees area of 400 ha around Hoa Binh town giving 2000 tons of fruit with billions VND worth.

Create 2250 ha of protection forest, 1722 ha of regeneration, 7700 of protection. The forest area will be 11700ha with 800000m³ wood reserve and hundreds of billion VND worth.

Ever year the total forestry value will be over 1 billion VND and local people can have products from doing agro-forestry. This helps to improve people's living standard and protect protection forest sustainably.

CONCLUSION AND REQUEST

Forest Enterprise protection forest project is located in area of Hòa Bình hydro-electric factory. Due to the importance of project area, the establishment of protection forest is necessary to protect the protection forest and improve people's life.

Since 1994, 327 project has invest about 4 billion. A lot of problems are still left like low investment, improper forest maintenance. To implement the 5 million ha forest plantation project, Song da Forest Enterprise established the project to submit to Hòa Bình People's Committee to approve so that the project can be implemented soon.

Hòa Bình, 28 February, 2000

Management Board of Forest Enterprise protection forest project

Nguyễn Đức Sỹ

NO	Items	Plan			Adjusted plan		
		Area (ha)	Price/unit	Capical (million VND)	Area (ha)	Price/unit	Capical (million VND)
	Total			9,530			9,530
I	Project of Song Da protection forest			1,995			2,031
1	Forest protection	29,953	0.05	1,498	29,442	0.05	1,472
2	Forest plantation with seedlings	100	1.75	175	119	1.75	208
3	Forest maintenance (year2)	51	0.35	18	51	0.35	18
4	Forest maintenance (year3)	91	0.40	36	91	0.40	36
5	High regeneration (year 3)	200	0.10	20	200	0.10	20
6	Low regeneration (year 1)	500	0.05	25	517	0.05	29
7	Low regeneration (year 3)	317	0.05	16	317	0.05	16
8	Forest protection station			100			100
9	Boat fixing			0			25
10	Management expenses			107			108
II	Project of Song Da FE protection forest			1,335			1,958
1	Forest protection	7,656	0.05	383	7,488	0.05	374
2	Forest plantation with seedlings	380	1.75	665	678		1,187
a	Plantation of protection forest				491	1.75	859
b	Improve eucaluptus forest				124	1.44	179
c	Plantation of forest in scientific reseach				43	2.50	108
d	Plantation of half-flooded forest	20	2.20	44	20	2.10	42
3	Forest maintenance (year2)	118		41	198		77
a	Forest maintenance (year2)	118	0.35	41	118	0.35	41
b	Forest maintenance (year2) (Cun slope)				80	0.45	36
8	Forest maintenance (year3)	208	0.40	83	208	0.40	83
9	High regeneration (year 3)	101	0.10	10	101	0.10	10
10	Low regeneration (year 1)	200	0.05	10	338	0.05	17
11	Low regeneration	461	0.05	23	461	0.05	23
12	Boat fixing						35
13	Management expenses			76			109
III	Ho Chi Minh statue forest garden			670			220
1	Plantation of 2 lines of trees	100		31			
2	Plantation of supporting trees			45			
3	Landscape forest plantation			200			
4	Imprivement of pine forest			10			
5	Fence			207			200
6	Ground preparation + timber fence			76			
7	Guard's house and office			74			
8	Design expense			10			10
9	Management expenses			17			10
IV	Da Bac protection forest project			502			692
1	Forest protection	2,673	0.05	134	2,673	0.05	134
2	Forest plantation with seedlings	100	1.75	175	194	1.75	340
3	Forest maintenance (year2)	172	0.35	60	214	0.35	75
4	Forest maintenance (year3)	175	0.40	70	175	0.40	70
5	Low regeneration	700	0.05	35	700	0.05	35
6	Management expenses			28			30
V	Mai Chau protection forest project			723			666
1	Forest protection	4,551	0.05	228	4,551	0.05	228
2	Forest plantation with seedlings	150	1.75	263	120	1.75	210
3	Forest maintenance (year2)	149	0.35	52	149	0.35	52
4	Forest maintenance (year3)	94	0.40	38	94	0.40	38
5	High regeneration (year 1)	100	0.05	50	100	0.50	50
6	High regeneration (year 3)	100	0.10	10	100	0.10	10
7	High regeneration (year 4)	314	0.05	16	314	0.05	16
8	Low regeneration (1,4)	500	0.05	25	500	0.05	25
9	Management expenses			41			38
VI	Tan Lac protection forest project			377			374
1	Forest protection	1,374	0.05	69	1,374	0.05	69
2	Forest plantation with seedlings	100	1.75	175	100	1.75	175
3	Forest maintenance (year2)	81	0.35	28	74	0.35	26
4	Forest maintenance (year3)	130	0.40	52	130	0.40	52
5	Low regeneration	633	0.05	32	633	0.05	32
6	Management expenses			21			21

ホアビン省 2002年 予算計画書

NO	Items	Plan			Adjusted plan		
		Area (ha)	Price/unit	Capical (million VND)	Area (ha)	Price/unit	Capical (million VND)
VII	Lac Son protection forest project			788			936
1	Forest protection	5,783	0.05	289	5,783	0.05	289
2	Forest plantation with seedlings	150	1.75	263	224.5	1.75	393
3	Forest maintenance (year2)	225	0.35	79	225	0.35	79
4	Forest maintenance (year3)	129	0.40	52	129	0.40	52
5	High regeneration (year 3)	112	0.10	11	112	0.10	11
6	Low regeneration	80	0.05	40	800	0.05	40
7	Ho Chi Minh High Way project	4		10	4	2.50	10
a	Plantation of protection forest	4		10	4	2.50	10
8	Management expenses			45			52
VIII	Ky Son protection forest project			382			204
1	Forest protection	1,786	0.05	89	1,300	0.05	65
2	Forest plantation with seedlings	100	1.75	175	60	1.75	105
3	Forest maintenance (year2)	100	0.35	35	0	0.35	0
4	Forest maintenance (year3)	91	0.40	36	0	0.40	0
5	Low regeneration	500	0.05	25	300	0.05	15
6	Establishment of new project						7
7	Management expenses			22			12
IX	Cao Phong protection forest project						228
1	Forest protection				700	0.05	35
2	Forest plantation with seedlings				52	1.75	91
3	Forest maintenance (year2)				100	0.35	35
4	Forest maintenance (year3)				91	0.40	36
5	Low regeneration				200	0.05	10
6	Establishment of new project						8
7	Management expenses						12
X	Luong Son protection forest project			310			309
1	Forest protection	1,133	0.05	57	113	0.05	57
2	Forest plantation with seedlings	100	1.75	175	100	1.75	175
3	Forest maintenance (year2)	79	0.35	28	79	0.35	28
4	Forest maintenance (year3)	74	0.40	30	74	0.40	30
5	Ho Chi Minh High Way project	1	2.50	3	1	2.50	3
6	Plantation of protection forest	1	2.50	3	1	2.50	3
7	Management expenses			17			17
XI	Kim Boi protection forest project			471			431
1	Forest protection	1,832	0.05	92	1,980	0.50	99
2	Forest plantation with seedlings	100	1.75	175	90	1.75	158
3	Forest maintenance (year2)	91	0.35	32	91	0.35	32
4	Forest maintenance (year3)	100	0.40	40	100	0.40	40
5	High regeneration (year 3)	100	0.10	10	100	0.10	10
6	Low regeneration (1)	300	0.05	15	280	0.05	14
7	Low regeneration (4)	517	0.05	26	517	0.05	26
8	Ho Chi Minh High Way project			58			28
9	Forest Protection	54	0.05	3	50	0.05	3
10	Plantation of protection forest	22	2.50	55	10	2.50	25
11	Management expenses			26			24
XII	Lac Thuy protection forest project			269			377
1	Forest protection	1,257	0.05	63			96
2	Forest plantation with seedlings	60	1.75	105			193
3	Forest maintenance (year2)	115	0.35	40			40
4	Forest maintenance (year3)	56	0.40	22			22
5	Ho Chi Minh High Way project			12			4
6	Forest Protection	22	0.05	1			1
7	Plantation of protection forest	4	2.50	10			3
8	High regeneration (year 2)	4	0.20	1			
9	Management expenses			15			
XIII	Yen Thuy protection forest project			478			386
1	Forest protection	1,928	0.05	96	1,928	0.05	96
2	Forest plantation with seedlings	100	1.75	175	100	1.75	175
3	Forest maintenance (year2)	100	0.35	35	100	0.35	35
4	Forest maintenance (year3)	100	0.40	40	100	0.40	40
5	Low regeneration	300	0.05	15	300	0.05	15

ホアビン省 2002年 予算計画書

NO	Items	Plan			Adjusted plan		
		Area (ha)	Price/unit	Capical (million VND)	Area (ha)	Price/unit	Capical (million VND)
6	Ho Chi Minh High Way project			90			3
7	Forest Protection	39	0.05	2			3
8	Plantation of protection forest	35	2.50	88	60		0
9	Management expenses			27			
XIV	Thuong Tien protection forest project			485			424
1	Forest protection	3,830	0.05	192	3,469	0.05	173
2	Forest plantation with seedlings	70	1.75	123	65	1.75	114
3	Forest Plantation in botanical garden	4	7.50	30	3.5	7.50	
4	Forest maintenance (year2)	55	0.35	19	55	0.35	
5	Forest maintenance (year3)	51	0.40	20	51	0.40	20
6	High regeneration (year 3)	183	0.10	18	183	0.10	18
7	Low regeneration	600	0.05	30	580	0.05	
8	Maintenance of pond banks in botanical garden			27			
9	Management expenses			26			24
XV	Hang Kia - Pa Co protection forest project			247			125
1	Forest protection	4,268	0.05	213	2,363	0.05	118
2	Management expenses	400		20			
3	Management expenses			14			7
XVI	Thuong Tien protection forest project			323			71
1	Forest protection	1,800	0.05	90			
2	Forest plantation with seedlings	50	1.75	88			
3	High regeneration (year 1)	100	0.50	50			
4	Management expenses	600	0.05	30			
5	Forest protection station			50			71
6	Management expenses			15			
XVII	Spare budget			75			0
XVIII	Management expense (Steering committee+provincial management board)			108			108

THE SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

VIETNAM FORESTRY CORPORATION
HOA BINH FORESTRY COMPANY
KY SON FORESTRY FACTORY

DOCUMENT

**The guidance to households and economic organizations
about procedures for plantation of forest producing raw material
(Cycle from 1998 to 2004)**

Name of Household : Nguyen Thanh Hai
Commune : Dan Ha

Ky Son, June 1998

THE SOCIALIST REPUBLIC OF VIETNAM

Independence - Freedom - Happiness

The application form for plantation of forest producing raw material
The year of 1998

To: Dan Ha commune People's Committee
Directorate of Ky Son Forestry Factory

My full name is Nguyen Thanh Hai, age is 55.
My residence is Mo village, Dan Ha commune, Ky Son district, Hoa Binh province.
There are 5 members in my family, out of which 3 are main laborers.

After I heard from Ky Son Forestry Factory and commune PC about content, purpose, requirement and procedures for plantation of forest producing raw material serving MDF Factory in Luong Son, Hoa Binh, my family has an area of barren land that has been allocated by the government under Decree 01CP at Mo village, Dan Ha commune, Ky Son district.

I spontaneously to make this application letter requesting to be participated contract for afforestation, in case my application is approved, I commit to carry out the followings:

- To fully comply with and carry out obligations mentioned in the contract.
- To execute all technical procedures and be under the instruction/advises of Forestry Factory about afforestation, tending, management and protection of forest.
- To use the capital for afforestation in the right way to make highest efficiency.

