

CHAPTER 5 : TABLES

Table 5.4.1 Extension of Electrification in Nam Dan District

Commune		Number of household required electricity	Required 0.4Kv new extend line	Required new substation	Required of new 35Kv or 10Kv line	Required of new 0.4Kv line
No.	Name	(household)	(km)	(KvA)	(km)	line (km)
1	Nam dan town					
2	Nam giang	5	2.7			
3	Kim lien	99	1.7			
4	Nam cat					
5	Xuan lam	29	1.7			
6	Nam linh	104	3.7	1 x 100	0.8	3.00
7	Hong long	2	2.7	1 x 100	1.0	1.60
8	Hung tien	26	2.7	1 x 100	0.7	0.80
9	Xuan hoa	92	2.0			
10	Van dien	6	2.7			
Region 1 Total		363	19.9	300	2.5	5.4
11	Khanh son	128	3.7	1 x 100	0.30	3.20
12	Nam trung	3	2.5			
13	Nam kim	307	3.7	1 x 100	0.45	1.70
14	Nam phuc	61	2.5	1 x 100	0.60	1.40
15	Nam cuong	5	2.0	1 x 100	0.55	0.40
16	Nam tan	135	4.0	1 x 100	0.85	1.40
17	Nam loc	101	3.0	1 x 100	0.35	1.30
Region 2 Total		740	21.4	600	3.1	9.4
18	Nam xuan					
19	Nam anh	44	2.7			
20	Nam thai	133	3.7	1 x 100	0.10	3.00
21	Nam hung	14	4.0	1 x 100	1.50	2.90
22	Nam nghia	15	2.5	1 x 100	1.20	3.10
23	Nam thanh	40	2.5			
24	Nam thuong	26	2.7	1 x 100	1.25	1.15
Region 3 Total		272	18.1	400	4.05	10.15
Total study area		1,375	59.4	1,300	9.65	24.95

Table 5.4.2 Rehabilitation of Power Distribution Network in Nam Dan District

Commune		Number of household using electricity	Total length of existing 0.4Kv line	Required rehabilitation of hook-up line	Required rehabilitation of 0.4Kv line	Required rehabilitation of 35Kv or 10Kv line
No.	Name	(household)	(km)	(household)	(km)	line (km)
1	Nam dan town	1,192		1,192		
2	Nam giang	1,128	13.0	1,128	4.9	1.4
3	Kim lien	2,385	26.5	2,385	13.4	2.2
4	Nam cat	1,262	13.0	1,262	7.3	2.8
5	Xuan lam	1,589	12.0	1,589	5.8	2.4
6	Nam linh	1,185	15.0	1,185	6.5	0.5
7	Hong long	949	9.0	949	6.5	3.8
8	Hung tien	1,895	17.5	1,895	6.3	2.0
9	Xuan hoa	1,194	12.0	1,194	2.8	0.4
10	Van dien	2,276	20.0	2,276	8.5	1.1
Region 1 Total		15,055	138.0	15,055	62.0	16.6
11	Khanh son	2,428	18.0	2,428	8.8	1.5
12	Nam trung	1,507	10.0	1,507	4.5	0.0
13	Nam kim	1,723	14.0	1,723	6.7	2.7
14	Nam phuc	635	5.0	635	2.5	0.5
15	Nam cuong	1,230	11.0	1,230	3.1	0.6
16	Nam tan	758	9.0	758	4.1	1.0
17	Nam loc	1,017	7.5	1,017	3.9	0.0
Region 2 Total		9,298	74.5	9,298	33.6	6.3
18	Nam xuan	1,370	14.0	1,370	7.6	2.0
19	Nam anh	1,447	11.2	1,447	4.1	0.4
20	Nam thai	472	7.5	472	4.9	0.7
21	Nam hung	760	11.0	760	5.0	1.5
22	Nam nghia	906	6.5	906	3.0	2.0
23	Nam thanh	1,730	18.8	1,730	8.6	4.0
24	Nam thuong	494	12.0	494	5.0	1.4
Region 3 Total		7,179	81.0	7,179	38.2	12.0
Total study area		31,532	293.5	31,532	133.8	34.9

No.	Service Block	No. of village	Served Population in 2010	Unit water demand (l/cap/day)	Average daily demand (m ³ /day)	Average daily distribution (m ³ /day)	Average daily intake (m ³ /day)	Maximum daily intake (m ³ /day)	Maximum daily distribution (m ³ /day)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Nam Hung	10	4,508	30	135	159	172	232	215
2	Nam Nghia	11	4,903	30	147	173	187	252	234
3	Nam Thai	7	3,356	30	101	118	128	173	160
4	Nam Thanh	14	9,072	30	272	320	346	467	432
5	Nam Anh - South	4 > 7	5,303	30	159	187	202	273	253
6	Nam Xuan - South	3	5,040	30	151	178	192	259	240
7	Nam Xuan - North	9	5,040	30	151	178	192	259	240
8	Van Dien - West	5	3,181	30	95	112	121	164	152
9	Van Dien - East	13	10,007	30	300	353	381	515	477
10	Nam Linh	13	7,157	30	215	255	273	368	341
11	Nam Giang	12	6,130	30	184	216	234	315	292
12	Nam Cat	12	6,982	30	209	246	266	359	333
13	Nam Tan	7	5,176	30	155	183	197	266	247
14	Nam Loc	11	6,606	30	198	233	252	340	315
15	Khanh Son - West	7	3,302	30	99	117	126	170	157
16	Khanh Son - South	7	4,058	30	122	143	155	209	193
17	Khanh Son-East	14 > 28	15,854	30	476	560	604	816	755
18	Nam Trung	14	9,018	30	271	318	344	464	430
19	Nam Kim - West	15	6,245	30	187	220	238	321	298
20	Nam Kim - East	5 > 13	6,846	30	205	242	261	352	326
21	Nam Phuc	8	6,846	30	205	242	261	352	326
22	Nam Quang	10	6,846	30	205	242	261	352	326
	Total	211	122,744		3,682	4,332	4,679	6,316	5,848

Notes:

(5) = (3) x (4)

(6) = (5) / (1-0.15), (Leakage losses = 15%)

(7) = (6) x 1.08, (Treatment losses = 8%)

(8) = (7) x 1.35, (Peak day factor = 1.35)

(9) = (6) x 1.35 (Peak day factor = 1.35)

CHAPTER 5: FIGURES



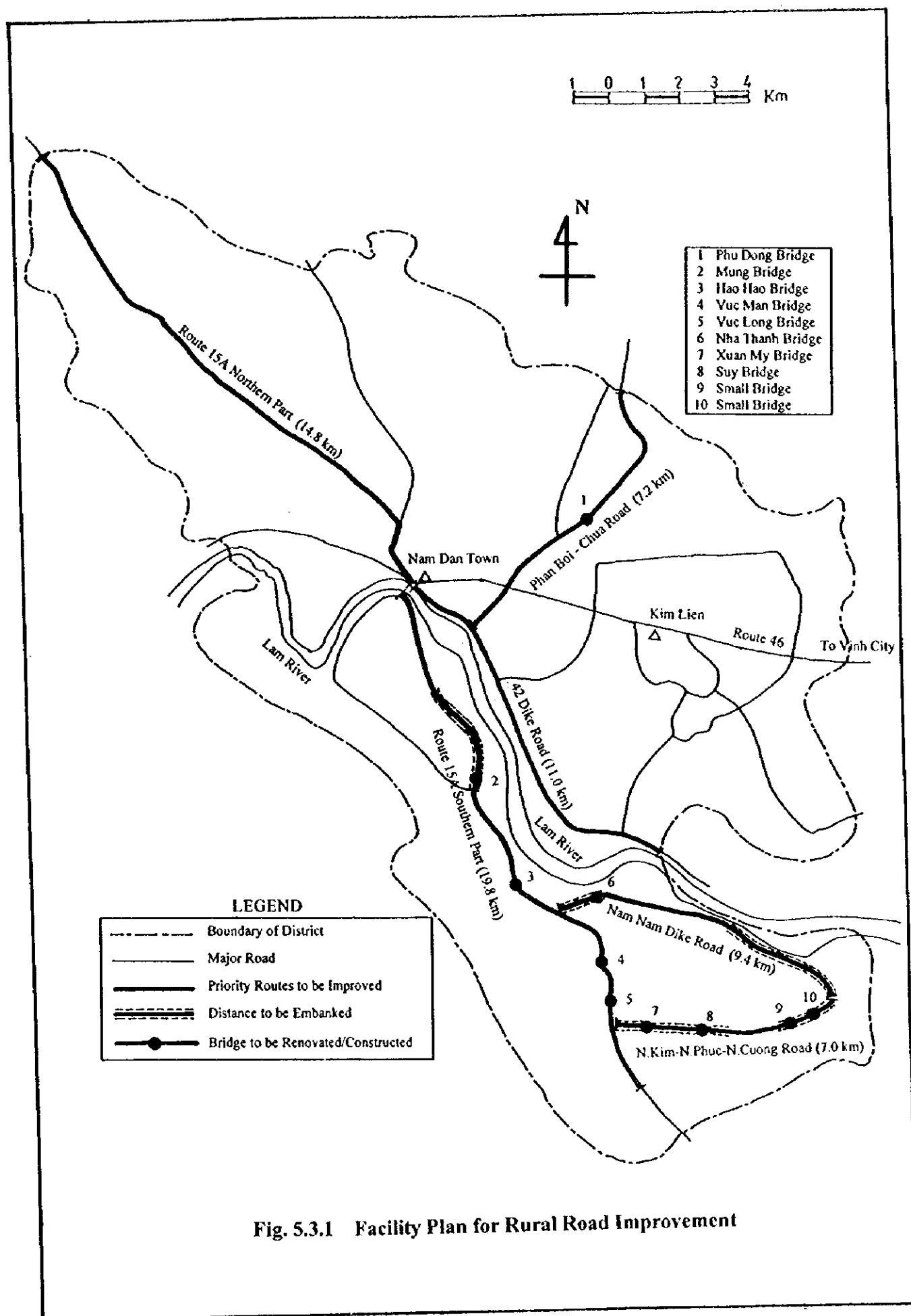


Fig. 5.3.1 Facility Plan for Rural Road Improvement

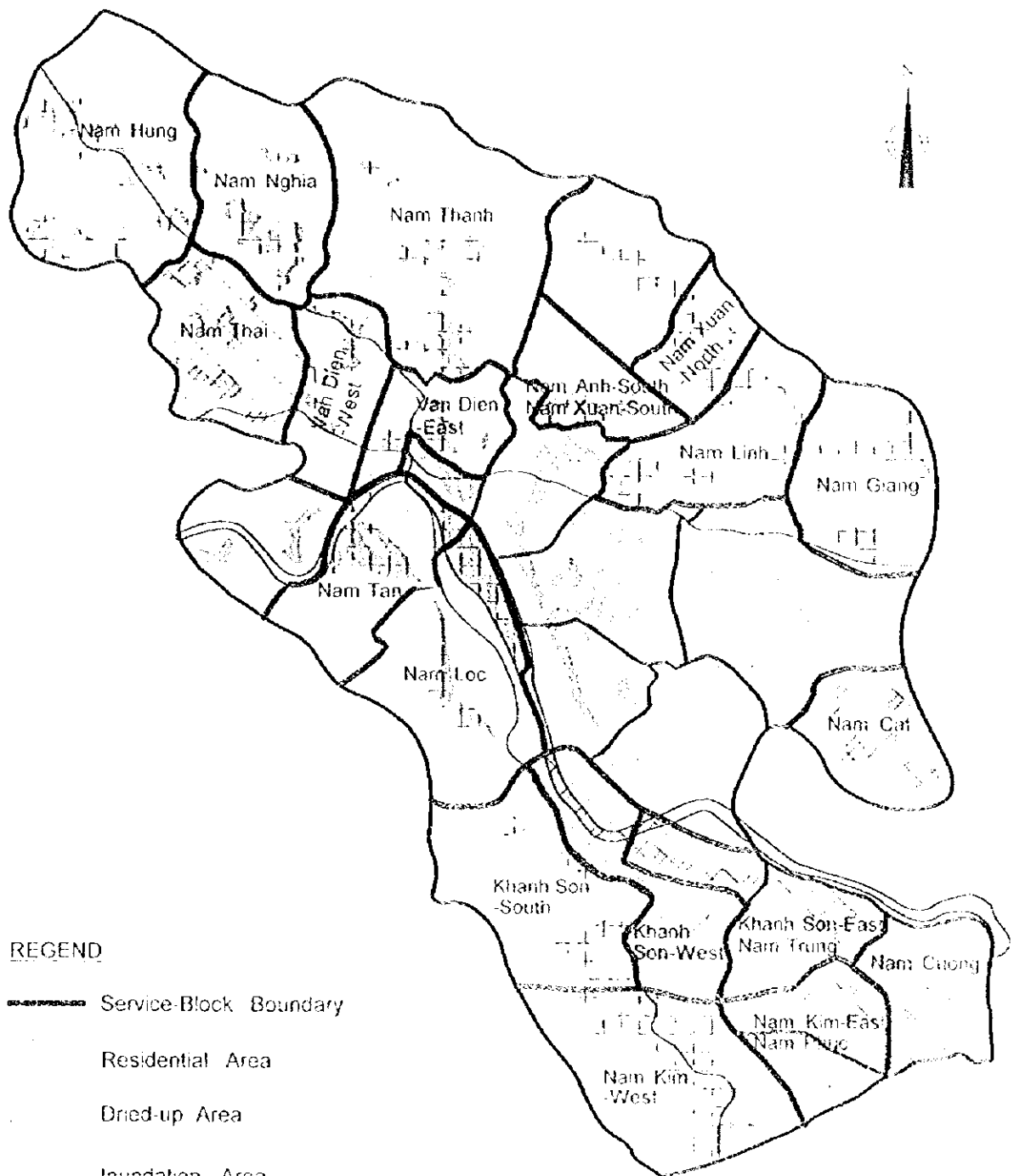


Fig.5.5.1 Classification Map of Service Blocks

CHAPTER 6 : MODEL RURAL DEVELOPMENT PROJECT

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6.1 FORMULATION OF MODEL RURAL DEVELOPMENT PROJECT

In this section, "a Model Rural Development Project", a kind of a package project, which is formulated by combining the priority projects planned in each sector is proposed to be dealt as a model project for developing rural areas in Viet Nam. "The Model Rural Development Project" is a project promoting improvement of agricultural production, living conditions and environmental conditions in the objective rural area integrally. The purpose of the project is to achieve the improvement of living conditions for local residents integrally and complexly. Also, this project is aimed to indicate a model of agriculture and rural development in Viet Nam.

The following ideas are employed in selecting projects in respective sectors in consideration of appropriate investment balance for achieving the final goal of the project efficiently and effectively:

- Agricultural Production Sector : Irrigation/Drainage, Agricultural Supporting System, Agro-industry/Marketing

Agricultural production is the most important element of this Project, because it improves farmer's living conditions economically by increasing agricultural income. At the same time, it is also essential as a economic foundation for the qualitative improvement of living conditions. In consideration of production of the economic effects from the Project, all of the priority projects in this Sector are selected in the Model Project.

- Rural Living Conditions Sector : Educational Facility, Rural Water Supply

All of the priority projects in this Sector are selected in the Model Project. Because they are indispensable as the basic conditions for achieving healthy living standard in rural area and qualitative improvement of living conditions.

- Rural Social Infrastructure Sector : Rural Road, Rural Electrification

The proposed projects in this Sector contribute to the improvement of both agricultural production and living environmental conditions. They are also the basic conditions for producing the project effects in other sectors. However, the projects which are expected to contribute directly to the improvement of agricultural production only are preferentially selected as the sub-projects of the Model Project in consideration of the balance between economic effects from the Project and social investment. The priority projects in this Sector which are not selected as the sub-projects forming the proposed Model Project should be implemented continuously after the implementation of the Model Project in consideration of the very important role of these projects for the improvement of the rural living environment.

• Environment Sector : Environmental Conservation

All of the priority projects in this Sector are selected in the Model Project. Because they are indispensable for stability over the rural area.

Based upon the above-mentioned points of view, the projects in respective sectors which form the proposed "Model Rural Development Project" are summarized as follows:

Components of Model Rural Development Project

Sector	Project	Sector	Project
Agricultural Production	Irrigation/Drainage	Rural Living Condition	Education Facilities
	Reservoir Irrigation Project		School Electrification
	Ho Thanh		Rehabilitation of School Facility
	Trang den		Rural Water Supply
	Cua Ong		Public Water Taps System for Semi-mountainous
	Rao Bang		Installation of Filter Tanks to all of existing wells
	Pumping Irrigation Project	Rural Social Infrastructure	Rural Road
	Nam Dong		Route 15A (Northern Part)
	Nam Cuong 2		Route 15A (Southern Part)
	Inundation Mitigation Project, Drainage Improvement Project		42 Dike Road
	Nam Nam Dike		Phan Boi - Chua Road
	Supporting Services		Nam Nam Dike Road
	Agriculture Extension Center		Nam Kim - Nam Phuc - Nam Cuong Road
	Seed Supply Center		Rural Electrification
	Agricultural Mechanization Service Center		Rehabilitation of Distribution Network
	Agro-industry and Marketing Improvement	Environment	Environmental Conservation
	Agro-processing Complex		Erosion Control
	Market-oriented Forwarding Center		

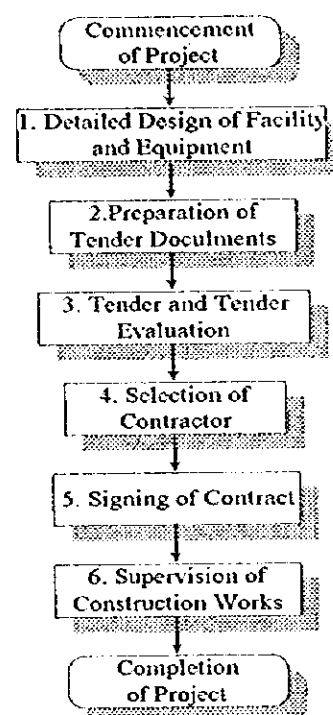
6.2 IMPLEMENTATION AND O/M PLAN

6.2.1 Implementation Procedure

(1) Method of Project Implementation

In the implementation of the projects in each sector, the implementing organizations formed by related department or section in Nam Dan District execute the tasks showed in the chart on the right:

Prior to implementing the project, the consultant selected by the implementing organization coordinates and supports all the tasks of the organization. On the other hand, a successful contractor in the tender executes the construction works. The contractor prepares all the machinery necessary for the construction. Also, materials necessary for the construction are procured in domestic or international market under the management of the contractor.



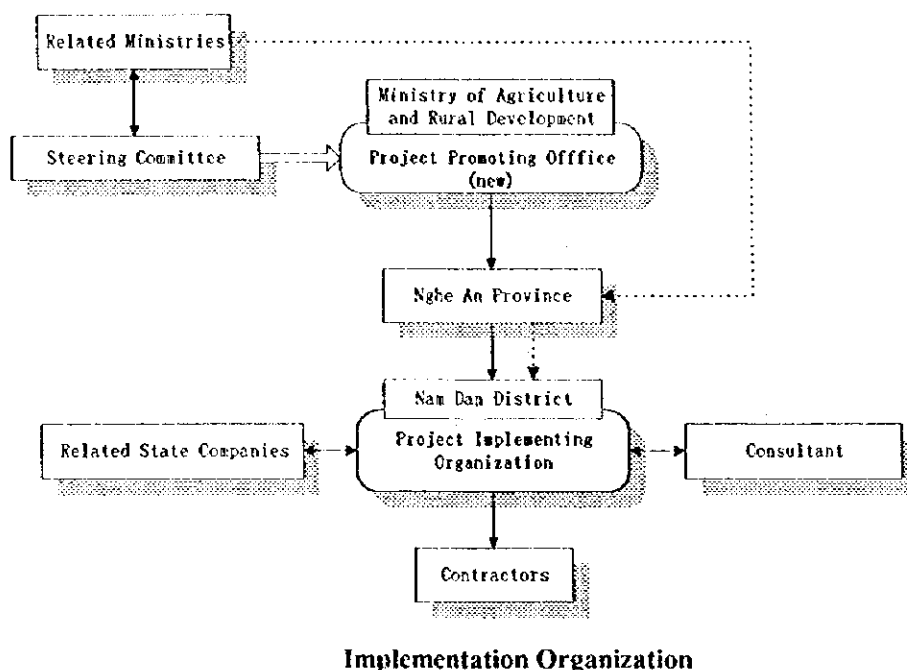
(2) Recommendation for Implementation

Flow of Project Implementation

Regarding the organization necessary for realizing the integrated Model Rural Development, there is no organization in the Ministry of Agriculture and Rural Development which can efficiently manage such integrated development projects as a central government. The local implementing and managing organization for this Model Project is Nam Dan District. However, in order to coordinate with other agricultural development projects and to study extension of this Model Project at the national level, it is recommended that a "Project Promoting Office" for the Project should be newly established in the Ministry of Agriculture and Rural Development.

Furthermore, the implementation of not only the projects of agricultural production, but also the projects of social infrastructure such as rural roads necessary for rural development and rural water supply are planned in this Project. So that, development projects in each sector should be executed integrally in order to contribute to alleviation of living condition of the farmers in the area with the sufficient and effective coordination among the projects. Also, it is necessary to adjust timing of implementation of projects in consideration of implementing organization and relations of effects among projects in order to make effective schedule of implementation. It is, therefore, recommended that the steering committee should be continuously established for coordinating related sectors. The committee consists of members from related ministries and is headed by the Ministry of Agriculture and Rural Development that has direct responsibility for the major agricultural projects in this Project. Related ministries in each sector take initiative of coordination between other ministries under the control of the Steering Committee. And also, they direct and

guide Nam Dan District through Nghe An Province for the successful implementation of the Project. The implementing organization of this Project is as shown in the following chart:



6.2.2 Implementation Plan

The project implementation plan is decided based on the consideration that the sub-projects/components having relation with agricultural production sector which contribute to economic effect directly is given priority on implementation, and that the schedule is arranged considering the mutual relation and synergistic effect between respective sub-projects/components so that project effect appears effectively and efficiently. Table 6.2.1 shows the project implementation plan proposed.

6.2.3 Project Cost

The project cost consists of construction cost, land compensation cost, material supply and equipment procurement cost, administration cost, engineering cost and price escalation.

(1) Basic Condition of Cost Estimation

The project cost is estimated on the following conditions;

- The basic cost such as labor cost, material cost and construction machinery operation cost are based on the "Unit Price of Construction in Nghe An Province, the first half of 1997" and interview with construction companies in the Province.
- The requirements per unit works refer to the Vietnamese Standard issued by Ministry of Construction.
- The price of domestic materials are based on those including transportation of them to the construction sites. On the other hand, the price of imported materials are based on the material CIF price plus domestic transportation cost and tax.
- The construction cost are estimated with local and foreign components. However, the money of the Viet Nam (VND) is used for both components. The unit costs for respective works items consist of direct and indirect costs, and the indirect cost is set as 30% of the direct cost based on the analysis of interview with construction companies.
- The foreign exchange rate used is US\$ 1.00 = VND 11,700 as monthly average of the exchange rate of the Bank for Foreign Trade as of July 1997.
- The physical contingency is set as 10% of the construction cost and other cost.
- Annual increase rate of price used for estimation of economic contingency is set as below.
- As the price escalation of the foreign currency portion, 1.8% is applied based on the annual average rate of the consumer prices index of G-7 during 1994~1996 estimated by OECD in 1997.
- For the price escalation of the local currency portion, 8.0% is applied because the consumer prices in Viet Nam is expected to stabilize around 8% during the period of the project implementation while the prices increased, on average, by 9.5% per year during 1994~1996 (State Bank of Viet Nam, 1997).

(2) Construction Cost

The construction cost is estimated with the foreign and local portions in each sub-project/component. The foreign portion covers a part of steel works, construction equipment, etc. The annual disbursement of the construction cost is determined based on the proposed schedule of construction works.

The material supply cost covers the material procurement for the sub-projects / components such as rehabilitation of school facilities in which the construction material will be supplied to local authorities and the construction work or rehabilitation work will be conducted by inhabitants participation.

The equipment cost covers the installed equipment and facilities procurement for sub-projects/components such as agricultural supporting service or agro-industry and marketing improvement. Those equipment/facilities shall be renewed at times when their useful life is expired.

The total construction cost is estimated to be VND 282,261 million, the foreign component of which represents VND 57,727 million (20%) and the local component VND 224,534 million (80%). The material supply cost is estimated to be VND 2,670 million and allocated to local portion. The equipment procurement cost is estimated to be VND 66,163 million, the foreign component of which represents VND 56,152 million (85%) and the local component VND 10,011 million (15%).