We kindly request the Forestry Factory to consider and accept my application.

10 June 1998

Applicant

Nguyen Thanh Hai

Hoa Binh Forestry Company
Ky Son Forestry Factory

Contract for plantation of forest producing raw material in 1998

I. Bases for the signing of the contract

- Based on Law for Economic Contract issued by State Council of Vietnam SRV on September 29, 1989
- Based on Ministerial Council's Decree No. 17 dated January 16, 1990 stipulating detailed implementation of the Law for Economic Contract
- Based on the approved afforestation project in 1998 for Luong son MDF Factory
- Based on approved designing and cost estimates for afforestation

Today, 18 October 1998, at Dan Ha commune, Ky Son district, Hoa binh province

Party A: Ky Son Forestry Factory

Bank account No. 4311010000 opened at Ky Son district Agriculture and Rural Development Bank

Address: Ky Son district, Hoa Binh province

Tel No.:

Represented by Mr. Nguyen Van Hoa Acting Director

Party B: Household

Bank account

Address: Dan Ha commune, Ky Son district, Hoa Binh province

Tel No.:

Represented by Mr. Nguyen Thanh Hai, owner of household, who has ID card No. 113010591 issued by Hoa Binh Polices on January 29, 1993.

Two parties agreed to sign this contract with the following terms and conditions.

Article 1: The party B is agreed to take this contract for the plantation, tending, management and protection of forest producing raw material for the cycle of 7 years from 1998 until 2004. (The next cycle will have additional contract).

1.1 The area for plantation and protection: 25.6 ha, in which

- The area of acacia magium is 11.6 ha
- The area of hybrid acacia is 14 ha.

1.2 Contract value

- Total contract value is 189,117,929 VND. In which,
 - + Acacia mangium: 11.6 ha x 7,208,632 VND/ha = 83,620,131 VND
 - + Acacia hybrid: 14 ha x 7,535,557 VND/ha = 105,497,798 VND

1.3 Cost norm for each completed item

- For acacia mangium:
 - Labor fee : 3,595,184 VND/ha
 - Fee for seedling : 484,000 VND/ha
 - Fee for fertilizer : 1,000,000 VND/ha
 - General expenses : 1,848,432 VND/ha
 - Other expenses : 281,016 VND/ha

- For acacia hybrid:
 - Labor fee : 3,508,725 VND/ha
 - Fee for seedling : 1,095,600 VND/ha
 - Fee for fertilizer : 830,000 VND/ha
 - General expenses : 1,804,088 VND/ha
 - Other expenses : 297,144 VND/ha

1.4 Site for afforestation

The plantation will be carried out in forestry land that has been allocated under the Decree No. 01 and 02/CP in Mo village, Dan Ha commune.

- The design and cost estimates have been made for each plot
- Tree species: Acacia mangium, acacia hybrid + eucalyptus
- Planting density:
 - + Acacia hybrid: 1660 trees/ha
 - + Acacia mangium: 2000 trees/ha

1.5 Contract validity

From 1998 to 2004.

Article 2: Technical requirement

- Party B shall comply with all procedures as mentioned in approved design document and specific technical regulation.

2.1 To execute the plantation in accordance with approved designing document and cost estimates as well as all document/procedures for planting techniques, tending, management and protection of forest.

2.2 The quality of plantation forest

To identify the places with good soil condition and thickness of soil layer is over 70 cm, after 6 – 7 years, the forest could be matured with average stock volume of 120m³/ha for acacia hybrid and 100m³/ha for acacia mangium.

2.3 Product standard

Raw timber that are not subject to any humid degree, not rotten, no worm, and are arranged by plot with equal length for easy measurement. The diameter of small end of timber must be over 5 cm (excluded tree bark).

Article 3: Party B shall pay back to Party A borrowed capital plus interest by timber product.

3.1 The levels of product to be collected to cover the borrowed capital plus interest after a cycle of 7 years are as follows:

- Plantation is made in land No. 01 (land managed by FE)
 - + Acacia hybrid: 50 m³/ha.
 - + Acacia mangium: 48 m³/ha.
- Plantation is made in land No. 02 (land managed by local people)
 - + Acacia hybrid:
 - + Acacia mangium:

3.2 Delivery of product.

Party B shall be responsible for loading timber product in the Party A's vehicles at yard No. 1 (the logging area where there is a car accessible road).

3.3 The price to buy the timber product exceeded contracted volume.

- Party A shall buy the Party B's timber volume that arrived exceeded the contract volume following the specification mentioned in 2.3
- The price shall be negotiable at the selling time.

Article 4: Investment capital

Party A shall lend party B a loan in comply with Prime Minister's Decision No. 264/TTg dated July 22, 1992 with the paying back by timber product after a cycle of 7 years.

Time for settlement of loan is after a 7 years (when the business cycle is finished).

4.1 Advanced capital

Based on the contract plantation volume, application letter for plantation of forest, Party A shall pay advance to party B as follows:

- Total number of seedlings in accordance with contract
- Inorganic fertilizer in accordance with designing document.
- Labor fee that is responsive to each sivilculture stage.

4.2 Inspection and payment settlement

- Two parties agreed that the approved cost norm for afforestation will be taken into consideration as base for payment settlement.
- Party A shall make a plan for monitoring of implemented volume of work to be inspected in accordance with relevant regulation/procedure.
- Party A shall make inspection sheet and execute necessary payment procedures as a base for the settlement of payment.
- The quality of plantation forest is stipulated as follows:
 - + The surviving proportion of plantation after three months must be over 90%, the payment thereof shall be made 100%. In case the surviving proportion is less than 90%, the payment shall be made after the surviving proportion has been improved to reach over 90%.

4.3 Bases for payment

- Availability of the plan and signed contract between Party A and Party B.
- Availability of inspection report made after completion of each silviculture stage in accordance with designing document.
- Availability of confirmation made by Party A, Party B and relevant local authorities.

Article 5. Responsibility

5.1 Responsibility of Party A.

- To make designing document and cost estimate to submit and get the approval of authorized agencies.
- To provide sufficient and right investment to local people in accordance with designing document, and to create favorable condition for the local people to catch up the palnting season.
- To provide sufficient seedlings and fertilizer at good quality.
- To provide guidance and monitoring of technical procedures in terms of planting season, planting density, management and protection of forest, pest and disease control, etc. to individual households.
- To make plan for logging activity and purchasing of timber products.
- To make adequately payment procedures and settle payment in accordance with cost estimates.

5.2 Responsibility of Party B

- To execute the works in accordance with the approved designing document regarding planting season, technical procedures (there will be a document to provide the detailed guidance).
- During the cycle to establish forest, Party B shall be responsible for spending exactly and adequately the capital received for plantation activities to make sure that forest shall be well grown up and reached high efficiency. The forest will not be lost in any case except force majeure that will be mentioned in below articles.
- In case the loss of forest occurred and party B does no have enough timber product to pay back to party A, Party B has to pay back to Party A (by money) whole borrowed

capital plus interest with the amount equivalent to the selling value of timber product should be available from certain plot at the payment timing.

- In case, Party B spends capital that should be used for afforestation for the other purpose causing the defect of the plantation forest, he should not only pay all compensation for the losses but also be subject to the current law.
- When the plantation forest is getting matured for exploitation, Party B shall carry out the logging activity in accordance with the detailed logging design made by Party A.
- To pay back borrowed capital plus interest by timber product in accordance with stipulation in 3.1 and Loan Agreement.
- To come to agreement to execute the contract with Party A for selling of timber volume that exceeded the amount Party B should pay back to Party A.

5.3 Dispute solution

5.3.1 The force majeure are the cases of natural calamities causing terrible forest fire, flooding, earthquake despite of most active countermeasures possibly taken by Party B. Party B should inform to local authorities, local polices, forest ranger and Party A within two days from happening of forest losses. The site report should be made by relevant authorities. Party A and Party B shall discuss to find out the best solution and report to upper authorized agency for its approval.

5.3.2 Treatment to dispute

Two parties shall discuss and come into amicable settlement to any problem arisen during the implementation of the contract. The settlement results shall be presented in written document and this document shall become a part of the contract.

In case the amicable settlement will not be reached by two parties, the case will be brought to economic court and the court's decision shall be final to both parties.

Article 6: Common commitment

- Two parties commit to fully comply with the mentions of this contract, and shall inform to the other party 15 days in advance in case of happening of any difficulty or burden to the implementation of the contract.
- Any party that violates this contract shall be settled and paid penalty in accordance with the current law.

This contract has been made into 2 copies, each party shall keep one equivalent copy of the contract.

Party A

Party B

Confirmation by commune people's committee

(attached to this contract are Application form for loan made by local people, Loan Agreement and Application for site for afforestation).

Department for Agriculture
& Rural Development
Da River Watershed Management Board
No. 01/HDKT

THE SOCIALIST REPUBLIC OF VIETNAM
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ECONOMIC CONTRACT
ON PROTECTION OF DA RIVER PROTECTION FOREST

- Pursuant to the Law for Economic Contract dated September 25, 1999 of State Council and Degree No. 17/HDBT dated January 16, 1990 of Ministerial Council stipulating details of execution of the Law for Economic Contract;
- Pursuant to Decision N^o 661QD-TTg dated July 29, 1998 of the Prime Minister on objectives, duty, policy and implementation of 5 million ha afforestation Project.
- Pursuant to relevant regulations regarding management, protection and development of Hoa Binh lake highly critical protection forest;
- Based on the Decision N^o 282/2002/QD-UB dated February 08, 2002 of Hoa Binh Provincial People’s Committee regarding working plan for the year of 2002 for 5 million ha afforestation Project;

Today, January 10, 2002, at Ha Cooperative, Dong Chun commune, Da Bac district of Hoa Binh province:

WE ARE INCLUDED THE FOLLOWINGS:

A. Party A: Da River Watershed Management Board:

1. Mr. Phung Tran Giao, Deputy Manger of WMB
 2. Mr. Hoang Van Cuong, Technical staff
 3. Mrs. Nguyen Thi Hai, Accountant
 4. Mr. Phung Hung, Technical staff
- Resident place: Mang La FE.

B. Party B: (Household, Cooperative, commune):

1. Mr. Dinh Cong Chan who is Household owner takes over the area of forest belonging to Ha Cooperative, Dong chum commune, Da Bac district, Hoa Binh province for protection.
2. Mr. Dinh Cong Hoi, Chairman of Ha Cooperative, Dong chum commune, Da Bac District, Hoa Binh province.
3. Mr. Luong Van Phon, Chairman of Dong Chum Commune PC, Da Bac district, Hoa Binh province.

After discussion, we agreed on the following terms and conditions:

Article 1: Party A agrees to contract Party B for its management and protection of the forest area as following:

CONTENT OF CONTRACT

1. Protection of current available forest:
 - Natural forest:22.5.....Ha
 - Planted forest with closed canopy: Ha
2. “Low” regeneration forest:Ha
3. “High” regeneration forest 3rd year: Ha

Article 2: Technical aspect.

a. For forest protection: This is to request to comply with the Law of forest management and protection (including natural forest and planted forest).

- Not to graze buffalos, cows and pig in planted forest.
- Not to harvest forest products.
- Not to practice shifting cultivation in natural forest.
- Not to hunt forest animals.
- Burning in forest is forbidden and not to fire forest.

b. For “high level” regeneration forest, it is requested to additionally plant sufficient number of trees as required and carry out the maintenance of the forest in accordance with approved design.