Construction Cost

Sub-projects	L/C (million VND)	F/C (million VND)	Total Amount (million VND)
Irrigation and Drainage improvement	51,253	4,248	55,501
Agricultural Supporting Service	6,937	1,743	8,680
Agro-industry and Marketing Improvement	1,335	334	1,669
Rural Road Improvement	78,249	21,398	99,647
Rural Electrification	48,041	12,010	60,051
Rural Water Supply	37,080	17,994	55,074
Environmental Conservation	1,639	0	1,639
Total	224,534	57,727	282,261

Material Supply Cost

Sub-projects	L/C (million VND)	F/C (million VND)	Total Amount (million VND)
Education Facilities	21,480	0	21,480
Rural Water Supply	5,280	0	5,280
Total	26,760	0	26,760

Equipment Procurement Cost

Sub-projects	L/C (million VND)	F/C (million VND)	Total Amount (million VND)
Agricultural Supporting Service	1,611	48,052	49,663
Agro-industry and Marketing Improvement	8,400	8,100	16,500
Total	10,011	56,152	66,163

(3) Land Compensation

In Viet Nam, land ownership is in the hand of the State and only land use rights are to be given to the farmers. Thus, necessary lands for the Project will not be purchased but be compensated for the land use rights of farmers. The compensation cost of land necessary for the construction of Project facilities such as irrigation canal, pumping station and rural road including compensation for production is estimated to be 4,329 million VND, and allocated to local portion.

(4) Administration Cost

The administration cost necessary for the Project Office includes procurement of office supplies, payment to the office staff, general expenses, etc. The total administration cost for the Project is estimated to be 14,329 million VND as 5% of the total construction cost including land compensation, and it is allocate to local portion.

(5) Engineering Cost

The engineering cost which covers consulting service is estimated to be 28,226 million VND as 10% of total construction cost. The foreign component occupies 80% of engineering cost and the local portion occupies 20%.

(6) Project Cost

As a result of the above disbursement schedule, the project cost excluding price escalation is estimated to be 464,275 million VND, the foreign portion of which represents 150,105 million VND (32%) and the local portion 314,170 million VND (68%). The project cost including price escalation is estimated to be 552,436 million VND, the foreign portion of which represents 156,397 million VND (28%) and the local portion 396,039 million VND (72%).

Total Project Cost Summary

(unit : million VND)

Items	L/C	F/C	Total Amount
1 Construction Cost	224,534	57,727	282,261
2 Land Compensation Cost	4,329	0	0
3 Administration Cost	14,329	0	0
4 Engineering Cost	5,645	22,581	28,226
Sub-total	248,838	80,307	329,146
5 Material Supply and Equipment Procurement Cost	36,771	56,152	92,923
6 Physical Contingency	28,561	13,646	42,207
Sub-total	314,170	150,105	464,275
7 Price Escalation	81,871	6,291	88,162
Total	396,039	156,397	552,436

The project cost summary excluding/including price escalation in each sub-project is shown below.

Project Cost Summary in Each Sub-project

(unit : million VND)

Items	Project Cost excluding Price Escalation			Project Cost including Price Escalation		
	L/C	F/C	Total	L/C	F/C	Total
Irrigation and Drainage Improvement	65,256	9,557	74,813	79,534	9,933	89,468
Agricultural Supporting Service	10,071	55,538	65,609	10,869	56,532	67,401
Agro-industry and Marketing Improvement	10,837	9,424	20,261	15,759	10,255	26,013
Education Facilities	23,628	0	23,628	35,223	0	35,223
Rural Road Improvement	94,141	32,307	126,448	107,891	33,317	141,208
Rural Electrification	57,469	18,495	75,965	68,235	19,199	87,433
Rural Water Supply	50,837	24,640	75,477	75,696	27,005	102,701
Environmental Conservation	1,929	144	2,074	2,833	156	2,990
Total	314,170	150,105	464,275	396,039	156,397	552,436

The investment schedule is determined to be total 6 years including preparation period except for education facilities and rural water supply. The investment schedule of education facilities and rural water supply is determined to be 10 years due to the consideration of the balance of investment and the ability of implementation organizations. The investment schedule is shown below.

Preparation	Construction Period					
1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7-10th Year
1%	38%	18%	20%	8%	6%	4 years total 9%

6.2.4 O/M Plan

Each project in the Project to be basically operated and maintained by appropriate sector in Nam Dan District as an implementing agency which is as same as the case of implementing th2 Project. Also, the Steering Committee shall coordinate all the sectors as same as the implementation. Related ministries of respective sectors shall coordinate each other as the organizations in the central government. At the same time, they shall guide and support related sectors in Nam Dan District through Nghe An Province. However, they should lead the District in consideration of farmers' management from the beginning for the projects which are suitable for the farmers to operate and maintain by themselves.

6.3 PROJECT EVALUATION

6.3.1 Basis of Evaluation

(1) Approach

The project evaluation method to assess implementation validity of the Project includes economic evaluation, financial evaluation, socio-economic evaluation (impacts) and environmental analysis. Emphasis is placed on the economic evaluation since the main objective of the Project is agricultural and rural development; public profitability is also emphasized. The financial evaluation is oriented to the investment and repayment plan for the Project, farm household economic analysis and inhabitant's charge for the Project. The basic approach to the project evaluation is in agreement with the methodology and criteria adopted by international organizations and the adopted parameters are related to the agricultural and rural sector policies of GOV.

(2) Conditions of Evaluation

The evaluation conditions of the economic and financial evaluations are as follows:

- a. The project life is set as 30 years from the commencement of the Project including detailed design period and construction works period, considering the working life period of the main structures.
- b. The currency used for the estimation is the Dong of Viet Nam (VND).
- c. The foreign exchange rate used is US\$ 1.00 = VND 11,700, which was the average exchange rate of the Bank for Foreign Trade for July 1997.
- d. For the prices of agricultural products, farm-gate prices are used and for the prices of agricultural production input materials and construction materials, delivery prices at the production and construction sites are used.
- e. An economic discount rate of 10% is applied in the economic evaluation. This figure represents the opportunity cost of capital and is used to determine the present value of future flow of costs and benefits of the Project as recommended by World Bank.
- f. A financial discount rate applied in the financial evaluation is the deposit rate of interest on annual basis of the State Bank of Vietnam as of 8.4%.

6.3.2 Benefits of the Project

(1) Estimation of Benefit

The benefits of the Project refer to a difference of net profit expected between with- and without-project conditions through the whole project life. The project benefits consist of tangible benefits (monetary benefits); i.e. an increase in agricultural production, an avoided damage of production, a saving effect of operation and maintenance cost, an increase of returns of farmers, etc. Also, the benefits consist of intangible benefits (non-monetary benefits) such as a stabilized food supply, a

supply of safe water, a creation of employment opportunities, an improvement of living standard of inhabitants, an improvement of education conditions and avoidance of environmental impacts. Tangible benefits are directly subjected to economic and financial evaluations, while intangible benefits are analyzed considering socio-economic impacts.

Furthermore, the benefit from agricultural production is aimed at only primary production. The benefit from the secondary production such as byproducts from rice and other crops (sugar, vegetable oil, soy sauce, noodle, etc.), values added of which are defined on the farm household economy analysis, is not considered. Increased cattle and poultry productions are the important sources of protein and contributes to the increase of income of farmers. As it is not calculated in detail, livestock production in the Study Area is expected to increase in a similar proportion to that of crop production.

(2) Generation of Benefit

Basic concepts regarding the benefits generated by the implementation of the Project are as follows:

1) Agricultural Benefit

a. Irrigation and Drainage Improvement

- Irrigation Improvement Sub-project

Benefit from the Irrigation Improvement Sub-project including improvement of reservoirs and pumping stations is considered as an increase of the crop productions mainly caused by increase of yield and efficiency of cropping pattern structures.

Under with-project conditions, the full benefit is generated from the next year of the completion of construction works in each irrigation system, because this sub-project is a rehabilitation project and the technique of irrigation control and farming practice are already very popular in the Study Area. On the other hand, under without-project conditions, some increase in agricultural production is considered even without implementation of the project, but at the same time some decrease of production is prospected due to inappropriate operation and maintenance of the existing irrigation systems and natural disasters such as inundation and drought. Accordingly, it is assumed that the production under without-project conditions is not changed and remains constant as the present situation.

Total annual net production value of six irrigation systems under with-project conditions is VND 17,077 million, about 3.6 times that of without-project conditions, and the total annual benefit of the Irrigation Improvement Sub-project is VND 12,342 million as follows:

Irrigation Improvement Financial Benefit

(Unit : million VND)

Item	Without-project	With-project	Increased Value
Reservoir Irrigation System			
Ho Thanh	340	925	585
Trang Den	327	11,188	862
Cua Ong	652	1,703	1,051
Rao Bang	693	1,882	1,189
Pumping Irrigation System			
Nam Dong	2,402	9,588	7,186
Nam Cuong	322	1,791	1,469
Total	4,735	17,077	12,342

Note : Including the benefit from the Agricultural Supporting Services Sub-project.

- Inundation Mitigation Sub-project

Benefit generated by the Inundation Mitigation Sub-project is recognized as an increase of the crop productions caused by avoiding crop damage by inundation, especially on Summer-Autumn and Summer paddies. Additionally, shortening of the inundation period will contribute to a rise of the living conditions of inhabitants (intangible benefit). Full benefit is generated from the next year of the completion of construction works.

The annual net value of inundation mitigation in 1,200 ha under with-project conditions is VND 4,033 million, about 1.4 times that of without-project conditions, and the annual benefit from the Inundation Mitigation Sub-project is VND 1,170 million as follows:

Inundation Mitigation Financial Benefit

(Unit : million VND)

Item	Without-project	With-project	Increased Value
Nam Nam Dike	2,863	4,033	1,170

b. Agricultural Supporting Services

- Agriculture Extension Center

This Center will be operated by a public organization (non-profit organization) under the management of the District or the Provincial People's Committee. Benefit generated by the Center is considered as an increase of the crop productions generated by the introduction of new farming practices with effective use of fertilizers and agro-chemicals.

- Seed Supply Center

This Center will be operated by the existing seed company under the management of the Provincial People's Committee. Benefit from the Center is considered as an increase of the crop productions especially for paddy generated by the introduction of high quality seeds.

- **Agricultural Mechanization Service Center**

This Center will also be operated by a public organization under the management of the District or Provincial People's Committee. Benefit produced by the Center is considered as an increase of crop productions especially for paddy generated by the control of cropping periods by avoiding inundation period.

Benefits generated by the implementation of three Centers are also included in the benefit of the Irrigation Improvement Sub-project in the Sub-project area as mentioned above. Therefore, the benefits of these Centers generated within the Irrigation Improvement Sub-project area are not considered. Only benefits generated out of the Sub-project area of 10,092 ha are considered.

The annual net production value out of the Irrigation Improvement Sub-project area under with-project conditions is VND 81,114 million, about 1.5 times that of without-project conditions, and the annual benefit of the Agricultural Supporting Services Sub-project is VND 28,659 million as follows:

Agricultural Supporting Services Financial Benefit

(Unit : million VND)

Item	Without-project	With-project	Increased Value
Agricultural Supporting Services	52,455	81,114	28,659

Note : Excluding the Irrigation Improvement Sub-project area.

c. **Agro-industry and Marketing Improvement**

- Agro-processing Complex
- Market-oriented Forwarding Center

Benefits generated by the implementation of the Agro-industry and Marketing Improvement Sub-projects are considered as a value added by a realization of the future agricultural production activities. Also, the activities of these Sub-projects can be examined using the same point of view as the one used for private sector. Therefore, the project evaluation of these Sub-projects is made from the financial view point only. Due to the characteristics of the operating organizations, benefits of these Sub-projects can be considered as net profit of the operating organizations of the Complex and Center.

Benefit generated from the Agro-processing Complex is the net profit of the difference between expenditure of raw material purchase such as paddy, ground nut, maize and sweet potato and income of product selling as white rice, edible oil and mixed feed and service charge of rice mill. The former is estimated at VND 1,361 million and the latter at VND 1,942 million. Therefore, the annual net profit is VND 581 million.

Market-oriented Forwarding Center is to buy agricultural products mainly

vegetables, beans and tubers, and clean, select, transport and sell them in Vinh City or other domestic markets. Benefit generated from the Center is the net profit of the difference between expenditure of purchase and income of selling agricultural products. The former is estimated at VND 675 million and the latter at VND 1,180 million. Consequently, the annual net profit is VND 504 million. Therefore, total annual benefit from the Agro-industry and Marketing Improvement Sub-projects is VND 1,085 million.

2) Education Facilities

- School Electrification
- Rehabilitation of School Facilities

Benefits generated by the implementation of the Education Facilities Sub-project are considered to be the improvement of educational conditions in classrooms of primary and secondary schools. However, these benefits are taken into account as intangible and they are analyzed in the socio-economic evaluation.

3) Rural Road Improvement

- Road Network Improvement

Benefits generated by the improvement of the existing roads are considered as a saving of transportation time of materials, a saving of fuels, a decrease of traveling loss and damage on transportation equipment etc. It should be noted that the benefit considered as a decrease of damage on transportation equipment is tangible to some extent. However, it is difficult to measure reliable benefits, and the estimated benefits may be extremely small as compared with the benefits from other factors and are not taken into account in the evaluation.