Article 3: Inspection and payment

- Party A shall pay to Party B sufficient amount for labour fee and the work items implemented by Party B in comply with unit rate approved by DARD.

Article 4:

1. The inspection shall be done and approved by Party A in case Party B complies with above articles 1 and 2.
2. The inspection shall be done and approved by Party A in case Party B ensures the contract duration.
3. The contract duration is from signing date until December 30, 2002.
4. Any disputes arisen and/or any amendment needed during implementation of the contract, the two parties will meet each other for amicable settlement.

Article 5: Obligation

Two parties commit to execute the contract in full accordance with articles mentioned in the contract. Any damages to the contract shall be subject to the Law.

This contract has been made into 5 copies, equally.

Party A keeps 4 copies, Party B keeps 1 copy.

Party B
Household owner.

Party A

Cooperative (hamlet)

Commune People’s Committee

Da River Watershed Management Board

Attachment on Volume of the Works

Party B received contract and allocate to the households

(Following contract No. 01 343 /HDKT dated January 10, 2002)

Cooperative (Hamlet) Ha.....Commune: Dong Chum.....District: Da Bac.....Province: Hoa Binh

No.	Name of HH owner	Newly planted forest (ha)	Tending of planted forest (ha)			Protection of forest (ha)			
			Total (ha)	Year 2	Year 3	Total (ha)	Protection of natural forest	Regeneration at high and low level	Protection of planted forest with closed canopy
1	2	3	4	5	6	7	8	9	10

ホアビン省 ダ河流域20コミュニティの森林と土地利用

Name of Commune	Total Land area	Forest land																	Non-forestland											
		661 Target area *	Forest land Total	Forest land Total (%)	Natural forest					Plantation forest							Mountains with bushes	forestry-capable land			Agriculture-capable land	Agricultural land	Other types of Land							
					Timber forest			Forest with timber trees, bamboo and small wood	Mixed forest	Rocky mountains with trees	Sub total	327 Project	747 Project	Forest planted before 1989	PAM project	Watershed protection project		Material forest plantation project	661 project	Sub Total				forestry-capable land Total	forestry-capable land (%)	Ia	Ib	Ic		
					Medium forest	Poor forest	Restoring forest																							
I	Dã Hắc District	47,606	37,046	22,405	47.1%	533.3	3,132.8	3,117.8	2,434.1	2,208.5	3,779.4	15,205.9	759.1	244.0	1,087.4	0.0	1,930.0	0.0	674.5	4,695.0	2,503.9	14,641.3	0.0	3,530.1	7,579.1					
1	Dông Nghiê Commune	3,156	2,677	2,325.8	73.7%		123.4	364.9			1,641.5	2,129.8			50.0	146.0			196.0		351.2	0.1	221.1	130.1	306.0	173.0				
2	Suối Nánh Commune	3,692	2,611	1,306.6	35.4%		186.5	149.9			808.2	1,144.6			94.0	68.0			162.0		1,304.4	0.4	553.7	1,205.7	294.0	123.0	209.0			
3	Mường Túng Commune	1,423	793	277.3	19.5%		186.7				30.6	217.3	60.0						60.0		506.0	0.4	336.4	481.2	131.1	197.0				
4	Mường Chiêng Commune	2,535	2,028	1,028.4	40.6%			357.8	205.9	112.7		676.4	59.7		190.0		102.3		352.0		999.6	0.4	802.4		197.0	358.0	149.0			
5	Dông Chum Commune	5,533	5,155	2,834.5	51.2%		1,544.1	124.4	336.2	510.3		2,515.0			98.0	54.0			152.0	167.5	2,320.4	0.4	520.4	932.7	876.3	201.0	177.1			
6	Dông Rương Commune	4,249	5,364	3,702.0	87.1%	333.3	453.0	114.1	132.5	153.3	513.9	1,900.1	54.6		82.0	3.4			140.0	1,661.9	1,661.9	0.4	522.0	717.7	422.2	209.0	338.0			
7	Yêu Hòa Commune	3,329	2,387	646.5	19.4%			277.2	4.1		177.2	458.5	43.7		142.0				188.0		1,740.0	0.5	499.9		1,240.2	353.0	589.5			
8	Tân Dân Commune	4,389	2,996	1,347.4	30.7%		105.7	197.2	7.8	682.2		992.9	17.6		134.0			13.9	354.5		1,648.6	0.4	37.4		1,611.2	385.0	1,008.0			
9	Tân Phong Commune	6,381	4,001	1,980.9	31.0%			389.2	121.6	63.3		574.1	156.4		14.9				202.0		641.7	1,015.0	391.8	2,019.6	0.3	863.9	112.2	1,043.5	515.0	1,863.5
10	Vây Nưa Commune	6,119	3,472	3,116.3	50.9%		533.4	483.6	1,146.7	68.4	109.7	2,341.8	88.1	244.0	36.5				514.6	259.9	355.7	0.1				383.0	2,264.0			
11	Hiên Lương Commune	4,023	3,305	1,921.1	47.8%			109.4	464.6	467.0	1,041.0	279.0			5.0				581.0		865.0	17.1	1,381.9	0.3	384.2	645.4	388.3	251.0	467.0	
12	Tân Sơn Commune	2,777	2,268	1,916.0	69.0%			659.5	369.9	153.7	31.3	1,214.4			241.0				436.0		18.9	695.9	5.7	352.0	0.1	312.9	21.2	17.9	315.0	142.0
II	Mai Châu District	8,746	6,677	5,627.8	64.3%	0.0	110.6	588.6	990.8	12.8	1,131.9	2,834.7	1,053.4	684.7	177.9	380.9	0.0	0.0	0.0	2,396.9	496.2	1,049.2	0.1	412.7	0.0	1,245.2	230.0	695.6	1,143.4	
13	Tân Mai Commune	3,562	2,565	2,416.0	67.8%		106.6	195.5	412.2	12.8	186.8	1,113.9	291.7	271.8	111.1	330.9				1,005.5	296.6	149.3	0.0	148.0		380.0	252.5	744.4		
14	Phiếu Sơn Commune	3,315	2,528	2,200.2	66.4%		4.0	193.1	578.6		108.4	884.1	761.7	412.9	66.8	50.0				1,291.4	24.7	328.0	0.1	148.0		380.0	200.0	300.6	286.2	
15	Bà Khan Commune	1,869	1,584	1,011.6	54.1%						836.7	836.7							0.0	174.9	571.9	0.3	116.7		485.2	30.0	142.7	112.8		
III	Tân Lạc District	7,392	4,810	3,901	52.8%	0.0	16.8	400.1	43.5	250.1	2,492.5	3,203.0	541.8	129.6	0.0	7.5	0.0	0.0	0.0	678.9	19.0	909.3	0.1	597.9	0.0	528.4	317.5	530.0	1,836.5	
16	Trung Hòa Commune	3,403	2,502	2,199.4	64.6%		16.8	391.0	43.5	250.1	1,195.0	1,896.4	146.9	129.6		7.5				284.0	19.0	302.7	0.1	420.3		117.6	260.0	523.3		
17	Ngôi Hòa Commune	3,989	2,308	1,701.5	42.7%			9.1			1,297.5	1,308.6	394.9						394.9		606.8	0.2	177.6		528.4	200.0	260.0	1,313.2		
IV	Cao Phong District	5,805	4,153	3,417.6	58.9%	0.0	0.0	49.5	5.7	339.4	1,127.3	1,521.9	306.5	122.6	47.0	356.0	141.2	0.0	0.0	973.3	922.4	735.5	0.1	0.0	0.0	0.0	495.7	633.5	887.7	
18	Thương Nại Commune	3,348	2,428	2,289.3	68.4%			23.7	5.7	28.8	1,122.3	1,180.5	165.3	39.8		194.4				399.5	709.5	138.1	0.0			285.7	376.2	682.3		
19	Bình Thanh Commune	2,457	1,726	1,128.1	45.9%			25.8			310.6	5.0	341.4	141.2	82.8	161.6	141.2			573.8	212.9	597.4	0.2			210.0	257.3	205.4		
V	Hòa Bình Town	1,632	894	522.6	32.0%	0.0	0.0	69.2	62.7	95.4	15.4	242.7	164.2	0.0	0.0	77.3	0.0	0.0	241.5	38.4	371.6	0.2	0.0	0.0	0.0	16.0	20.0	107.8		
20	Thái Thịnh Commune	1,632	894	522.6	32.0%			69.2	62.7	95.4	15.4	242.7	164.2	0.0	0.0	77.3	0.0	0.0	241.5	38.4	371.6	0.2			16.0	20.0	107.8			
Total		63,789	48,770	31,972.8		533.3	3,243.4	3,825.1	3,493.3	2,656.1	6,054.0	19,805.2	2,283.2	1,051.3	1,312.3	814.2	2,071.2	0.0	674.5	8,206.7	3,960.9	16,797.6		412.7	0.0	1,245.2	741.7	4,879.2	9,718.0	

* 661 Target Area = Forest land Total + Forestry-capable land

Thua Thien Hue People's Committee
Department of Agriculture and Rural Development

**PROJECT ON INVESTMENT IN PROTECTION
FOREST PLANTATION IN WATERSHED AREA IN
THUA THIEN HUE PROVINCE**

Using loan from JBIC adjusting to decision 152/QD - TTg
on 9/10/2001 by Government Prime Minister

Hue, June 2002

Number : 679 / QU - UB

Hue, March 14, 2002

DECISION BY PROVINCIAL PEOPLE'S COMMITTEE

On the establishment of management board of protection forest plantation project in watershed area using loan from Japanese Bank for International cooperation (JBIC)

THUA THIEN HUE PROVINCIAL PEOPLE'S COMMITTEE

- In accordance with Law on organization of People's Committee and People's Council on June 21, 1994;
- In accordance with Decision number 152 /2001 / QD - TTg on October 9th 2001 by Government Prime Minister on mechanism and policy on protection forest plantation in watershed area in provinces including Quang Tri, Thua Thien Hue, Quang Nam, Quang Ngai and Phu Yen using loan from Japanese Bank for International cooperation;
- In accordance with Decision number 3058/ QD - UB on November 20th , 2000 by Thừa Thiên Huế provincial People's Committee on approval of forest plantation project in Thừa Thiên Huế province;
- In accordance with official letter number 410 BNN / KH on February 6th , 2002 by MARD on the implementation of JBIC forest plantation project;
- In accordance with suggestion by the director of DARD as in statement number 53 TT - NN.PTNT on January 1st,2002;

Decides

Article 1 : Establish Thua Thien Hue provincial management board of forest plantation project in watershed area (or management board of JBIC forest plantation project in Thua Thien Hue province) with the following members:

1. Mr. Hồ Đăng Vang - Director of DARD: director of the project management board.
2. Mr. Vo Van Du - Deputy Director of DARD: standing deputy director of the project management board.
3. Mr. Tran Huu Banh - Director of Sub-Department of Forest Development (Sub-DFD) : Deputy director of the project management board.
4. Mr. Pham Dinh Van - Director of Planning and Investment Division - DARD: member of the Project Management Board.
5. Mr. Tran Dinh Phuc - Chief - accountant of Department of Agriculture and Rural Development : account of the Project Management Board.