Tangible benefits generated by the Rural Road Improvement Sub-project are considered to be transportation cost reduction and products quality increment. The former is: transportation cost under without-project conditions that bicycle only is used is VND 2,478 million of transportation cost by full bicycle mean and at VND 1,214 million and that under with-project conditions that bicycle and truck are used is VND1,264 million. Then the annual benefit becomes VND 1,264 million. The later is estimated at VND 242 million as 3% of the net production value of vegetables. The total annual benefit from the Rural Road Improvement Sub-project is estimated at VND1,506 million.

4) Rural Electrification

- Rehabilitation of Distribution Network

Benefits from the implementation of the Rural Electrification Sub-project are considered as a mitigation of power loss and a saving of operation and maintenance costs, and they are tangible to some extent. However, the latter is uncertain and the estimated benefit is to be extremely small as compared with the former one in accordance with the poor conditions of present operation and maintenance, and is not taken into account in the evaluation. Additionally, the improvement of voltage drop contributes to a rise of the living conditions by

providing stable electricity supply (intangible benefit).

Present electricity loss is approximately 60% of the total electricity supply of 10.2 Gwh in the Study Area (Nghe An Power Company, 1997). By the improvement of this Sub-project the loss is to be decreased to 20% of the total supply. Consequently, the annual benefit from the Rural Electrification Sub-project is estimated at VND 2,040 million per year corresponding to 40% of the actual electricity supply.

5) Rural Water Supply

- Public Water Supply System
- Material Supply of Filter Tanks

It is difficult to assess the value of water for human consumption. Since water is essential for life, drinking water has theoretically an infinite value. In general, the unit water value of domestic water supply corresponds to the willingness to pay when determining its value. The benefits from the Rural Water Supply Sub-project can also be recognized as the decrease of the diseases and the improvement of living standard of inhabitants (intangible benefits). Therefore, it is considered that this Sub-project has the same objectives and activities as those of the health and sanitation sectors, and the economic benefits generated by this Sub-project can be considered to be intangible. Benefit from the implementation of this Sub-project is analyzed in the socio-economic evaluation.

6) Environmental Conservation

- Erosion Control

The countermeasures against erosion is closely related to the agricultural production conditions and rural living conditions. In this sense, the benefit from the Environmental Conservation Sub-project is considered as an avoided damage of agricultural production to be caused by soil erosion in the agricultural land. It is also considered as an avoided damage of residential houses and social facilities such as roads, irrigation canals and drainage canals, and an improvement of the efficiency of farming works and transportation.

Tangible benefits of avoided damage by the erosion control are considered to be benefits from lemon fields, residential houses and soil run-off. The first one is estimated at 50 m² of damaged agricultural field per year and annual damaged value is VND 0.5 million applying the productivity of lemon production as the net production value of VND 10 thousand/m². The second is estimated at three damaged houses each 10 years, of which one is completely damaged and two half damaged, the annual damaged value is VND 10 million applying VND 50 million for a completely damaged one. The third is estimated at 60 m³ of the soil volume of run-off per year and the annual damaged value is VND 1.8 million applying the soil run-off treatment cost of VND 30 thousand/m³. Therefore, the annual benefit from the Environmental Conservation Sub-project is estimated at VND 12.3 million.

6.3.3 Economic Evaluation

(1) Evaluation Criteria

The economic evaluation is carried out to analyze the economic impacts of the Project on the basis of economic benefits and economic costs as computed at economic prices under the framework of the national economy. Based on the incremental benefits and the project costs (initial investment cost or capital cost), operation and maintenance cost and replacement cost of the Project, all the prices are converted into economic prices.

The evaluation uses three interrelated indexes: 1) economic net present value (ENPV), 2) economic benefit-cost ratio (EB/C) and 3) economic internal rate of return (EIRR). The benefit and cost of the Project which are estimated based on implementation schedule of the Project are discounted by the opportunity cost of capital through the project life. The term ENPV is a difference between accumulated benefits and accumulated costs, and EB/C is the ratio of the former to the latter. The term EIRR means a discount rate in which accumulated benefits are equalized to accumulated costs.

The criteria to economically validate the implementation of the Project are that ENPV is positive, EB/C is more than 1 and EIRR exceeds the opportunity cost of capital. The opportunity cost of capital (economic discount rate) is the social marginal productivity of capital input in the Project, and the economic discount rate is considered to be 10%.

(2) Price Conversion

The evaluation in economic prices corrects financial prices (market prices) to reflect distortions in foreign exchange rate, impacts of taxes, subsidies and rents, and possibly to reflect distortions of prices of trade commodity and shadow (economic) wages. The adjusted prices are used in the evaluation of the costs and benefits of the Project, reflecting their true resource values and thus determining the true economic returns from the Project to Viet Nam. The economic prices used in the economic evaluation correspond to shadow prices. To obtain shadow prices, market prices are subtracted by transfer items other than real resources used for the Project, and the differences obtained are multiplied by the conversion factors to correct distortions of the market prices. However, these conversion factors are not established by GOV.

For the purpose of adjusting the effects of trade distortion, the prices of import goods such as construction materials are economically estimated using the shadow foreign exchange rate. The inter-bank foreign exchange rate (parallel market rate) or the foreign exchange rate of private sector (open market) is substantially higher than the official exchange rate. Basically, the parallel market rate is not equal to the shadow foreign exchange rate, but has influence on formation of trade commodity prices as taxes and subsidies. Therefore, this project evaluation applies the mean inter-bank exchange rate as of July 1997, US\$ 1.00 = VND 11,688 as the shadow foreign exchange rate; converting international prices (border parity prices) into prices

calculated with an exchange rate of the Bank for Foreign Trade (US\$ 1.00 = VND 11,673, State Bank of Vietnam, 1997). The shadow foreign exchange rate applied is 1.0 or the standard conversion factor is 1.0.

The value of traded or tradable major agricultural commodities and inputs is measured by border parity prices in Viet Nam currency. The border parity prices of main crops are based on 1997 constant prices which are projected by the constant 1990 terms. In this estimation as for a forecast of commodity prices, "Commodity Markets and the Developing Countries, 1996" evaluated by World Bank is used. Crops such as paddy, ground nut and maize offer foreign trade effects. International trade commodity in the production cost such as fertilizers are based on international prices, but others are based on Viet Nam internal prices.

No conversion factor is evaluated by the international monetary agencies in terms of the value of local costs for non-traded goods and prices for services including wage originated from market prices. Therefore, conversion factor of 1.0 is applied. The shadow wage rate, which is the shadow price for labor or the opportunity cost of labor, is estimated as 0.5 for unskilled labor and 0.9 for skilled labor. The rates thus derived are applied to convert financial wages / prices to economic costs.

1) Estimation of Benefits

Transfer items to be subtracted in the estimation of the benefits of the Project are as follows:

- Land user's tax occupied in production cost;
- Water charge occupied in production cost; and
- Contribution funds occupied in production cost.

Shadow prices to be applied in the estimation of the benefits are as follows:

- Farm-gate price of main crops of paddy, ground nut and maize to be converted to the international prices;
- Agricultural chemical price of urea, phosphate and potassium occupied in the production cost to be converted to the international prices; and
- Agricultural labor occupied in production cost; shadow wage rate of 0.5.

Furthermore, farmer labor is valued as a part of production cost.

a. Irrigation and Drainage

- Irrigation Improvement Sub-project

Total economic annual net production value for the six systems under with-project conditions is VND 22,128 million, about 4.4 times that under without-project conditions, and the total economic annual benefit from the Irrigation Improvement Sub-project is VND 17,075 million as follows:

Irrigation Improvement Economic Benefit

(Unit : million VND)

Item	Without-project	With-project	Increased Value
Reservoir Irrigation System			
Ho Thanh	392	1,254	862
Trang Den	319	1,499	1,180
Cua Ong	709	2,218	1,509
Rao Bang	707	2,391	1,683
Pumping Irrigation System			
Nam Dong	2,714	12,659	9,945
Nam Cuong	212	2,108	1,896
Total	5,053	22,128	17,075

Note : Including benefit of the Agricultural Supporting Services Sub-project.

- Inundation Mitigation Sub-project

The economic annual net value of inundation mitigation in 1,200 ha under with-project conditions is VND 4,783 million, about 1.4 times that under without-project conditions, and the annual benefit from the Inundation Mitigation Sub-project is VND 1,442 million as follows:

Inundation Mitigation Economic Benefit

(Unit : million VND)

Item	Without-project	With-project	Increased Value
Nam Nam Dike	3,341	4,783	1,442

b. Agricultural Supporting Services

The economic annual net production value from this Sub-project in connection with the area other than the Irrigation Improvement Sub-project area under with-project conditions is VND 73,279 million, about 1.6 times that under without-project conditions, and the annual benefit from the Agricultural Supporting Services Sub-project is VND 28,179 million as follows:

Agricultural Supporting Services Economic Benefit

(Unit : million VND)

Net Production Value	Without-project	With-project	Increased Value
Agricultural Supporting Services	45,100	73,279	28,179

Note : Excluding the Irrigation Improvement Sub-project area.

c. Rural Road Improvement

The total economic annual benefit from the Rural Road Improvement Sub-project is estimated at VND 1,479 million.

d. Rural Electrification

The economic annual benefit from the Rural Electrification Sub-project is estimated at VND 2,040 million.

e. Environmental Conservation

The economic annual benefit from the Environmental Conservation Sub-project is estimated at VND 12.3 million.

2) Cost Estimation

The project cost is composed of the costs for construction works, land acquisition, equipment procurement, project administration, engineering service, and physical and price contingencies; contingencies are included to consider the possibilities of design modification and price increase. However, even though physical contingency is included, price contingency is excluded in the project evaluation. Transfer items to be subtracted in the estimation of the costs of the Project are as follows:

- Fund charges occupied in the project cost; and
- Facility depreciation cost occupied in the operation and maintenance cost.

Shadow prices to be applied in the estimation of the costs are as follows:

- Shadow wage rate of 0.5 for unskilled labor wage included in the construction cost;
- Shadow wage rate of 0.9 for skilled labor wage included in the construction cost; and
- For land acquisition and compensation costs, the opportunity cost of land is the net production value of the productivity of land corresponding to the agricultural land of the same category in economic terms for the cultivating land and an opportunity cost of 0.0 is used for barren land or unused land.

a. Irrigation and Drainage Improvement

- Irrigation Improvement Sub-project

The economic project cost of the Irrigation Improvement Sub-project is the sum of VND 58,045 million for local currency and VND 8,898 million for foreign currency, totaling VND 66,943 million as shown in the table below. On the other hand, the total annual operation and maintenance cost is VND 982 million and the replacement cost is VND 407 million for every 15 years.

Economic Project Cost of Irrigation Improvement

(Unit : million VND)

Item	Local Currency	Foreign Currency	Project Cost
Reservoir Irrigation System			
Ho Thanh	6,113	961	7,074
Trang Den	9,813	1,447	11,260
Cua Ong	8,498	1,134	9,632
Rao Bang	7,094	817	7,911
Pumping Irrigation System			
Nam Dong	18,366	3,383	21,749
Nam Cuong	8,161	1,156	9,317
Total	58,045	8,898	66,943

- Inundation Mitigation Sub-project

The economic project cost of the Inundation Mitigation Sub-project is the sum of VND 3,356 million for local currency and VND 437 million for foreign currency, totaling VND 3,793 million. On the other hand, annual operation and maintenance cost is VND 359 million and the replacement cost is VND 145 million for every 20 years.

b. Agricultural Supporting Services

The economic project cost of the Agricultural Supporting Services Sub-project is the sum of VND 9,161 million for local currency and VND 55,504 million for foreign currency, totaling VND 64,665 million as shown in the table below. On the other hand, operation and maintenance cost and replacement cost are evaluated together with the production costs of crops for the benefits estimation.

Economic Project Cost of Agricultural Supporting Services

(Unit : million VND)

Center	Local Currency	Foreign Currency	Project Cost
Agricultural Extension Center	96	1,951	2,047
Seed Supply Center	3,098	18,443	21,541
Agricultural Mechanization Center	5,967	35,110	41,077
Total	9,161	55,504	64,665

c. Rural Road Improvement

The economic project cost of the Rural Road Improvement Sub-project is the sum of VND 88,337 million for local currency and VND 31,908 million for foreign currency, totaling VND 120,245 million. On the other hand, annual operation and maintenance cost is VND 1,582 million.

d. Rural Electrification

The economic project cost of the Rural Electrification Sub-project is the sum of VND 55,919 million for local currency and VND 18,255 million for foreign

currency, totaling VND 74,174 million. On the other hand, annual operation and maintenance cost is VND 1,202 million.

c. Environmental Conservation

The economic project cost of the Environmental Conservation Sub-project is the sum of VND 1,799 million for local currency and VND 145 million for foreign currency, totaling VND 1,944 million.

(3) EIRR, ENPV and EB/C

The period of evaluation is 30 years for the whole project life. Therefore, replacement cost is required for some machines and equipment with shorter working life at the end of economic working life of them. Residual value is considered as a negative cost for the principal structures and equipment which have a working life period at the final year of the project life. If the evaluation proves that EIRR exceeds the opportunity cost of capital of 10%, ENPV is positive and EB/C exceeds 1, it will be judged that the implementation of the Project is economically feasible.

The evaluation shows a flow of project cost, operation and maintenance cost and replacement cost and all the project benefit. Where EIRR of the Project is 14.5%, ENPV is VND 88,890 million at the economic discount rate of 10% in the prices of July 1997 and EB/C is 1.3 at the same discount rate. The project evaluation has proven that EIRR exceeds the opportunity cost of capital, ENPV is positive and EB/C exceeds 1. Therefore, it is judged that the implementation of the Project is economically feasible.

(4) Sensitivity Analysis

Sensitivity analysis shows how sensible is the Project to the variations of the main assumed factors in the project evaluation. The analysis has been made under the following conditions: 1) 10% increase of the project cost, 2) 10% decrease of the project benefit and 3) 1 year delay of the completion of the construction works.

Increase of the estimated project cost is attributable to the rise of construction material cost and wage and increase of work volume. Decrease of the project benefit is attributable to the increase of the estimated production cost, reduction in the expected yield and fall in farm-gate price of agricultural products. And delay of the completion of the construction works means the delay of occurrence of the benefit. The results of the sensitivity analysis of the economic evaluation are summarized below:

Sensitivity Analysis for Economic Evaluation			
Item	EIRR (%)	ENPV (million VND)	EB/C
Base	14.46	88,890	1.31
Project cost increased by 10%	12.92	63,516	1.21
Project benefit decreased by 10%	12.62	51,660	1.18
Construction delayed for 1 year	12.34	52,424	1.19

Sensitivity analysis has proven that a change in the construction period has stronger economic influence on the EIRR and a change in the project benefit has stronger influence on the ENPV and EB/C than a change of other items.

Furthermore, the economic evaluation in case of including all costs of the Education and Water Supply Sub-projects, even if their benefits are intangible, shows that EIRR of the Project is 11.2%, ENPV is VND 26,963 million at discount rate of 10% in the prices of July 1997 and EB/C is 1.1 at the same discount rate.

6.3.4 Financial Evaluation

(1) Evaluation Criteria

The financial evaluation is carried out to evaluate soundness of financial state of the Project, which generates a justifiable profit with its implementation, from the viewpoint of project implementation organization and beneficiary based on financial benefit and financial cost evaluated using financial prices (market prices).

The evaluation in financial prices utilizes the actual market prices for inputs and outputs faced by the farmers to calculate their expected gross income and net income in order to explore the farm level financial reserve (farm profit) and farmers' ability to contribute to cost recovery of the Project. The financial prices are also used to analyze the cash flow and balance sheets of the whole Project including the operation and maintenance cost and replacement cost, and to analyze the cash flow of project investment and repayment.

(2) FIRR, FNPV and FB/C

1) Tangible Sub-projects

The evaluation uses three same relevant indexes as for the economic evaluation: financial net present value (FNPV), financial benefit-cost ratio (FB/C) and financial internal rate of return (FIRR). The benefit and cost of the Project which are estimated based on the implementation schedule of the Project are discounted by the financial discount rate through the project life. The term FNPV is a difference between accumulated benefits and accumulated costs and FB/C is the ratio of the former to the latter. The term FIRR means a financial discount rate in which accumulated benefits is equalized to accumulated costs. The criteria to financially validate the implementation of the Project are that FNPV is positive, FB/C is more than 1 and FIRR exceeds the financial discount rate.

The governmental subsidy for the Project is considered as income of the Project. Accordingly, it is possible to evaluate validity of the implementation of the Project depending on the proportion of the governmental subsidy.

The evaluation shows a flow of the project cost, operation and maintenance cost and replacement cost and all the project benefit. Where FIRR of the Project is

9.2%, FNPV is VND 17,843 million at the financial discount rate of 8.4% in the price of July 1997 and FB/C is 1.1 at the same discount rate. Project evaluation has proven that FIRR exceeds the financial discount rate, FNPV is positive and FB/C exceeds 1. It is judged that the implementation of the Project is financially feasible.

2) Sensitivity Analysis

Sensitivity analysis for the financial evaluation for the three cases stated previously is also carried out under the same conditions as for the economic evaluation. The results of sensitivity analysis of financial evaluation are summarized below:

Sensitivity Analysis for Financial Evaluation			
Item	FIRR (%)	FNPV (million VND)	FB/C
Base	9.23	17,843	1.05
Project cost increased by 10%	8.00	-9,611	0.98
Project benefit decreased by 10%	7.36	-22,545	0.94
Construction delayed for 1 year	7.70	-17,153	0.96

Sensitivity analysis has proven that a change in the project benefit has stronger financial influence on the Project than a change in construction period and project cost.

3) Agro-processing Complex and Market-oriented Forwarding Center

FIRR, FNPV and FB/C of the Agro-processing Complex and the Market-oriented Forwarding Center representing the Agro-industry and Marketing Sub-project, is calculated based on the cash flow of initial cost, operation and maintenance cost, and all the profits through the project life. Where FIRR is below 0% and 8.4%, respectively, FNPV are VND -11,413 million and VND 6 million at the discount rate of 8.4% in the price of July 1997, and FB/C is 0.3 and 1.0 using the same discount rate. Project evaluation has proven that FIRR of the Agro-processing Complex is drastically below the financial discount rate, FNPV is negative and FB/C is under 1. It is judged that the implementation of the Agro-processing Complex is not financially feasible. On the other hand, FIRR of the Market-oriented Forwarding Center exceeds the financial discount rate, FNPV is positive and FB/C exceeds 1. It is judged that the implementation of the Market-oriented Forwarding Center is financially feasible.

As mentioned above, FIRR of the Agro-processing Complex is lower than the financial discount rate of 8.4%, and it can be judged that this Complex is not feasible from the financial view point only. The governmental subsidy for this activity is considered as a part of income of the Complex. Accordingly, it is possible to examine the feasibility of the implementation of the Complex depending on the proportion of the governmental subsidy as a case study.

FIRR for Different Cases of Governmental Subsidy

Case of Governmental Subsidy Ratio of Subsidy (%)	FIRR (%)	
	Agro-processing Complex	Market-oriented Forwarding C.
Without any Subsidy	under 0	8.42
20% of Initial Cost	under 0	11.1
50% of Initial Cost	1.74	18.5
80% of Initial Cost	10.4	46.6

According to the results of the financial evaluation, the Agro-processing Complex has limited commercial viability if all the initial capital investment thereof is to be included in the project cash flow. Therefore, it is necessary that the government directly finances some parts of the initial capital investment to the Complex.

The basic consideration on the project finance for this Sub-project that may generate income is that the government should cover whole or part of the initial capital investments and take the economic return/benefit derived from their development. The recurrent cost for their operation and maintenance, however, should be self-financed with the revenues or charges generated from their operations. The proposed establishment of the Sub-project is for this purpose. In order to ease the project's cash flow or to provide institutional funds for social or model developments, it is highly recommended that the concessionary loan and/or grant aid is used as much as possible for this Sub-project as proposed in the Study.

(3) Investment and Repayment

For the implementation of the Project, it is necessary to procure the project cost including the price contingency (price escalation) in foreign and local currencies. The Project attempts to introduce external loan from an international financial organization to cover expenses mainly to be paid in foreign currency or a certain portion of the total cost. Expenses to be paid in local currency are to be budgeted in the frame of the public investment account under the responsibility of GOV. An example of investment and repayment conditions of the foreign loan for the Project indicates that proportion of the foreign loan covers 75% of the total cost with an annual interest rate of 2%, loan maturity of 30 years, grace period of 10 years and equal annual payment of the principal.

In the 11th project year, the sum of equal annual reimbursement for principal and interest reaches the maximum of VND 28,600 million. In the 2nd project year, the sum of the reimbursed interest of the foreign loan and the Governmental finance to the Project reaches the maximum of VND 49,200 million. This amount accounts for about 6.8% of the budget plan for expenses of the People's Committee of Nghe An Province in 1997.

(4) Farm Income Analysis

The most direct and important benefit from the implementation of the Project is to increase agricultural income of farmers through the irrigation and agricultural

supporting service developments. Agricultural net income is calculated by deducting production cost from agricultural gross income. Income from livestock production will also be expected to increase.

After the completion of the Irrigation Improvement Sub-project which includes reservoir systems of one in Nam Nam region and three in Northwest region and two pumping station systems in Nam Nam region, and Agricultural Supporting Services Sub-project, agricultural net income will be increased. The impacts of the Project on agricultural income are determined on the basis of crop budgets and productions; model farmers are prepared for each irrigation system using representative average land holding sizes.

Agricultural Net Income Increment per Average Farmer

(Unit : thou. VND)

System	Farm Size	Without-project	With-project	Increment
Ho Thanh Reservoir	0.36 ha	1,538	4,184	2,646
Trang Den Reservoir	0.45 ha	1,457	5,299	3,843
Cua Ong Reservoir	0.45 ha	1,937	5,063	3,125
Rao Bang Reservoir	0.45 ha	1,932	5,247	3,315
Nam Dong Pumping Station	0.36 ha	1,087	4,339	3,252
Nam Cuong Pumping	0.36 ha	971	5,403	4,431

Expected annual agricultural net incomes increase by 2.6 to 5.6 times in comparison with without-project conditions. Increased value of agricultural net income are from VND 2,600 thousand to VND 4,400 thousand per year for an average farm size in each irrigation system at 1997 prices.

Accordingly, even if the Education and Rural Water Supply Sub-projects apply the some charges or tariff system after the completion of the Project, these increased incomes of the farmers can cover such costs. Especially, in order to make the Water Supply Sub-project succeed, at least operation and maintenance costs should be paid by the beneficiaries by themselves.

6.3.5 Socio-economic Evaluation

As stated before, the Project brings about the following secondary or indirect intangible benefits which are important in reviewing the validity of the implementation of the Project as well as the direct or tangible benefits:

(1) Contribution to the National and Provincial Development Plans

Implementation of the Project contributes to the national and provincial developments in ensuring accomplishment of many objectives of the agricultural and rural development plans, which are important in political terms for the national and provincial development plans.

(2) Stable Supply of Food

Nam Dan District is almost self-sufficient in rice production. However, Nghe An Province is not self-sufficient in rice production. Therefore, it is important to see the way to cover the deficits of rice production. A stable production of rice, which is a basic food crop, is maintained with the irrigated farming method. Furthermore, the new crops such as sesame and vegetables introduced in the Project answer to the stable supply of food and diversity to the people in the Study Area, and contributes to the improvement of self-sufficiency rate in Nghe An Province.

(3) Increase in Employment Opportunity

Construction works of the Project employ about 290 thousand man-day of skilled laborer and 690 man-day of unskilled laborer in the total period of 10 years. Implementation of the Project absorbs excess labor in and around the Study Area, reduces the number of unemployed laborers and improves the living standard of employed laborers; thus contributes to stabilize the living conditions in and around the Study Area.

(4) Improvement of Living Standard

As evidently proven by the financial evaluation, farmer's reserve (profit) is increased to a great extent with the implementation of the Project, even if a part of the project cost and/or operation and maintenance cost is borne by the farmers under the form of irrigation water charge, domestic water supply charge, electric charge and education costs. A rapid increase in funds in the farmer's economy by far exceeds cost of improving living environments.

(5) Improvement of Rural Water Supply

Beneficiaries of the public water supply system by deep wells of the Rural Water Supply Sub-project are approximately 123,000 persons in 9 service blocks; this figure includes 43,000 persons for the inundation area (6 service blocks) and 80,000 persons for the dried-up area (13 service block). About 70% of the population in Nam Dan District are to be supplied with safe water by this system. Furthermore, construction materials for the installation of filter tanks are supplied for the remaining area not covered by the public water supply system. A total of 3,300 existing wells are to be supplied with construction materials for filter tanks; the number of beneficiaries is 55,000 persons (30% of the population in Nam Dan District). Consequently, the health and sanitation situation in Nam Dan District is to be improved through the provision of safe water.