Article 2 : duties of Management Board of JBIC forest plantation project:

1. Management Board of JBIC forest plantation project is a standing organization implementing tasks assigned by Provincial People's Committee in organizing and implementing JBIC forest plantation project with the technical guidance of Central Management Board of JBIC forest plantation project.
2. Establish master plan and annual plan, design strategy, standard, quantum... of implementing the project under the guidance of Central Management Board then submit to provincial People's Committee for approval.
3. Receive and manage budget distributed to the province for organizing the project implementation. Give technical support and guides for individual or organizations participating in the project. Management Board of JBIC forest plantation project is allowed to use business budget (counter -budget) to pay salary, business fee, allowance and other expenses for implementing project activities in accordance with the project regulations.

4. Submit periodical and other kinds of report to the provincial People's Committee and Central Management Board of JBIC forest plantation project.

Article 3 :

- Management Board of JBIC forest plantation project in Thua Thien Hue province includes members with job plurality (one person has more than 1 job) under the regulations of the Board which are approved by the provincial People's Committee. The board is allowed to use some technical staff from Department of Agriculture and Rural Development to support the project operation.
- Management Board of JBIC forest plantation project has its own seal and bank account for its operation and business transactions.
- The office of Management Board of JBIC forest plantation project is arranged by Department of Agriculture and Rural Development.

Article 4 : This decision will take effect from the subscription date (signing date). Heads of People's Committee office and People's Council office, Director of Department of Agriculture and Rural Development, directors of relating agencies and people having names in Article 1 are responsible for implementing this decision . /.

Receivers:

On behalf of Thua Thien Hue People's Committee

- As article 4
- Department of Agriculture and Rural Development
- People's Council
- Chairman and Vice Chairman of People's Committee
- Department of Investment and Planning
- Department of Finance and Price
- Sub - DFD

Per procurationem Chairman

Vice Chairman

Lê Văn Hoàng

Number : 1918 / BNN - KH

On verification of investment project of plantation
in watershed area, Thua Thien Hue province

Hanoi, July 17, 2002

To: - Thua Thien Hue People's Committee

- In accordance with Decree number 52 / 1999 / NĐ - CP on July 8, 1999 and Decree number 12 / 2000 / NĐ - CP on May 5, 2000 by the Central Government on regulations of investment management, management regulation establishment and amendment and addition of some article in Decree number 52 CP;

- In accordance with Decree number 17 / / 2001 / NĐ - CP on May 4, 2001 by the Central Government on regulations of management and use of budget from Official Development Assistance (ODA)

- In accordance with Decision number 661 / QĐ - TTg on July 27, 1998 by Prime Minister on the objectives, duties, policies and implementation of 5 million ha project.

- In accordance with Fiduciary Convention signed between Government of Vietnam and Government of Japan, VN VI - 8 fiscal year 1998 on the loan from JBIC for forestry sector.

- In accordance with Decision number 152 / 2001 / QĐ - TTg on October 9th 2001 by Government Prime Minister on mechanism and policy on protection forest plantation in watershed area in central provinces using loan from Japanese Bank for International cooperation;

- In accordance with suggestion by Thua Thien Hue People's Committee as in statement number 1420 UB - ND on June 26, 2002 on the verification of investment project of forest plantation in watershed area of Huong river, Thua Thien Hue province.

Ministry of Agriculture and Rural Development verifies basic contents of investment project of forest plantation in watershed area, Thua Thien Hue province as follows:

1. Name of the project: project of forest plantation in watershed area of Huong river, Thua Thien Hue province
2. Project managing agency: Management Board of forest plantation project in watershed area using loan from JBIC, under Thua Thien Hue Department of Agriculture and Rural Development
3. Implementing agency: is decided by Thua Thien Hue People's Committee
4. Investment forms: protection, plantation, maintenance, regeneration and constructing silviculture infrastructure in the project area.
5. Investment locations:

Huong Tra district:

+ Binh Thanh commune : 5 sections: number 974, 982, 972, 975b, 973

+ Binh Dien commune: 6 sections number 975, 976, 977, 979, 980, 981

A Luoi district:

+ Hong Ha commune: 11 sections : 948, from 1043 to 1050, 1056, 1067

+ Huong Nguyen: 4 sections : 949, 978, 979, 1057

6. Land use situation in the project area:

- Total area :	30392 ha
+ Forestry land with forest :	27498 ha
* forest land :	19787 ha
* non-forest land :	8161 ha
+ other types of land :	2444 ha

(to see details of each types of land please refer to appendix of the project document)

7. Project objectives:

To protect current forest area, increase the coverage area by plantation to protect the watershed area of Huong river for water regulating, reduction of natural calamities.

To attract labourers, create jobs for people contributing to the improvement of people's income in project area.

8. Project contents :

8.1. Project land planning in protection area

- Total area :	21974 ha
+ Forestry land :	15058 ha (natural forest : 12894; plantation forest : 2165 ha)
+ Bare land	6109 ha
* Bare land with grass arrays (IA):	2754 ha
* Bare land with bushes(IB):	1894 ha
* Bare land with scattered trees(IC) :	1461 ha

8.2. Specific investment amount

- Regeneration with additional planting	1400 ha
- New plantation	4700 ha
- infrastructure	
+ Road construction for forest plantation and protection	29 km
+ Small nurseries	4
+ Fire prevention belt	40 km
+ Forest protection station	4
- Project equipment	

9. implementation solution :

9.1. Implementation

- Thua Thien Hue Department of Agriculture and Rural Development is the State management Unit supporting the People's Committee in terms of management.

- Management Board of forest plantation project in watershed area in Huong river, under Department of Agriculture and Rural Development has its legal person status, it has duties to deploy the project. It is also under the management of Provincial People's Committee and Central Management Board as stated in the project regulations.

9.2. Technical solution

- Forest plantation : As Decision number 661 / QD - TTg on July 27, 1998 by Prime Minister on the objectives, duties, policies and implementation of 5 million ha project and conditions to establish protection forest in the local area.

- Mixed plantation : Pine, Hopea, Dipterocarpus, acacias

10. Investment and effects

10.1. Investment (general estimate)

The province lists the investment items as in the table bellows

Investment items	Total (million VND)	JBIC capital (million VND)	Provincial capital (million VND)
1. Forest plantation	18000	18000	
2. Forest maintenance	11300	11300	
3. Forest protection	400	400	
4. Forest regeneration with additional planting	1400	1400	
5. Infrastructure	2800	2000	800
6. Management expense	3000		3000
7. Equipment	890		890
8. Land measurement and land allocation	500		500
9. Investment project establishment	100		100
10. Education and training expense	100		100
Reserve	3000	2500	500
Total	41490	35600	5890

10.2. Capital solution

- Investment rate as applied in Decision number 152 /2001 /QD - TTg on October 9, 2001 by Prime Minister on the mechanism and policy of protection forest plantation. The provincial People's Committee submits to MARD the payment for some tree species which procedures of payment are not established.

- Other forestry investments follow Decision number 661 / QD - TTg on July 27, 1998 by Prime Minister 5 million ha project, with concerns to specific local situation of forest establishment.

- Price of Basic construction items follows current regulations

10.3. Duration : 2002 - 2007

10.4. Effects

Environmental effect: increase the forest coverage in the project area from 55% at the moment to 70% in 2007 contributing to the balance of forest ecology, protection of land, water source. Increase people's income contributing to poverty reduction and hunger alleviation.

Basing on the contents of this document, Ministry of Agriculture and Rural Development requests Thua Thien Hue People's Committee to steer relating agencies to improve the project documents for approval and implementation. Approved decision is sent to Ministry of Agriculture and Rural Development and Central Management Board and JBIC for monitoring and supervision.

Receivers:

- Department of Agriculture and Rural Development
- Management Board of forest plantation project in watershed area in Thua Thien Hue province
- Vu TCKT, Department of Forestry Development
- JBIC forest plantation management Board
-

Per procurationem Minister of MARD

Deputy Minister

Nguyen Van Dang

Number : 1420 / UB - NN

On verification of investment project of plantation
in watershed area, Thua Thien Hue province

Hue, June 26, 2002

To: - Ministry of Agriculture and Rural
Development

- In accordance with Decree number 52 / 1999 / ND - CP on July 8, 1999 and Decree number 12 / 2000 / ND - CP on May 5, 2000 by the Central Government on regulations of investment management, management regulation establishment and amendment and addition of some article in Decree number 52 CP;

- In accordance with Decree number 17 / / 2001 / ND - CP on May 4, 2001 by the Central Government on regulations of management and use of budget from Official Development Assistance (ODA)

- In accordance with Decision number 661 / QD - TTg on July 27, 1998 by Prime Minister on the objectives, duties, policies and implementation of 5 million ha project.

- In accordance with Decision number 152 / 2001 / QD - TTg on October 9th 2001 by Government Prime Minister on mechanism and policy on protection forest plantation in watershed area in provinces including Quang Tri, Thua Thien Hue, Quang Nam, Quang Ngai and Phu Yen using loan from Japanese Bank for International cooperation;

- In accordance with Request by Thua Thien Hue Department of Agriculture and Rural Development as in official statement number 673 / TT - NN.PTNT on June 21, 2002 on the verification on forest plantation project in watershed area

Thua Thien Hue provincial People's Committee requests Ministry of Agriculture and Rural Development to verify basic contents of investment project of forest plantation in watershed area, Thua Thien Hue province as follows:

1. Name of the project: project of forest plantation in watershed area of Huong river, Thua Thien Hue province
2. Project managing agency: Management Board of forest plantation project in watershed area using loan from JBIC
3. Investment forms: protection, plantation, maintenance, regeneration and constructing silviculture infrastructure in the project area.
4. Investment locations: The project is implemented in 3 communes in Huong Tra district: Binh Thanh, Binh Dien and Hong Tien commune and 2 communes in A Luoi district: Hong Ha and Huong Nguyen communes

5. Land use situation in the project area:

- Total area :	30392 ha
+ Forestry land with forest :	27498 ha
* forest land :	19787 ha
* non-forest land :	8161 ha
+ other types of land :	2444 ha

(to see details of each types of land please refer to appendix of the project document)

6. Project objectives:

To protect current forest area; plant 4.700 ha of forest and rehabilitate forest using regeneration to increase the forest coverage area contributing to the increase of protection ability of watershed of Huong River for water regulating and reduction of natural calamities.

To attract labourers, create jobs for people contributing to the improvement of people's income in project area.