Most of the households have a shallow well near their houses which provide enough water during the rainy season in Nam Dan District. However, during the dry season, there is a shortage of water from the wells; also, during the rainy season, the water of the wells become contaminated as a result of flood water seeping. During these periods, peoples are forced to collect water from another sources located far away from their homes. Since women in the rural area are obliged to spend a lot of time for

carrying water, the Rural Water Supply Sub-project will alleviate them from this task.

A water fee will be charged to beneficiaries to cover the operation and maintenance costs of the public water supply system. Thus, the establishment of a self-supporting organization is required for operation and maintenance through the participation of the beneficiaries. This cooperative activities greatly contribute to strengthen their communities.

(6) Improvement of Education Conditions

Implementation of the Education Sub-project will improve the educational conditions in classroom of schools, and contribute to up-grade educational level of the school age group of rural habitants. Finally, the Sub-project will lead to the renovation of the manpower resources; one way is to utilize the qualified human resources in the rural area and the second way is to draw some parts of the agricultural labor to industry and service sectors.

(7) Promotion of Marketing and Agro-processing

Increased production of agricultural products stimulates the marketing system and opens a door to the improvement of the system. In addition, processing of crops ensures increased added values. Stable supply of raw materials effectively stimulates new activities of agro-processing in the Study Area and utilizes the existing processing facilities that would otherwise be left in poor utilization efficiency in the surrounding of the Study Area; thereby contributing to the promotion of the agro-processing sector.

(8) Economic Stimulation

The implementation of the Project increases the income of local farmers and improves the living standard of them to a great extent. Improved income further increases purchase power of the local farmers and vitalizes local commercial activities. Increased purchase power and vigorous commercial activities are expected to promote local industries. In this way, the implementation of the Project will bring about significant influential effect to Nghe An Province and finally to the economy of Viet Nam, not limited to the Study Area of Nam Dan District.

6.3.6 Environmental Evaluation

The Project is essentially a rehabilitation project for agricultural and rural development. Therefore, no significant impacts are anticipated. However, when implementing the Project, the possible impacts on the project site are taken into account, together with the natural conditions surrounding the Project and the socio-economic conditions. When the Project is executed, a more detailed environmental study should be carried out in the project site. It is important to assess the possible effects of the implementation of the

Project and to find out possible countermeasures before the commencement of the construction works.

Specially, as the Irrigation and Drainage Sub-project and the Rural Road Improvement Sub-project require a lot of civil engineering works, in the detailed design of the main infrastructures, the construction methods must be considered in such a way as not to affect as much as possible the characteristics and distribution of the soils and not allow the apparition of water and soil contamination, noise and vibrations. Still more, as the new construction of a pump station and rural roads potentially impacts several families, special consideration to the designs is required to minimize the number of affected families. When executing the Project, the works must be managed in an adequate way and it will be necessary to establish a monitoring system for any possible environmental mutation.

6.3.7 Comprehensive Evaluation

Through the implementation of the Project, it is possible to predict that the living standard of local people in and around the Study Area will be greatly improved, which comes from an increase in agricultural production, stable supply of food, increase in employment opportunity, expansion of income, improvement in living conditions, etc. The implementation of the Project is highly expected to stabilize the inhabitants' living and welfare conditions in the Study Area, and to have a deep impact on agricultural activities and to contribute to the national economy.

The implementation of the Project is judged as valid based on the results of economic and financial evaluations as computed from tangible benefits. In addition, socio-economic impacts evaluated from intangible benefits are also judged as big enough. Any remarkable negative environmental impacts from the implementation the Project are not confirmed by the environmental evaluation and the Project is evaluated as a sustainable agricultural and rural development plan considering the environmental situation. Moreover, the implementation of the Project is justified to be feasible from technical and organizational operational viewpoints. Accordingly, it is recommended that a high priority should be given to the Project for its implementation in an early stage.

6.4 RECOMMENDATION

(1) Early Implementation of the Plan

The Project should be implemented as soon as possible due to the following reasons:

- Economic differences between urban area and rural area have widened recently in Viet Nam and this has become one of the serious social problems in the country. In this situation, economic development and increase of farmers' living standard are urgent matters to be considered in rural areas.
- The implementation of the Project is economically and socially possible. At the same time, it contributes greatly to increase farmers' living standard and developing rural areas.
- In the rural society changing day by day since the market economy was introduced, the implementation of the Project will present a rural society as what it should be in the future. And it will indicate the direction and the method for realization of such project. The implementation of the Project is extremely valuable as displaying the rural development as a model for extending its development to other areas.

Furthermore, even if the implementation of the Project covering the whole objective area of Nam Dan District is difficult, it is recommended that the immediate implementation of the Project in some parts of the Project area. In this case, it is better to implement it in a limited area by including as many sectors as possible in consideration of the nature of the Project as a model rural development, not focusing on a specified sector.

(2) Irrigation and Drainage

The important factor of irrigation and drainage improvement proposed in the Project is improvement of water usage. Facilities are designed considering efficiency of water usage with simple operations in water management. It is necessary to guide and educate farmers sufficiently regarding the necessity of keeping to the regulations in water use right by themselves in order to maintain the facilities in good function.

(3) Agricultural Supporting Service

In the Sub-project of agricultural supporting service, enhancement of existing organizations or establishment of new organizations are proposed for the project management. It is important to realize the efficient commencement of management after the completion of building construction and procurement of equipment by securing human resources and executing training for them from the preparation stage of the project.

(4) Agro-industry and Marketing Improvement

"Agro-processing Complex" and "Market-oriented Forwarding Center" are to display new models of farm management adaptable to market economy and are valuable as model projects in the sector. For the realization of these projects, voluntary participation of farmers' groups to the enterprises and independent management by themselves are necessary. However, sufficient support by public organization to supplement the deficiencies of initial investment and to provide technical/management know-how is also necessary for such pioneer development projects.

(5) Rural Credit

Because it is inevitable to consider the sector of rural credit at national level, this sector is excluded from the Sub-projects of the Model Rural Development. A new system of rural credit realizing accessible credit for farmers by introducing "Group Loan System" is necessary to develop active farm management in rural area in Viet Nam. Under these situations, a system including the extension of penalizing system by law should be established immediately.

(6) Education Facilities

The Sub-project for rehabilitation of education facilities is to provide necessary materials and to be implemented with inhabitants' participation. Operation of rehabilitation is to be executed by grouped inhabitants under the responsibilities of each commune. At the implementation, appropriate procurement of materials and guidance by technical experts are to be realized in each commune with sufficient communication with Province and District through the Education and Training Department in Nam Dan District.

(7) Rural Road Improvement

For realizing the future image of agriculture and rural areas what should be, modern road network which do not affected by weather conditions and methods of transport is indispensable. Also, appropriate road networks are basic social infrastructures for all of the agricultural activities, economic activities and living of inhabitants. Since this sector is indispensable for project components in other sectors, the projects in this sector should be implemented prior to others. Presently, maintenance and management have been executed mainly by manpower provided by the participation of inhabitants. However, introducing mechanization in maintenance and management operation is necessary in consideration of increase of work amount in the future.

(8) Rural Electrification

Since construction of distribution line from low voltage power line is executed by the farmers themselves, accidents and power loss resulted by insufficient works and poor materials have frequently occurred. The present system in this sector

should be reviewed for securing safety of individuals (prevention of electrical shock) and for eliminating illegal electricity use. Under these circumstances, the following are recommended in this sector:

1. To regulate the wiring of distribution line to be operated only by the electrician belonging to Agriculture and Rural Development Department in Nam Dan District,
2. To execute rehabilitation of all the existing distribution lines by the electricians,
3. To assign approximately 3 official electricians to each commune for providing appropriate operation and maintenance of this sector, and to train the electricians periodically for improving their abilities.

(9) Rural Water Supply

It is necessary to establish new organizations with inhabitants' participation for operating/maintaining water supply facilities. At the initial stage of operation, technology and finance of the organization will be insufficient. Therefore, it is recommended that the People's Committees of Province/District and Provincial Rural Water Supply Office provide appropriate support to the organizations at the beginning of the O/M for operation/management techniques and financial management which is necessary for the operation.

Also, as the information regarding underground water in the project area is insufficient, it is necessary to confirm potentiality and quality of underground water by conducting the investigation covering wide areas to clarify locations of well construction before commencement of each project. Under these circumstances, it is recommended that electric resistivity survey over the entire project area is conducted to locate sites for well construction, then to conduct test borings, a pumping tests and water quality tests at the proposed well sites.

(10) Environmental Conservation

Gully erosions which are in small scale and are considered to be less dangerous for inhabitants with low urgency are excluded from the Project. Countermeasures against these erosions are possible to provide with inhabitants' participation, if they are executed before the erosions develop in large-scale. These activities should be continued with the initiative of Forestry Section in Nghe An Province.

CHAPTER 6 : TABLES



Table 6.2.1 Project Implementation Plan

Item	Project Cost* (mill.VND)	Implementation Schedule						
		1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th Year	7 th to 10 th Year
IRRIGATION AND DRAINAGE IMPROVEMENT								
1 Ho Thanh Irrigation System	7,542							
2 Tang den Irrigation System	12,032							
3 Cua Ong Irrigation System	10,252							
4 Rao Bang Irrigation System	8,408							
5 Num Dung Irrigation System	22,661							
6 Nam Cuong Irrigation System	9,966							
7 Nam Nam Dike	3,952							
Total	74,813	453	22,436	13,959	16,077	21,838		
AGRICULTURAL SUPPORTING SYSTEM								
1 Agricultural Extension Center	2,085							
2 Seed Supply Center	21,719							
3 Agricultural Mechanization Center	41,804							
TOTAL	65,609	1,312	64,297					
AGRO-INDUSTRY AND MKETING								
1 Agro-processing Complex	16,234							
2 Market-oriented Forwarding Center	4,027							
TOTAL	20,261					4,027	16,234	
EDUCATION								
1 School Electrification	1,364							
2 Rehabilitation of School Facilities	22,264							
TOTAL	23,628		2,474	2,474	2,929	2,929	2,929	2,474 x 4
RURAL ROAD IMPROVEMENT								
1 Route 15A Nothern Part	17,554							
2 Route 15A Southern Part	41,433							
3 42 Dike Road	14,790							
4 Phan Boi - Chua Road	16,083							
9 Nam Nam Dike Road	16,120							
10 Nam Kim- Nam Phuc - Nam Cuong Road	20,468							
Total	126,448	1,180	58,538	36,475	30,255			
RURAL ELECTIRIFICATION								
Region 1	35,568							
Region 2	19,206							
Region 3	21,190							
Total	75,965	384	19,246	21,477	34,857			
RURAL WATER SUPPLY								
Public Water Supply System (Dried-up Area)	53,617							
Public Water Supply System (Inundation Area)	16,052							
Material Supply of Filter Tank	5,808							
Total	75,477		8,671	8,671	8,305	8,305	8,305	8,305 x 4
ENVIRONMENTAL CONSERVATION								
Erosion Control	2,074							
GRAND TOTAL	464,275	4,339	176,092	83,220	91,253	36,797	29,460	10,779 x 4
		1%	38%	18%	20%	8%	6%	9%

*: The project cost excludes price escalation.

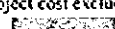

 Preparation Period
 Construction Period

Table 6.2.2 Summary of Project Cost and Annual O/M Cost

Item	Project Cost* (mill VND)	Annual O/M Cost (mill VND)	Item	Project Cost* (mill VND)	Annual O/M Cost (mill VND)
IRRIGATION AND DRAINAGE IMPROVEMENT					
1 Ho Thanh Irrigation System	7,542	44	RURAL ROAD IMPROVEMENT		
2 Tang den Irrigation System	12,032	61	1 Route 15A Northern Part	17,554	355
3 Cua Ong Irrigation System	10,252	63	2 Route 15A Southern Part	41,433	466
4 Rao Bang Irrigation System	8,408	56	3 42 Dike Road	14,790	264
5 Nam Dung Irrigation System	22,661	679	4 Phan Boi - Chua Road	16,083	173
6 Nam Cuong Irrigation System	9,966	107	9 Nam Nam Dike Road	16,120	226
7 Nam Nam Dike	3,952	367	10 Nam Kim- Nam Phue - Nam Cuong Road	20,468	98
Total	74,813	1,377	Total	126,448	1,582
AGRICULTURAL SUPPORTING SYSTEM					
1 Agricultural Extension Center	2,085	718	RURAL ELECTRIFICATION		
2 Seed Supply Center (Contract on Seed Production)	1,342	3,504 (2,162)	1 Region 1	35,568	563
3 Agricultural Mechanization Center (Replacement of Agricultural Machinery)	1,432	4,909 (3,477)	2 Region 2	19,206	304
TOTAL	4,859	9,131	3 Region 3	21,190	335
			Total	75,965	1,202
AGRO-INDUSTRY AND MARKETING					
1 Agro-processing Complex	16,234	222	RURAL WATER SUPPLY		
2 Market-oriented Forwarding Center	4,027	129	1 Public Water Supply System (Dried-up Area)	53,617	2,503
TOTAL	20,261	351	2 Public Water Supply System (Inundation Area)	16,052	0
			3 Material Supply of Filter Tank	5,808	0
			Total	75,477	2,503
ENVIRONMENTAL CONSERVATION					
1 Erosion Control			ENVIRONMENTAL CONSERVATION		
TOTAL			1 Erosion Control	2,074	0
EDUCATION					
1 School Electrification	1,364	0	GRAND TOTAL		
2 Rehabilitation of School Facilities	22,264	0		464,275	10,507
TOTAL	23,628	0			

* : The project cost dose not include price escalation.