7. Project contents :

a. Project land planning in protection area

- Total area :	21973.8 ha
+ Forestry land :	15058.6 ha
natural forest :	12894.1 ha
plantation forest :	2164.5 ha
+ Bare land	6109.5 ha
* Bare land with grass arrays (IA):	2753.9 ha
* Bare land with bushes(IB):	1894.7 ha
* Bare land with scattered trees(IC) :	1460.9 ha
+ Other types of land	805.7 ha

b. Specific investment amount

- Regeneration with additional planting	1400 ha
- New plantation	4700 ha
- Other investments	
+ Road construction for forest plantation and protection	29 km
+ Nursery establishment	
+ Fire prevention belt	47 km
+ Forest protection station	5
- Project equipment	

8. Implementation solution :

a. Implementation

- Thua Thien Hue Department of Agriculture and Rural Development is the State management Unit supporting the People's Committee in terms of management.
- Management Board of forest plantation project in watershed area in Huong river, under Department of Agriculture and Rural Development has its legal person status, it has duties to deploy the project. It is also under the management of Provincial People's Committee and Central Management Board as stated in the project regulations.
- State agencies local households directly implement the project duties assigned by Management Board of forest plantation project in watershed area

b. Technical solution

- Forest plantation : As Decision number 661 / QD - TTg on July 27, 1998 by Prime Minister on the objectives, duties, policies and implementation of 5 million ha project and conditions to establish protection forest in the local area.
- Mixed plantation : Pine, Hopea, Dipterocarpus, acacias

9. Investment and effects

a. Investment (general estimate)

Investment items	Total (million VND)	Loan from JBIC (million VND)	Provincial capital (million VND)
1. Forestry	32389.9	32389.9	
2. Infrastructure	2875	2075	800
3. Other items	100		100
4. Equipment	890		890
5. Management expense	3000		3000
6. Reserve	3000	3000	
Total	42227.9	37437.9	4790

9.1. Capital solution

- Investment rate as applied in Decision number 152 /2001 /QD - TTg on October 9, 2001 by Prime Minister on the mechanism and policy of protection forest plantation
- Other forestry investments follow Decision number 661 / QD - TTg on July 27, 1998 by Prime Minister 5 million ha project, with concerns to specific local situation of forest establishment.
- Price of Basic construction items follows current regulations

9.2. Duration : 2002 - 2007

9.3. Effects

Environmental effect: increase the forest coverage in the project area from 55% at the moment to 69% in 2007 contributing to the balance of forest ecology, protection of land, water source. Increase people's income contributing to poverty reduction and hunger alleviation.

Thua Thien Hue People's Committee requests Ministry of Agriculture and Rural Development to verify the project to provide the basis for the People's Committee to approve so that the project can be implemented in 2002.

Receivers:

- Department of Agriculture and Rural Development
- People's Council
- Chairman and Vice Chairman of People's Committee
- Ministry of Investment and Planning
- Ministry of Finance
- Department of Agriculture and Rural Development

On behalf of Thua Thien Hue People's Committee

Per procurationem Chairman

Vice Chairman

Lê Văn Hoàng

SPECIAL ASSISTANCE FOR THE PROJECT IMPLEMENTATION (SAPI)
BASIC INVESTIGATION
FOREST PLANTATION PROJECT IN WATERSHED AREA

ACTIVITY REVIEW

Basic investigation is implemented to establish database in commune and household scale proposed to participate in forest plantation project in watershed area in Thua Thien Hue province. Variables and indicators of the project effect and impact to communes and households are also identified.

Interview method is used. Investigation is conducted in 8 communes (2 districts) Huong Tra and A Luoi. Household investigation is conducted in 25 - 30 households in each commune. The duration of investigation was from June 14, 2000 to June 23, 2000.

Commune profile

Population is different in communes, from 738 people in Hong Tien commune to 8409 people in Huong Ho commune. Urbanization is only within 6 km from hue city. Population increase rate is 2.22% on average. The lowest rate is 1.76% in Huong Ho commune and the highest rate is 4% in Huong Nguyen commune - a mountainous commune in A Luoi district. On average there are 5.3 people in a household. There are 4610 households in 8 communes. The lowest number of household in one commune is 139 households, the highest is 1537 households. Most of population is Kinh ethnic except for Hong Tien and Hong Ha communes where majority of people is Pahy and Catu ethnic. There are 10859 labourers in 8 communes.

Total area of 8 communes is 77795 ha. Commune with the smallest area is Hong Tien and largest area is Hong Ha commune. The percentage of agriculture land is from 1% in Huong Nguyen commune to 13% in Huong Binh commune.

Total commodity income in 8 communes in 1999 is VND 24.45 billion, income per head is about VND 1.01 million. Income from agriculture is 40%, from husbandry is 36%, from forest plantation is 11% and from other sources is 13%.

In all communes, there are primary schools, healthcare station, road system, power and water provision system and telephones. Only 3 communes have markets. There are no shops in all communes. The goods transaction is done by peddlers.

People in all communes are participating in forest plantation project with the total area of 5353 ha. At the moment, illegal cutting is still a serious problem in all communes. Forest fire happened quite regularly. Communes are preventing these two problems by patrol and constructing forest watch towers and education through mass media.

Women participate very actively in forestry development projects mainly in forest plantation, maintenance and seedling production. Women association also participates in forest protection campaigns.

Household profile

The investigation is done with 223 households including 1331 people. On average, there are 6 people in one household. Only four households have people with university or college education in all households investigated. Majority of population is Kinh ethnic. In mountainous area, Catu and Pahy ethnics are of majority.

Though the soil condition is poor with high acid level and the productivity of land is low, agriculture is a main income of local people. Because of acid soil, fertilizers become one of the costly expenses in agriculture cultivation. Husbandry provides 17% of the total income; this is also the main income source of investigated households. Collection of forest products only accounts for 8% income. No households participate in the processing of forestry products. The value added to the forestry product through processing may be a good solution for income rising of local households.

In mountainous area, there are 3 households ranked as hunger, 3 ranked as poor households. In the midland area households are ranked as poor households. Most of households have the income of VND 1.2 to 2.4 million/year.

Most of local households have been participating in forestry development projects or other kinds of projects. They planted 319.4 ha of forest. Local people are able to participate in technical training to improve their knowledge in fields that they are not experienced and they can support in mass media campaigns.

People's desire is to have capital for production. This is the most urgent problem need to be solved.

Requests

To maximize local people's benefit, they need support from programs or projects together with (a) increase the productivity of agriculture production; (b) reduce the production expense; (c) facilitate the product marketing; (d) develop projects that can improve people's life.

The application of micro organic fertilizer is necessary after evaluation of its effectiveness. Tree species are needed to improve and introduce to local people.

Loans with priority interest rate from Banks' program are necessary. Loans can support people to start activities to increase the income creating sustainable benefit. They can use loans to invest in husbandry, increase productivity in agriculture by using new varieties of species. A good transport system is also necessary for improving local economy.

A good agriculture and forestry extension program can be implemented by project implementing agencies with the co-ordination with other organizations to : (a) develop and support projects for income increase; (b) encourage people to use land and water conservation in agriculture production; (c) increase the forestry and agriculture extension activities to reduce the illegal cutting and forest fire.

Following issues are important in project monitoring

- Household income
- Factors intervene to household income
- The use of methods to increase soil fertility and reduce production expenses
- The application of methods of land and water conservation
- Changes in land use models, in forest coverage and in area of bare land
- Forest fire and illegal cuttings

SAPI group
Japanese Bank for International Cooperation (JBIC)
Implementation plan
Forest plantation project in watershed area - Thua Thien Hue Province

REVIEW OF ACTIVITIES

Forest plantation project in watershed area, Thua Thien Hue Province aims at increase the protection forest's canopy and improve local people's ability in protecting the watershed area and river system to reduce the effects of flood. The project plan suggests establishing 5000 ha of forest on the current bare land (straw grass and bush vegetation) in 2 districts Huong Tra and A Luoi. To ensure the success of the project the construction of forestry road system, forest maintenance and protection as well as extension activities need to be done as supporting compositions of the project.

In the total of 5000 ha, there are 2800 ha area of bushes and 2200 of straw grass. There are 2250 in 3 communes of A Luoi district and 2750 ha in 6 communes in Huong Tra district. The project proposes to plant the 4 combination of tree species: some types of acacias: 750 ha; acacia + some types of pines: 2450 ha; acacia + Shorea: 600 ha; acacia + dipterocarpus: 1200 ha. Plantation starts in 2001 and finishes in 2003. Maintenance must be conducted in 3 years after planting. Forest plantation is proposed to complete in 2006. Forest plantation will be form 2000 to 2006.

To reach to plantation site, transport seedlings, maintain forest, protect forest, and monitoring the forest plantation, a road system with the length of 29 km must be constructed in which there are 15 km in A luoi district and 14 km in Huong Tra district. Road construction starts in 2001 and finishes in 2003. There must be a plan of construction so that the plantation activity can be implemented well. Road maintenance is done during the project implementation.

Forest protection focuses on the following objectives: (a) co-ordinate relating agencies to prevent and control forest fire; (b) co-ordinate with forest protection department (forest rangers) on activities relating to forest resources protection; (c) limit and control forest fire. 50 km of fire-proof belt will be constructed as a composition of forest fire prevention activities. Forestry extension services will focus on: (a) providing technical support to local people so that they have knowledge in forestry activities and forest maintenance; (b) improving people's awareness on land conservation in terrace cultivating; (c) creating opportunities of increasing the income of people participating in the project.

Project overall management is done by provincial People's Committee steering the implementation through Management Board of forest plantation project in watershed area under Department of Agriculture and Rural Development. In each area, the implementation is done by local Management Board and state forest enterprises. Local management boards are: management board of watershed area in Huong river and Bo river, Tien Phong, Huong Giang, Nam Hoa and A Luoi forest enterprises. To facilitate the smooth implementation of the project, monitoring and supervising activities are important. After the project ended, the maintenance of forest needs to be continue with the state budget to maintain the sustainability of the project.

Total expense of the project estimated with the price in 2000 is about VND 69239 billion equivalent to USD 4946. Expense is about VND 13848 million/ha or USD 989/ ha. 71.5% of the capital is used for forest plantation and maintenance; 13.5% is used for construction, 9.7 is for management and 5.3% is for forest protection and forestry extension.

The project brings benefit not only in terms of environment and ecology but also benefit in terms of socio-economy.

Benefit to environment and ecology:

- Reduce the soil erosion and alluvium in river system
- Improve soil fertility and productivity in forest plantation area
- Reduce the forest fire in the project area
- Increase the number of wild animals

Benefit to society and economy:

- Increase the income of households participating in the project about VND 32 billion in the project duration. That provides a large number of capital circulating in Thua Thien Hue province.
- People participating in the project can have 5300 working days/ year in total
- Increase forest value
- Increase firewood from thinning activity

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PROJECT ON FOREST PLANTATION INVESTMENT IN WATERSHED AREA IN THUA THIEN HUE PROVINCE

- Project managing agency: Management Board of forest plantation project in watershed area Thua Thien Hue province
- Investment managing agency: Thua Thien Hue provincial People's Committee
- Duration: 6 years (2002 - 2007)

INTRODUCTION

Thua Thien Hue province is on the narrow land in the central part of Vietnam, with the total area of 505398 ha and total population of over 1 million people. After two liberation wars, forests in Thua Thien Hue province were severely destroyed by bombs and toxic chemical those made the forests decrease both in quality and quantity.

After the country was liberated, the needs of economic development and enlarging the cultivation area, new economic area resulted in narrowing the forests and made the protection and forest product provision function weaker.

In the past several years, with the concerns of the Central Government and relating departments, Thua Thien Hue has used a lot of positive activities to protect, establish and develop forests. Besides investment from state budget, there are supports from international organization such as PAM 2780, 4304. 327 project (1993 - 1999) and 661 project (now) have contributed to the increase of forest canopy. The province has planted 50000 ha of forest and increased the canopy by 10%. The forest coverage now is 42%. However, most of the forest areas now are young forests. That's why the protection function and ecology recovery function are still low.

In the century flood in November 1999, only in 5 days (from 1 to 5 November) the rainy water level measured in A Luoi is 2062 and in Hue is 2219. the heavy rain and powerful flood made 90% of residential area are flooded, the water level in Huong and Bo river sources were 8 - 9 m. the terrible flood destroyed severely people's properties, houses, industrial, transportation, and irrigation system. It also destroyed education, healthcare, cultural constructions. The total damages were over VND 1761 billion.

The damages of the flood to forestry sector were severe, some areas of natural forest were lost, hundred ha of plantation forest were damaged, over 500 ha of new plantation area were washed up with the flood, most of nurseries and seedlings were damaged.

After the century flood, besides natural factor, many people attributed the reason of such severe flood to the destruction of forest that made forest protection and water regulating function too weak. To reduce the destruction of natural disasters in the following years, forest rehabilitation and development are urgent and necessary. Forest plantation is very important to protect the region from flood and to provide firewood and material for industry. Special attention is paid to A Luoi district and location around national highway number 49. A Luoi district is the place suffered the most severe from the food and A Luoi forest is the source of 3 river systems. This area has great effect to the lower plain including some district such as Phong Dien, Huong Tra, Phu Vang.

With the approval of Ministry of Agriculture and Rural Development, Thua Thien Hue provincial People's Committee, Department of Agriculture and Rural Development assigned the investigation group of Forestry and agriculture planning and design in Thua Thien Hue to co-operate with Thua Thien Hue Sub-DFD to establish the project.

"Investment project of forest plantation in watershed area in Thua Thien Hue province"

After completing the project, Thua Thien Hue province People's Committee send official letter to Ministry of Agriculture and Rural Development for verification.

On June 6, 2000, Ministry of Agriculture and Rural Development held a workshop with the participation of 5 province concerning the project to present the plan.

July 2000, Group of Special Assistance for Project Implementation came to work in Thua Thien Hue. The group visited the field to get information and data to establish a suitable implementation plan. Then the group held a workshop in Thua Thien Hue.

Contents of the plan were approved and its requests and suggestions are considered models for the adjustment of project establishment.

Basing on the investigation results, Thua Thien Hue Sub-DFD reestablished the project in November 2000 and the project was approved by Thua Thien Hue provincial People's Committee and submitted to Ministry of Agriculture and Rural Development for approval.

After the Fiduciary Convention between GOV and GOJ was signed, and there was loans for forestry sector, the GOV passed Decision number 152 /2001 / QD - TTg on October 9th 2001 by Government Prime Minister on mechanism and policy on protection forest plantation in watershed area in central provinces using loan from Japanese Bank for International cooperation.

Ministry of Agriculture and Rural Development has document number 410 /Bnn /Kh on February 6, 2002 on the deployment of forest plantation project using loans from JBIC and document number 1350 /BNN_KH on May 20, 2002 on the guidance of implementing the of forest plantation project in watershed area using loans from JBIC.

Basing on the contents of those documents, Thua Thien Hue People's Committee passed the decision of establishment of Management Board of forest plantation project in watershed area using loan from JBIC.

LEGAL DOCUMENTS AND OTHER DOCUMENTS USED

- Decree number 163 /1999 /ND-CP on November 11, 1999 by Prime Minister on forestry land tenement to households, individual and organization for long term use with forestry purposes.
- Decision number 152 /2001 / QD - TTg on October 9th 2001 by Government Prime Minister on mechanism and policy on protection forest plantation in watershed area in provinces including Quang Tri, Thua Thien Hue, Quang Nam, Quang Ngai and Phu Yen using loan from Japanese Bank for International cooperation.
- Decision by Thua Thien Hue provincial People's Committee on deployment of 5 million ha project.
- Official letter number 410 /BNN-KH on February 6, 2002 by Ministry of Agriculture and Rural Development on the guideline of deployment of JBIC forest plantation project.
- Basing on the strategy of forest plantation to recover the consequences of flood and reduce natural calamity in Thua Thien Hue province by Ministry of Agriculture and Rural Development.
- Documents of forest inventory by Thua Thien Hue forest inventory board.
- Document of hill area planning in Thua Thien Hue province
- Document of industrial material planning in Thua Thien Hue province
- Annual inventory and statistics in 2000 published by Thua Thien Hue Statistic department
- Document on meteorology and hydrography by Thua Thien Hue meteorology and hydrography station
- Reference documents from other forest plantation projects in A Luoi, Huong river and Bo river sources
- Reports for the implementation of forest plantation project in Thua Thien Hue by SAPI and JBIC
- Document on classification of forest into 3 categories approved by Thua Thien Hue provincial People's Committee as in Decision number 1259 /QD-UB on June 7, 2001.

PART I: NATURAL CONDITIONS AND SOCIO-ECONOMIC SITUATION IN THE PROJECT AREA

I. NATURAL CONDITIONS

1. Project boundary

The project area is in the southwest of Hue city. There are 2 communes of A Luoi district and 3 communes of Huong Tra in the area.

Location: 17^o90 - 18^o20 Northern Latitude
107^o40 - 107^o80 Eastern Longitude

Total of plantation forest	6095.5 ha
A Luoi District	1170.9 ha
Huong Tra district	4924.6 ha

2. Topography

A Luoi is a border and mountainous district in southwest of Thua Thien Hue province, the average height of the district is 300 - 500 above sea level, slope level is 20- 25^o. The area has the topography of medium height and low mountains. The area is divided by 3 rivers A Sap, Bo and Huong River; also by high and slope ranges of mountain such as Dong Ngai (1776 m), Tam Boi (1224 m), A Co Nong (1228 m) and Co Pung (1615 m). A Luoi valley is along National High Way number 14, the valley is quite flat with the length of over 30 km, this is the residential area of majority of the district population.

3 communes in Huong Tra province are along National High Way number 49, this is the transitional area of mountains and plain. The area contains bowl-shape hills with the height around 300m except for some hills have the height of 500m. The average slope level is 15 - 25^o. Most of the hills are bare; Natural forest still exists in a few places but only in a rehabilitation state.

3. Climate and weather

Thua Thien Hue is in tropical area with monsoon climate. There are two different seasons:

- Dry season: from March to September, this is the time the place is under the influence of Southwest monsoon. In this time of year, it is dry and the temperature is high, sometimes reaches the 38 - 40^oC. The average temperature is from 27 - 29^oC.

- Rainy season: from October to February of the following year, this is the time the place is under the influence of North-East monsoon. The average temperature is 17 - 19^oC, there is time when the temperature is only 10^oC. In A Luoi district alone, average temperature is 21.5^oC. The average temperature in November, December, January, and February is below 20^oC. The lowest temperature is in December and the highest temperature is in April (38^oC).

It rains the most from September to November. In November alone, the rainfall accounts for 30% the rainfall of the whole year. The average rainfall of the whole province is 3500 - 3900mm/year. Rainfall does not distributed evenly all year round, in rainy season, food happened frequently due to heavy rain. The time of rainy season is also the time of storm from Eastern Sea; sometimes the wind speed is 140km/hour, these result in severely harmful influence to people's life and security. In A Luoi district alone, the average rainfall is 4468mm, the rainfall is lowest in May and June, and highest in September, November and December (rainfall may reach 600 - 700mm a month).

Humidity is 85%

Lowest 77% (in May)

Highest 92% (in October)

4. Streams, rivers and hydro-condition

There are 3 big rivers in the project area: A Sap River runs across Laos, Bo River runs across Phong Dien and Huong Tra district, and Huong River runs across Hue. In the river source area, there are rapids and waterfall. The river width is small and the river banks are under landslide due to heavy rain and flood. In general, streams and rivers in the project area are narrow, sloping and swift-flowing. In the rainy season, swift flow and slow drainage cause sweeping flood in the river source areas and flood in the lower land.

5. Soil conditions

There are 4 types of soil

- Feralite on magma acid stone
- Feralite on clay and degraded stone
- Feralit on sand stone
- Degraded agriculture land

The table below shows the land condition basing on the inventory under decree 286 by Prime Minister and the result of the bare land and hills investigation.

NO	Items	Total area (ha)		
			Protection	Production
	Total of the project area	30392	21973.8	8418.2
1	Area with forest	19787.9	15058.6	4729.3
	- Natural forest	13692.4	12894.1	798.3
	- Plantation forest	6095.5	2164.5	3931
2	Bare land and hills	8159.8	6109.5	2050.3
	- Pastoral land (Ia)	3727.3	2753.9	973.4
	- Land with bushes (Ib)	2649.2	1894.7	754.5
	- Land with sparsely distributed timber trees (Ic)	1783.3	1460.9	322.4
3	Other types of land	2444.3	805.7	1638.6

With the data above, we can that the forest canopy is 65.1%.

Natural forest in A Luoi province belongs to tropical ecology system, the forest resources are various. According to a forestry investigation by FIPI in central part of Vietnam, there are 66 families, 156 branches and 246 timber species. Wars, illegal and unplanned cuttings have devalued the forest in A Luoi district. Many valuable trees were destroyed such as ironwood, parashrea stellata, sindora tree, and talauma. Other non-timber species like rattan, amomum,... were destroyed too.

Plantation forest in the project area contains the following species:

- Pinus Merkusii: this species was planted in 1978 in 6 communes in Huong Tra district. Pinus Merkusii grown in the area now grows well. In some places, people can get resin from the pine. Pinus Merkusii has proved its adaptability in bare hills in Thua Thien Hue.
- Acacias: was planted in 1980. there are 4 types of acacia
 - + Acacia mangium
 - + Acacia auriculiformias
 - + Acacia crassicarpa
 - + Hybrid Acacia (between Acacia mangium & Acacia auriculiformias)

In the thinning process, acacia has been used in material board factory. Acacia is very good for land improvement and prevention of fire can be use in fire prevention belt.

- Eucalyptus: was planted in 1977. This species proves unsuitable by degrading land and intolerance of pest and diseases.

Some indigenous species like hopea, dipterocarpus, boi loi, bassia... have been planted for the last 3 or 4 years. This is still experimental period. The effectiveness of these species has not been concluded.

Besides above species, people also grow cinnamon and rubber trees.

Bare land and hills were classified into 3 categories:

Bare land with grass, reed in the hill sides: most area of this type is planned for industrial and agricultural species plantation.

Bare land with bushes (tomentose rose myrtle, cajuput...): area with low sloping degree can be used for growing industrial and agricultural species. Others need to use for forest plantation.

Bare land with sparsely distributed timber species: most area of this type is in high area. Natural forest regeneration can be applied with this type.

II. Population and socio-economic situation

1. Population and labour

The project area has a population of 8783 people and 1674 households .

Population statistics

Location	Households	Population	Labourers
<i>Total</i>	1674	8783	3342
<i>A Luoi district</i>	370	2174	570
- Hong Ha commune	203	1176	290
- Huong Nguyen commune	167	998	280
<i>Huong Tra district</i>	1304	6609	2772
- Binh Dien commune	667	3319	1112
Binh Thanh commune	498	2552	1394
Hong Tien commune	139	738	266

Ethnic minority people live separately in villages. Some live in town with Kinh people but still gather in villages. Population growth rate is 3% (A Luoi district). The death rate is 0.71%.

People at labour age account for 85%, however, due to small agriculture area, many people have to live on hunting and fruit gathering. Their lives rely heavily on forest.

General comments on population and labour

Population in the project area resides in the towns near national roads.

Intellectual level of local people is low; out-of-date habits and customs are still practiced.

Number of labourers in different economic sectors is unbalanced.

2. Agricultural and industrial production situation

Agriculture is the main production in this area. Area for wet rice is 1080 ha, equivalent to 49% of the crops. The capacity of wet rice is 250kg/ha. The area for maize is 246 ha and the capacity is 200 kg/ha. Growing crops are practiced with shifting-cultivation methods; that's why the capacity is low. Maize and sweet-potatoes are grown on stream banks; cassava is grown on hills.