CHAPTER 7 MONITORING OF PROJECT AREA

CHAPTER 7 : MONITORING OF PROJECT

7.1 HUMAN DEVELOPMENT INDEX

The human development index (hereinafter referred to as "HDI") is a comprehensive socio-economic index recently adopted by UNDP to display degree of relative development for each country and is considered to replace the traditional GDP index. However, it is utilized at present for the analysis at a country level and is not adopted as an analyzing method for a development plan to be implemented in a limited area. Thus, some modifications are necessary in order to adopt this methodology for the analysis of present conditions in the specific farming areas. The adoption of this methodology was considered in the Study with the mind of its suitability for the analysis of the present conditions in the Study Area by unifying indices for different dimensions such as life span, knowledge and living standards of the people in the area.

The basic principle of HDI methodology is expressing degrees of development for each country with numbers between 0 (as the foundation of intended development) and 1 (as the final condition of intended development). Degree of development for each country is categorized into the following three groups by using the estimated HDI:

- 1) less than 0.5 : low developing group
- 2) 0.5 - 0.8 : middle developing group
- 3) more than 0.8 : high developing group

Some difficulties in implementing this methodology may exist in the process of collecting reliable information representing the survey area, analyzing the collected data and judging the results of analysis. Data used for analysis was confirmed from the results of the rural socio-economic survey in the Study.

7.2 COMPUTATION OF HDI IN PRESENT CONDITION

HDI has been calculated based on 3 items: average life expectancy, education attainment rate (it is calculated from adult literacy and combined enrollment ratio) and living standard (adjusted real GDP per capita [purchasing power parity PPP\$]). The result of calculation of HDI (as of 1995) of Nam Dan District and Viet Nam is shown below:

Conditions:

Area	Life expectancy (years)	Adult literacy ratio (%)	Combined enrollment ratio (%)	Real GDP per capita (PPP\$)
Nam Dan District	66.0	98.0	64	835
Viet Nam	65.5	92.5	51	1,040

Results:

Area	Life expectancy index	Education attainment index	Adjusted real GDP per capita (PPP\$) index	HDI
Nam Dan District	0.683	0.867	0.124	0.558
Viet Nam	0.675	0.787	0.158	0.540

As a result of calculation based on the pre-conditions set in this Study, HDI value calculated for Nam Dan District is slightly higher than that of the national average. This is due to the fact that the education indexes of Nam Dan are higher than those of national average by about 10% even though the economic index is lower by about 20%, and calculated HDI value presents well the social and economic conditions of Nam Dan.

Among 3 items necessary to calculate HDI, average life expectancy and education attainment rate can be calculated without difficulties, because necessary statistical data for Nam Dan District are relatively well prepared. However, it is impossible to collect necessary information by employing a normal method and calculate purchasing power parity (PPP) within the limited period. Because there are more than 200 items necessary for its calculation and most of the items are not general data of social statistics. In this Study, PPP was estimated from the trend of market prices related to GDP per capita in the area and expenditure of farm household. However, accumulation of experiences in similar study and examination is necessary in order to justify the pre-condition and employed method for the calculation.

7.3 RECOMMENDATION ON MONITORING OF PROJECT EFFECT

For the formulation and implementation of an integrated rural development plan consisting of many sector projects, one of the very important factors to take into consideration is to continuously monitor the project effects based on the changes of conditions in the project area by adopting the same indexes in the same area.

In the Study, the present condition of the Study Area was evaluated by applying HDI method; by doing so, the basic material for the project evaluation in the future was obtained. By monitoring the results of the implementation of the Project, it will be possible to have a feedback from the monitoring results to the Project, and it will be useful for other similar projects in other regions. This is one of the objectives of the present Study concerning the formulation of a Model Rural Development Plan. Thus, it is strongly required to execute a continuous monitoring of the rural living conditions applying HDI method.

GDP in Viet Nam was doubled within the recent 2 years and a drastic change of economic conditions which is observed also in Nam Dan District has been under way nationally. On the other hand, life expectancy in Nam Dan District increased by 1 year for each year within the last 4 years. Also, literacy rate is reaching nearly 100% in the District. The combined enrollment ratio almost has reached its maximum rate under the present situation of school facilities. In consideration of the above-mentioned conditions, the frequency of monitoring is considered to be once in 1 to 2 years in order to view a HDI value representing the changes of conditions in rural society and economics.

If the method of monitoring requires complex and lengthy investigation, it will become impossible to conduct monitoring continuously. So that, the monitoring should be conducted simply and quickly maintaining necessary accuracy. There are no major difficulties on the data of average life expectancy and education attainment rate as mentioned above. It will be difficult to calculate an actual GDP by employing traditional method. So that, it is recommended to employ a conventional method to calculate an

actual GDP based on PPP rate of Viet Nam announced by UNDP, GDP of national average and of Nam Dan District, and comparison of market prices in Vinh and Ha Noi on 20 major food items. HDI value calculated by employing this conventional method is considered to be sufficient for the purpose of comparing changes in the society. The list of proposed major food items to be employed in the monitoring is prepared based on the results of this Study as follows:

Rice	Fresh vegetables
Bread	Potatoes
Bakery products, biscuits, cakes, etc.	Manioc & other tubers
Noodles, macaroni, spaghetti	Tea
Beef and veal	Sugar
Pork	Chocolate, ice cream, confectionery, etc.
Poultry	Mineral water
Fish fresh/frozen	Soft drinks
Eggs & egg products	Beer
Fresh fruits	Cigarettes

In consideration of extending this monitoring method into the similar integrated projects in other areas, the monitoring should be executed uniformly by an appropriate organization in the central government; namely MARD which supervises agriculture and rural development in the country.

7.4 TASKS IN THE FUTURE

(1) Feedback of Monitoring by HDI

It is extremely important to classify HDI in developing areas into two categories namely HDI affected by implementation of development projects and HDI affected by natural changes in the area through the time, if the results of monitoring are reflected on modifying or planning of projects in other similar areas. In order to achieve this, analyzing data collected from wide range. There is a possibility that a change of HDI affected by the project can be separated by comparing a change of HDI in the project area with a change in the area without project. Accumulation of data and results of study in the future are expected.

(2) HDI Application for Project Planning

In planning integrated rural development including many sectors such as society, economic and living conditions, clarifying the results of the development plan integrally not limited within an individual sector is extremely important. Employing a new evaluation method which can express changes by implementing projects in rural areas can support the most effective planning. HDI considered at this stage is insufficient to evaluate the absolute quantity of the project effects. However, it is considered to be a great help to compare the results in a planning stage.

In this Study, an integrated effect resulted by major components of the Model Project is obtained by employing the above-mentioned simplified method. As a

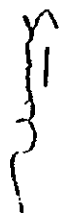
result, the increase of HDI in the area is obtained as a value of 0.022. Some of the components in the rural development plan are difficult to apply reasonably and simply in an evaluation of HDI after the completion of a project. However, further study in the future is expected together with realizing simplified calculation method and improved evaluation accuracy.

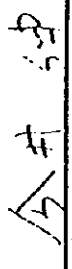
ANNEX A : SCOPE OF WORK AND MINUTES OF MEETING

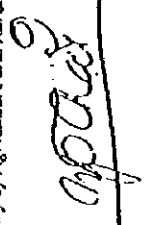
SCOPE OF WORK
FOR
THE STUDY
ON
MODEL RURAL DEVELOPMENT
IN
NAM DAN DISTRICT, NGHE AN PROVINCE
IN
SOCIALIST REPUBLIC OF VIET NAM

AGREED UPON
BETWEEN
MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

HANOI, 18 APRIL 1996


1. NGUYEN ICH CHUONG
Vice Director for Director,
International Cooperation Department
Ministry of Agriculture and Rural Development


MR. SHIN IMAI
Leader,
Preparation Study Team,
Japan International Cooperation Agency


2. NGUYEN XUAN THAO
Director,
Agriculture and Rural Development Department
Ministry of Planning and Investment

I. INTRODUCTION

In response to the request of the Government of Socialist Republic of Viet Nam (hereinafter referred to as "GOV"), the Government of Japan (hereinafter referred to as "GOJ") has decided to conduct the Study on Model Rural Development in Nam Dan District, Nghe An Province in Socialist Republic of Viet Nam (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Socialist Republic of Viet Nam.

And as for the organizations concerned of Viet Nam, National Institute for Agricultural Planning and Projection (hereinafter referred to as "NIAPP") under Ministry of Agriculture and Rural Development (hereinafter referred to as "MARD") and Nghe An Province People's Committee shall act as the counterpart Agencies to the Japanese study team and also as the coordinating body in relation with other governmental organizations and group associations concerned for smooth implementation of the Study.

The present document sets forth the scope of work with regard to the Study.

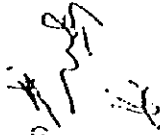
II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To prepare a master plan of the Study area and feasibility study for priority project(s) in order to raise living condition of inhabitants in the Study area. The Study focuses on mainly agricultural development and also rural social development, which will be a model/pilot development plan for other rural areas suffering from lack of infrastructures in the Nghe An Province and other Provinces in Viet Nam.
2. To transfer technology, which is required on conducting the Study, to the counterpart personnel of GOV through on-the-job training in the course of the Study.

III. STUDY AREA

The Study covers Nam Dan district (29,500ha) in Nghe An province. (See ANNEX 1)



IV. SCOPE OF THE STUDY

In order to achieve above objectives, the Study will consist of following two phases:

1. Phase I

Preparation of a master plan for the Study area

1-1. To collect and review relevant existing data and information including existing plan and projects.

1-2. To carry out field survey and investigation on following items:

(1) natural condition including:

- meteorology
- hydrology
- topography
- soil
- others

(2) agricultural condition including:

- land use
- cultivation technique
- cropping pattern
- irrigation and drainage
- research activities
- extension services
- farmer's organization
- processing
- marketing
- agricultural credit
- livestock
- inland aquaculture
- agro-forestry
- others

(3) socio-economic condition including:

- population
- employment
- economy
- education
- health and water supply
- road
- public services
- group associations (Women's, Youth, etc.)
- WTD (Women's Development)
- others

(4) environmental conditions

1-3. To analyze collected data and information.

1-4. To recognize present situation of the inhabitants in terms of agriculture and socio-economics.

1-5. To identify major constraints and development potential.

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1-6. To prepare a master plan in order to raise living condition of inhabitants in the Study area.

1-7. To select priority project(s) for following feasibility study.

2. Phase II

Preparation of topographic map(s) and execution of feasibility study for priority project(s).

2-1. Prepare topographic map(s) for feasibility study of priority project(s), if necessary.

2-2. To collect detail data and information through field surveys.

2-3. To formulate alternative plans and evaluate their expected results in terms of technical soundness, financial viability, economic profitability, social changes, and environmental effects.

2-4. To finalize feasibility study, including implementation schedule, based upon the above evaluation.

V. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative schedule.
(See ANNEX II)

VI. REPORTS

JICA shall prepare and submit the following reports in English to the GOV.

1. Inception Report

Twenty (20) copies at the commencement of the Phase I field study.

2. Progress Report (1)

Twenty (20) copies at the end of the Phase I field study.

3. Interim Report

Twenty (20) copies at the commencement of the Phase II field study.

4. Progress Report (2)

Twenty (20) copies at the end of the Phase II field study.

5. Draft Final Report

Twenty (20) copies after the end of Phase II study. GOV shall provide JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.

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6. Final Report

Fifty (50) copies within two (2) months after receipt of GOV's comments on the Draft Final Report.