Average food per person regarded in terms of rice is 215kg /person /year. Due to the low capacity in agriculture production, local people have to buy food from towns and city. Products from short-term industrial trees are only enough for internal consumption, a small number are sold to the plain.

Husbandry and fish farming are practiced but still in a small scale.

Gardening is quite developed; many fruit trees are grown like jackfruit, orange, lemon. Local people also plant industrial trees like sugarcane, coffee. However, gardening in the area is still in unprompted manner and lack of investment, that's why the quality is low.

Industrial production is not developed and commerce and services are weak.

Due to the limitation in industrial production, the living standard of local people is low. The following numbers show the statistics in 1998 in A Luoi district.

+ number of fairly rich households:	6 %
+ number of households with food sufficiency:	24 %
+ number of poor households:	63 %
+ number of households suffer from hunger:	7 %

Average income: VND 1 million/person/year

+ Hong Ha Commune:	1.31
+ Huong Nguyen Commune:	0.89
+ Binh Dien Commune:	0.89
+ Binh Thanh Commune:	1.59
+ Hong Tien Commune:	1.35

3. Forestry production situation

In the project area, there are 4 state forestry management units

- Huong Giang Forest Enterprise : founded in 1980, managing totally 9913 ha, including 5480 ha of natural forest. The main duty of the Forest Enterprise is to exploit the forest from 1000-1500m³ of round timber/year.

- Tien Phong Forest Enterprise : founded in 1976, managing totally 14734 ha. The main duty of the Forest Enterprise is to participate in forest plantation. The Forest Enterprise took part in forest plantation in 327 Project for 6 years with 759 ha of forest planted. At the moment, the FE is taking part in 661 project and collecting latex from rubber trees.
 - Management Board of Forest Plantation in watershed area in Bo river source: founded in 1989, managing totally 39162 ha in Hong Ha and Huong Binh communes. The Forest Enterprise took part in forest plantation in 327 Project for 6 years with 872 ha of forest planted. At the moment, the FE is taking part in 661 Project.
 - Management Board of Forest Plantation in watershed area in Huong river source: founded in 1991, managing totally 12041 ha. The Forest Enterprise took part in forest plantation in 327 Project for 6 years with 1037 ha of forest planted. At the moment, the FE is taking part in 661 project
- Forestry sector here is considered the second-rank production sector. With the investment of Cultivation and Residential Stabilization Program, poverty and hunger alleviation program, 327 Project, 135 program and 661 project, forest area has been recovered. However due to limitation in investment, the results are still limited.

4. Infra-structure situation

Transportation: National high Way number 49 from Hue is in bad condition in the rainy season the landslide make it difficult for the transportation, especially the distance from Hong Ha to Bo Do T-junction is really difficult. Transportation inside the project area is also difficult. Some roads are only accessible in dry season.

Irrigation dams, lakes are still temporary, they often need constructed after the rainy season. Irrigation canal system is also temporary.

Most of communes except for some remote ones can access to electric power.

Education, healthcare and telecommunication systems are still weak.

PART II: PROJECT CONTENTS

I. PROJECT NAME, DURATION AND MANAGEMENT

- Project name: Forest Plantation Project in Watershed Area in Thua Thien Hue province
- Duration 6 years (2002 - 2007)
- Managing Agency:
 - Investing management unit: Thua Thien Hue People's Committee
 - Investing agency: Management board under Department of Agriculture and Rural Development
- + Consulting agency: Thua Thien Hue Sub-DFD
- + Executing agencies:
 - Huong Giang Forest Enterprise
 - Tien Phong Forest Enterprise
 - Management Board of Forest Plantation in watershed area in Bo river source
 - Management Board of Forest Plantation in watershed area in Huong river source

II. Objectives - Duties

1. Objectives

- Protect the current forest area; increase the quality of forest; plant 4700 ha; increase the forest canopy to regulate the water and reduce natural disasters and limit the bad effects of storm and flood; limit the landslide, erosion; project lakes, irrigation canals from alluvium; protect the infra-structure and contribute to the environment and ecology protection, genetic and bio-diversification conservation.
- Develop the forestry sector in parallel with other socio-economic sectors; create more jobs for local people, contributing to poverty and hunger alleviation and increase of people's life both materially and spiritually.
- Contribute to the development of the country-side and mountainous area; contributing to regional security and national defense.

2. Duties (table 3)

In the project area, forest management and protection are done by Forest Enterprises with different budget sources. The project only focused on forest plantation of 4700 ha in critical and very critical protection area and forest regeneration of 1400 ha.

2.1. Forest plantation

Forest plantation is conducted on Ia and Ib soil types. The plantation area is high and sloping land.

Prioritize to plant forest on two sides of National High Way number 49.

Proposed sites for forest plantation are in 2 districts including 5 communes under the management of 2 Forest Enterprises and 2 Management Boards. The area is identified by Forestry and agricultural investigation planning and design group shown in location and planning maps.

Project duration is from 2002 - 2007 but the forest plantation is only conducted in 3 years (2002 - 2004).

The forest plantation area is under 4 management units but it is unified under Thua Thien Hue Department of Agriculture and Rural Development.

Proposed area for forest plantation in 5 communes

Total of new plantation area:	4700 ha
A Luoi district:	2400 ha
Hong Ha commune:	1400 ha
Huong Nguyen commune:	1000 ha
Huong Tra district:	2300 ha
Binh Dien commune:	1200 ha
Binh Thanh commune:	1000 ha
Hong Tien commune:	100 ha

* Forest plantation plan distributed in terms of management units

Unit	Total	Year		
		2002	2003	2004
Total	4700	1250	1650	1800
Management Board of Forest Plantation in watershed area in Bo river source	1400	400	500	500
Hong Ha	1400	500	500	400
Huong Giang Forest Enterprise	1000	300	300	400
Huong Nguyen	1000	300	300	400
Management Board of Forest Plantation in watershed area in Huong river source	1300	350	450	500
Binh Dien	1200	300	400	500
Hong Tien	100	50	50	
Tien Phong Forest Enterprise	1000	200	400	400
Binh Thanh	1000	200	400	400

* Forest plantation in terms of species

Commune	Species			
	Total	Acacia	Acacia + pine	Acacia+ Hopea + Dipterocarpus
Total	4700	1200	2200	1300
Huong Nguyen	1000	200	500	300
Hong Ha	1400	300	900	200
Binh Dien	1200	400	400	400
Hong Tien	100	100		
Binh Thanh	1000	200	400	400

2.2. Forest regeneration

There are 1400 ha used for forest regeneration. The soil type of the area is Ic (land with sparsely distributed timber trees) in the critical and very critical area. The area need to be divided in plots. Plot good for regeneration is the one which has sufficient mother trees - seed providing trees (25 trees/ha). Regeneration plot may next to a forest with 300 trees/ha with the height of over 0.5m.

+ Technical measures

- Area next to residential place, local households need to be guided to practice additional planting of fruit trees and industrial trees to create commodities. Trees grown need to be suitable with the sub-weather and climate.
- Area which local people do not have conditions to plant industrial or fruit trees, can be used to grow forestry species using seeds or seedlings.
- Implement the maintenance and additional planting in 3 years, careful protection and protection from animal and forest fire.
- Regeneration area need to be planned and design and allocate or contract to local people maintain the long-term development of forest.

III.

SILVI-CULTURE MEASURES

1. The needs of seedlings

The objectives of the project are to meet the need of greening the bare land and hills and limit the bad effects of flood, that's why plantation species are fast-growing species which have been through experiment. In Thua Thien Hue, the project area has direct influence to the protection ability of Bo and Huong river sources.

To green and protect the water sources, and rehabilitate forests, mixed plantation of fast-growing species and native species is necessary. The fast-growing species can meet the need of greening bare land and hills and provide good conditions for the growth of native species.

Proposed species:

Native species

+ Pinus Merkusii

+ Pinus Caribea

+ Dipterocarpus

+ Hopea Odorata

Fast-growing species

+ Acacia mangium

+ Acacia auriculiformis

+ Acacia crassicapa

+ Acacia hybrida (hybrid acacia)

The contour-line planting needs to be apply in the mixed plantation with the rate of 60% fast-growing species and 40% native species; density is 1600 trees/ha, in which there are 1000 fast-growing trees and 600 native trees.

In area with straw grass, it is difficult for native species to grow, so only fast-growing species should be planted. Along roads, fast-growing species can be planted to keep the soil from erosion.

Nursery duration: fast-growing species need the nursery duration from 3 months (hybrid acacia) to 6 months (Acacia mangium, auriculiformis). Native species need the nursery duration from 10 - 12 months.

Plantation period is from October to December. We can base on the plantation period to do the nursing.

Management units will establish nurseries to provide seedlings for forest plantation. Nurseries should be close to the plantation location to minimize the cost and damages. These units need to take advantage of the experience in nursing from local people; they can contract to local households to improve the seedling production.

The needs of seedlings can be based on some information below

- Density: + pure plantation	: 1600 trees/ha
+ mixed plantation	: - 1000 fast-growing trees/ha - 600 native trees/ha
- Trees lost through transport	: 10%
- Death rate need additional planting	
+ year 1	:10%
+ year 2	:5%

2. Forest plantation

Preparation must be done before planting forest such as basic investigation, topography identification.

These tasks can be done by investigation group of forestry and agriculture planning and design.

Households contracted need to do following tasks

- Land preparation (clear the grass)

- Dig holes : for acacia: 30 x 30 x30 cm

for native species: 40 x40 x40 cm

- Fertilizing: households need to fertilize trees twice: one is padding fertilizing and one is in the maintenance in year 2. Fertilizers used are NPK. First time of fertilizing is in the forest plantation contract and the second time is in maintenance contract. In the first time, fertilizers are mixed with soil and put at the bottom of the hole. Management units are responsible for providing local people with fertilizers.

- Tree transport: Transporting trees from the nearest road to the plantation location need to contract with local people specifically.

3. Plantation forest maintenance

This task is contracted to household in three years time

- Earth up: is done twice in the first year and once in the following 2 years, earth up around the tree with the diameter of 40-50 cm.
- Grass clearing
- Replace the dead trees with seeds
- Grass clearing in the plot boundary

4. Fire prevention and protection

To improve the forest fire prevention and protection, Forest Enterprises and Management Boards plan for constructing fire watch towers to discover the forest fire in time. In the dry and hot season, the watchtower must be alert all day (24h/25h), especially from June to August, telecommunication need to be used to communicate in time with the fire prevention and protection agency.

Watch towers need to be placed at important positions. Management units can place more watch towers to improve the protection.

The fire breaks lines need to be established on average 1km/100ha. The project will establish 47 km of fire protection belts as follows

Locations	Total	Year		
		2002	2003	2004
Total	47	13	15	18
A Luoi district	24	8	8	8
+ Huong Nguyen commune	10	3	3	4
+ Hong ha commune	14	5	5	4
Huong Tra district	23	6	8	9
+ Hong Tien commune	1	1		
+ Binh Dien commune	12	3	4	5
+ Binh Thanh commune	11	3	4	4

*pest and disease prevention and protection

At the moment, the danger of pest and diseases for proposed species has not been seen. However, this danger cannot be ignored. Once the pest and diseases break out, the chemicals can be used but the unplanned use is not encouraged

IV. IMPLEMENTING SOLUTIONS

- After the project is approved, local management boards in 4 management units need to be established. These units use the labourers in state sectors as well as local people and organizations to implementing forest plantation and maintenance.
- Implement the regulations of land allocating and contracting to local households as in 5 million ha project (661 project) to ensure the forest quality.
- Combine this project and other project like Cultivation and Residential Stabilization Program, poverty and hunger alleviation program, 135 program to improve the economic situation in the area.
- Implement the forestry land allocation as in Decree number 163/1999/ND-CP on 16 November, 1999 by the Government; Decree 01/CP on January 4, 1995 and Decision 178/1999/QD -TTg on September 16, 1999 by Prime Minister.

1. Labour

Mainly use the local labour force. The labour force is identified as in following statistics

Commune	NO of households	NO of labourers	Area	Area /households
Total	1674	3342	4700	2.8
Hong Ha	203	290	1400	6.9
Huong Nguyen	167	280	1000	6.0
Binh Dien	667	1112	1200	1.8
Binh Thanh	498	1394	1000	2.0
Hong Tien	139	266	100	0.7

As the table above, the labour force is not a matter for forest plantation and protection.

2. Forestry extension

The success of the project very much depends on the people participation. Forestry extension needs to ensure:

- All households have information on the project as well as their roles in the project.
- Provide them with basic contents of forest plantation and its regulations and procedures
- Identify the potential income of the households
- Improve the cultivation custom to increase the productivity but still keep the cost low and limit the soil erosion

3. Technical support

Consulting agencies will give support in terms of technology

- Improve species quality
- Biological fertilizers
- Pest and disease control

4. Road network for seedling transportation and forest protection

Project area is 40 km long along National High Way number 49. Some places can be accessible by inter-district and commune roads. At the moment there are 21 km of roads connecting 5 communes in Huong Tra district and 2 communes in A Luoi district. However, to facilitate the seedling transportation and forest protection, constructing new road is necessary.

The project proposes to construct 29 km road for that purpose.

Road construction can be distributed as follows

District	Total	Year		
		2002	2003	2004
Total	29	9	10	10
A Luoi district	13	4	4	5
Huong Tra district	16	5	6	5

PART III: PROJECT MANAGING AND STEERING

Provincial People's Committee steer the project through Management Board in Department of Agriculture and Rural Development.

Specific tasks can be assigned to local Forest Enterprises and Management Boards

I. PROJECT MANAGEMENT BOARD

The project management board is responsible for all the project implementation, issuing policies, guidelines and monitoring the budget management. The board members are:

Project director: Director of Department of Agriculture and Rural Development

Project vice director: director of sub-DFD

The Management Boards can request staff of DARD and sub-DFD to support some tasks of the project.

II. EXECUTING AGENCIES

The project area is under management of 4 units, that's why field work is assigned to those 4 units. After the project finishes, those units are still responsible for protecting and maintaining the plantation forest under their management.

III. PROGRESS MONITORING AND QUALITY EVALUATION

The purpose of monitoring is to have reflection of the project situation to the project management board to ensure the progress and solve problems arise.

Quality evaluation is objective evaluation process of the adaptability, effectiveness, and effect of implementation; compare results and propose and establish future plans.

The project management board monitors and evaluates the progress through 3 stages: work done, work implementing and work proposed to do. Results can be used to revise, amend, or modify the project strategy, objectives, or stages.

Executing agencies have to report once a month on the implementation to discover difficulties. The project management board verifies and submits to provincial People's Committee and Central Government.

Quality evaluation is done on yearly basis with the participation of MARD, MPI and JBIC

Information on monitoring and evaluation is stored in a database to make it easy for management.

PART IV: INVESTMENT NEEDS

I. *BASES FOR COST CALCULATING*

Cost calculating bases on local and government procedure and price in 2002

Cost for forest plantation includes cost for seedlings, NPK fertilizers, seedlings transportation, and plantation

Cost for maintenance includes additional seedlings, fertilizers for the 3rd year, earth-up cost, grass clearing

Besides silviculture cost, there are costs for road construction, forestry extension and management.

II. *Investment price*

1.	NPK fertilizer price	: VND 2800/kg
2.	Price for forest plantation investigation, planning and design	
-	labour cost	: VND 7072000
+	Basic salary	: VND 3470100
+	Allowance	: VND 2758600
+	Social insurance	: VND 624600
+	Healthcare insurance	: VND 218700
-	Material	: VND 1561500
*	Direct labour	: VND 8633500
*	Management expense	: VND 3889600
*	Other expenses	: VND 2476900
Total		: VND 15000000
	Price for forest plantation design	: VND 150000/ha
	(Cost verified)	: VND 150000/ha

3. Price of seedlings

Items	Native species	Acacias
Fixed expense	200	100
Liquid expense	100	500
1. Material		
Seeds	30	10
Holding bag	50	30
Fertilizer	200	100
2. Labour	600	300
3. Others	120	60
Price for 1 tree	1200	600

4. Forest plantation price

* plantation of only acacia /1ha	
- fertilizers: 1600 trees x 0.1 x VND2800	= VND 448000
- Seedlings: 1600 trees x VND 600/tree	= VND 960000
- Labour: 93 people x VND 20000/person	= VND 1860000
- Verification	= VND 75000
- Design expense	= VND 150000
	= VND 3799000

* Price for mixed plantation native + acacia	
- fertilizers: 1600 trees x 0.1 x VND2800	= VND 448000
- Seedlings: 1000 acacias x VND 600/tree	= VND 600000
: 600 native trees x 1200	= VND 720000
- Labour: 93 people x VND 20000/person	= VND 1860000
- Verification cost	= VND 75000
- Design expense	= VND 150000
	= VND 3853000

5.	Forest maintenance price	
	First year	
	- Additional planting: 10%: 160 trees x VND1200	= VND 192000
	- Labour: 36 people x VND 20000/person /day	= VND 720000
	- Verification cost	= VND 29000
		<hr/>
		= VND 941000
	Second year	
	- Additional planting: 5%: 80 trees x VND1200	= VND 96000
	- Labour: 35 people x VND 20000/person /day	= VND 700000
	- Verification cost	= VND 28000
		<hr/>
		= VND 824000
	First year	
	- Labour: 29 people x VND 20000/person /day	= VND 580000
	- Verification cost	= VND 23000
		<hr/>
		= VND 603000
6.	Price for road construction	: VND 30000000/km
7.	Price for fire breaks lines	: VND 15000000/km
8.	Price for forest protection stations	: VND 1000000/m ²

III. *Investment needs*

Total investment	VND 42263.9 million
A. Loans from JBIC	VND 37437.9 million
1. Forest plantation	
Total investment for forest plantation	VND 18044.3 million
- 2002	VND 4802.75 million
- 2003	VND 6333.15 million
- 2004	VND 6908.4 million
2. Forest maintenance	
Total budget for forest maintenance	VND 11129.6 million
- 2003	VND 1176.25 million
- 2004	VND 2582.65 million
- 2005	VND 3807.15 million
- 2006	VND 2478.15 million
- 2007	VND 1085.4 million
3. Forest protection and management	
Total budget	VND 1825 million
- 2003	VND 125 million
- 2004	VND 290 million
- 2005	VND 470 million
- 2006	VND 470 million
- 2007	VND 470 million
4. Road construction	VND 870 million
5. Protection station	VND 500 million
6. Fire breaks lines	VND 705 million
7. Regeneration	VND 1400 million
8. Preventive	VND 3000 million
B. Counter-budget : VND 4790 million	
1. Offices and equipment	VND 1690 million
2. Management expense	VND 3000 million
- 2002	VND 460 million
- 2003	VND 750 million
- 2004	VND 910 million
- 2005	VND 430 million
- 2006	VND 280 million
- 2007	VND 170 million
3. Investment preparation	VND 100 million

* Total investment

	Total	Loans from JBIC	Counter-budget
- 2002	6267.75	5687.75	580.0
- 2003	11714.40	9364.40	2350.0
- 2004	12401.05	11431.05	970.0
- 2005	5787.15	5347.15	440.0
- 2006	3798.15	3518.15	280.0
- 2007	2295.40	2125.40	170.0

*Loans from JBIC

Loan on average/ 1 ha : VND 7037000

New plantation	:	VND 3839200/ha equivalent to 54.6 %
Maintenance	:	VND 2368000/ha equivalent to 33.7 %
Protection	:	VND 388000/ha equivalent to 5.5 %
Road construction	:	VND 185200/ha equivalent to 6.9 %
Protection station	:	VND 106400/ha equivalent to 1.5 %
Fire breaks lines	:	VND 150000/ha equivalent to 2.1 %

Vietnam Forestry Corporation
 Hoa Binh Forestry Company
Accountance Balance Sheet of 2002

No.	Assets (property)	Code	Total amount	
			Figure at beginning of the year	The figure at the end of the year
1	2	3	18	19
A	Liquid (floating) asset and short-term investment	100	12,650,323,923.0	9,576,654,889.0
I	Money	110	3,126,568,625.0	325,677,803.0
1	Money in Company	111	247,132,986.0	43,150,966.0
2	Money in the Bank	112	821,319,639.0	282,526,837.0
3	Money under transfer	113	2,058,116,000.0	-
II	Short-term financial investment	120	-	-
1	short-term stock investment (securities)	121	-	-
2	Other short-term investment	128	-	-
III	The items to be collected	130	775,035,429.0	1,081,419,770.0
1	To be collected from customers	131	70,971,750.0	54,907,640.0
2	Advanced payment to sellers	132	49,356,634.0	43,240,634.0
3	VAT to be deducted	133	-	-
4	To be collected among the company subordinate units	134	-	395,079,660.0
-	Business capital of subordinate units	135	-	-
-	Other items to be collected	136	-	395,079,660.0
5	Other items to be collected	138	654,707,045.0	588,191,936.0
IV	Goods in stock	140	6,420,931,074.0	5,958,996,208.0
1	Purchased goods going on the way	141	-	-
2	Material in stock	142	51,989,532.0	22,012,562.0
3	Tools, instruments in stock in warehouse	143	44,410,566.0	238,713,446.0
4	Ongoing business fees	144	6,324,530,976.0	5,698,270,200.0
5	Finished products in stock	145	-	-
V	Other liquid assets	150	2,321,232,359.0	2,204,004,672.0
1	Advance payment	151	1,815,098,063.0	1,942,473,459.0
2	Pre-paid fees	152	282,056,788.0	143,248,991.0
3		153	224,077,508.0	118,282,222.0
VI	Administrative expenditure	160	6,556,436.0	6,556,436.0
1	Administrative expenditure for last year	161	-	-
2	Administrative expenditure for this year	162	-	-
B	Fixed assets and long-term investment	200	30,781,617,489.0	40,600,542,550.0
I	Fixed assets	210	2,032,295,836.0	2,378,126,486.0
1	Tangible fixed assets	211	1,820,543,186.0	2,189,873,836.0
-	Original price	212	2,583,296,017.0	2,967,398,345.0
-	Accumulated depreciation	213	762,752,831.0	777,524,509.0
3	Intangible fixed assets	217	211,752,650.0	188,252,650.0
-	Original price	218	246,852,650.0	246,852,650.0
-	Accumulated depreciation	219	35,100,000.0	58,600,000.0
II	Long-term financial investment	220	25,558,525,653.0	32,167,978,064.0
1	Long-term stock investment	221	-	-
2	Allocate fund for joint ventures	222	-	-
3	Other long-term investment	228	25,558,525,653.0	32,167,978,064.0
III	On-going capital construction cost	230	3,190,796,000.0	6,054,438,000.0
IV	Long term deposit	240	-	-
	Total assets	250	43,431,941,412.0	50,177,197,439.0