VII. UNDERTAKING OF GOV

1. To facilitate smooth conduct of the study, GOV shall take necessary measures:

- 1-1. to secure the safety of the Japanese study team,
- 1-2. to permit the members of the Japanese study team to enter, leave and sojourn in Socialist Republic of Viet Nam for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
- 1-3. to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into and out of Socialist Republic of Viet Nam for the conduct of the Study,
- 1-4. to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study,
- 1-5. to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into Socialist Republic of Viet Nam from Japan in connection with the implementation of the Study,
- 1-6. to secure permission for entry into private properties or restricted areas for the implementation of the Study,
- 1-7. to secure permission for the Japanese study team to take all data and documents (including photographs and maps) related to the Study out of Socialist Republic of Viet Nam to Japan, and
- 1-8. to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team.

2. GOV shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

3. MARD shall act as responsible counterpart agency to the Japanese study team and also as coordinating body in relation with other governmental organizations and group associations concerned for the smooth implementation of the Study.

4. MARD shall, at its own expense, provide the Japanese study team with the following, in cooperation with other organizations concerned:

- 4-1. available data and information related to the Study,
- 4-2. counterpart personnel,
- 4-3. suitable office space with necessary equipment and furniture in Hanoi and Vinh, and
- 4-4. credentials or identification cards.

VIII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

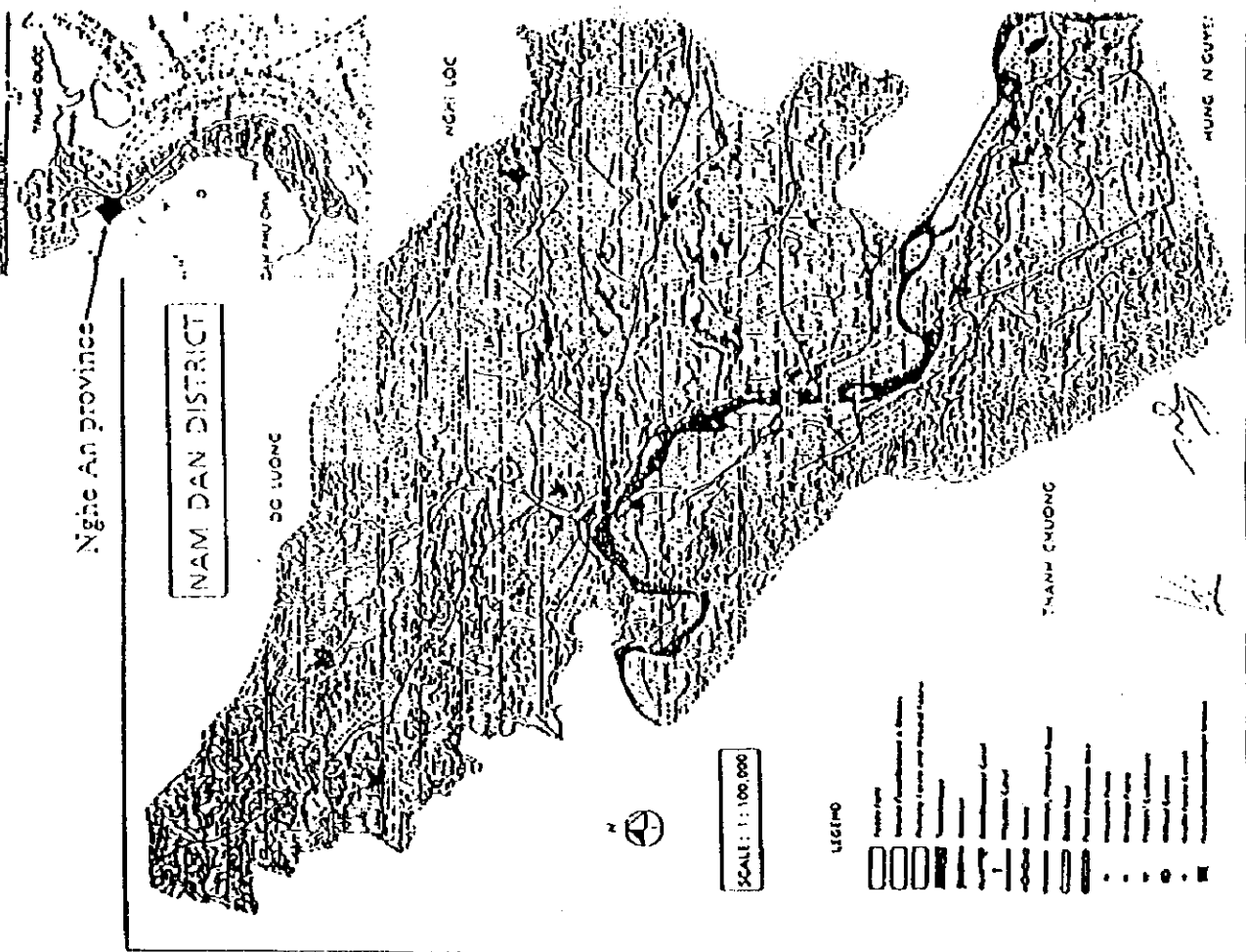
1. to dispatch, at its own expense, study teams to Socialist Republic of Viet Nam, and
2. to pursue technology transfer to the counterpart personnel of GOV in the course of the Study.

IX. CONSULTATION

JICA and MARD shall consult with each other in respect of any matter that may arise from or in connection with the Study.

ANNEX I

NOTE: This map was prepared from
aerial photographs of 1964
and is not to scale.



ANNEX II

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Item																					
Work in Viet Nam																					
Work in Japan																					
Phase	PHASE I								PHASE II												
Reports	IC/R		P/R (1)				IF/R			P/R (2)				DF/R		F/R					

(Remarks) IC/R : Inception Report P/R (1) : Progress Report (1)
IF/R : Interim Report P/R (2) : Progress Report (2)
DF/R : Draft Final Report F/R : Final Report
O Comments on DF/R by the Viet Nam side

MINUTES OF MEETING

ON

SCOPE OF WORK

FOR

THE STUDY

ON

MODEL RURAL DEVELOPMENT

IN

NAM DAN DISTRICT, NGHE AN PROVINCE

IN

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AGREED UPON

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AND

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HANOI, 18 APRIL 1996

2



Mr. NGUYEN ICH CHUONG
Vice Director for Director,
International Cooperation Department
Ministry of Agriculture and Rural Development



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Leader,
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Agriculture and Rural Development Department
Ministry of Planning and Investment

In response to the request of the Government of Socialist Republic of the Viet Nam, the Government of Japan decided to dispatch through Japan International Cooperation Agency (hereinafter referred to as "JICA"), which is responsible for the implementation of technical cooperation programs of the Government of Japan, the preparatory study team (hereinafter referred to as "the Team") headed by Mr. Shin Imai, to Socialist Republic of the Viet Nam (from April 1 to 20, 1996) so as to discuss and exchange views on the Study on Model Rural Development in Nam Dan District, Nghe An Province in Socialist Republic of Viet Nam (hereinafter referred to as "the Study"), with the Ministry of Agriculture and Rural Development (hereinafter referred to as "MARO") and officials concerned of the Government of Socialist Republic of the Viet Nam for the implementation of the Study.

MARO and the Team mutually agreed to the Scope of the Work on the Study.

The following matters were prepared confirming the main issues discussed and matters agreed upon by both sides in connection.

1. MARO and the Team mutually understood that the Study will focus on not only agricultural development but also rural social development in the rural area.
2. The result of the Feasibility Study of the South Nghe An Subproject financed by The World Bank will be used by the Master Plan and the South Nghe An Subproject will, however, be excluded from the Master Plan to avoid its duplication of the Study.
3. The Team requested that the Vietnamese side should prepare necessary data and information regarding to the Water Resource Development of Ban Mai Hydraulic Power Project which is planning to be constructed at the upper stream of Lam river.
4. For the smooth implementation of the Study, both sides agreed upon the necessity of formulating the Steering Committee for the Study by the concerned Ministries and organizations, e.g. MARO, Ministry of Planning and Investment, Ministry of Finance, Ministry of Science, Technology and Environment, Ministry of Education and Training, Ministry of Health, People's Committee of Nghe An Province, Resident Representative of JICA and the Study Team.
5. The Japanese study team shall carry out the Initial Environmental Examination (IEE) which includes the collection of existing data, additional investigation and preliminary assessment of environmental impact(s) of the proposed project(s) during the Phase - 1. Based on the



LIST OF PARTICIPANTS

result of the JEE, the Japanese study team shall carry out the Environmental Impact Assessment (EIA) in the Phase - II, if necessary. All procedures required according to the Vietnamese laws and regulations of environment shall be taken by the Government of Viet Nam.

Regarding resettlement, the Japanese study team shall make the preliminary assessment on the basis of existing information and preliminary investigation, if resettlement is necessary. According to the recommendation of the preliminary assessment, the Vietnamese side shall make the detailed assessment caused by the resettlement in the due time.

6. For the smooth implementation of the Study, both sides agreed upon the necessity of holding Work Shop at the beginning of the Phase - II.

7. The Vietnamese side requested that the Vietnamese counterpart personnel take advantage of training in Japan related to the Study to promote an effective technology transfer. The Team promised to convey this request to the Government of Japan.

8. The Vietnamese side requested to be provided the following equipment and machines which would be used for the smooth implementation of the Study. The Team promised to convey this request to the Government of Japan.

- 1) Personal computer
- 2) Copy machine
- 3) Hydrological measurement equipment
- 4) Water quality test equipment

9. The Vietnamese side requested that the appropriate number of vehicles for the Study should be arranged by JICA. The Team promised to convey this request to the Government of Japan.

10. The Team strongly requested Vietnamese side to make arrangement of necessary procedures for smoothly custom clearance of equipment, machines and other materials brought into and out of the Socialist Republic of Viet Nam for the conduct of the Study. Annex of the list of equipment, machines and other materials is informed by the letter later by the Japanese side.

Ministry of Agriculture and Rural Development

Mr. Nguyen Ich Chuong
Vice Director, International Cooperation Department

Mr. Dao Thi Loc
Senior Expert, International Cooperation Department

Mr. Takemichi IWAI
JICA Expert, International Cooperation Department

Mr. Sho KOSUGI
JICA Expert, International Cooperation Department

National Institute of Agricultural Planning and Projection

Prof. Dr. Tran An Phong
Director

Dr. Vu Nang Dung
Vice Director

Mr. Vu Cong Lan
Head, Division of International Cooperation and Project Management

Mr. Tran Thanh Hao
Co-ordinator of Projects, Division of International Cooperation and Project Management

Ministry of Planning and Investment

Dr. Nguyen Xuan Thao
Director, Agriculture and Rural Development Department

Mr. Phan Douth
Vice Director, Agriculture and Rural Development Department

Mr. Phan Bao
Expert, Agriculture and Rural Development Department

Mr. Le Hong Thai
Expert, Agriculture and Rural Development Department

Mr. Tran Tuan Anh
Expert, International Economic Department

The Team

Mr. Shin IWAI
Leader

Mr. Fusao KAMIKUBO
Member

Mr. Ikuo YAMADA
Member

Mr. Tsunemi GEJO
Member

Mr. Hiroshi OKABE
Member

Mr. Kozo ITO
Member

ANNEX B : MINUTES ON THE REPORT SUBMITTED

MINUTES OF MEETING

ON

INCEPTION REPORT

FOR

THE STUDY

ON

MODEL RURAL DEVELOPMENT

IN

NAM DAN DISTRICT, NGHE AN PROVINCE


BETWEEN

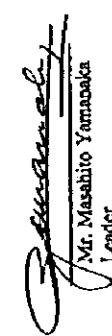
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)


AND

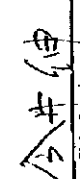
MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

Hanoi, October 10, 1996


Mr. Nguyen Cai Giao
Director
International Cooperation Dept.
MARD


Mr. Masahito Yamashita
Leader
Study Team
JICA


Prof. Dr. Tran An Phong
Director
NTAPP


Mr. Shin Imai
Leader
Advisory Team
JICA

In accordance with the Scope of Work for the Study (hereinafter referred to as "S/W") on Model Rural Development in Nam Dan District, Nghe An Province (hereinafter referred to as "the Study"), the Government of Japan dispatched through Japan International Cooperation Agency (JICA) the Study Team headed by Mr. Masahito Yamashita and the Advisory Team headed by Mr. Shin Imai for the implementation of the Study to Viet Nam. At the commencement of the Study, the Study Team submitted officially twenty (20) copies of the Inception Report and explained basic concepts, methodology and schedule of the Study to the Vietnamese organizations concerned i.e.; MARD, NTAPP, Provincial Agencies and People's Committees during October 4 to 9, 1996. As a result of the explanation and exchange of opinions on the Inception Report, the following points were agreed upon by the Vietnamese side and Japanese side:

1. The Vietnamese side agreed upon that the contents of the Inception Report were prepared in due compliance with the conditions set forth in S/W.
2. The Vietnamese side agreed upon that the Study Team would proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Inception Report.
3. The Vietnamese side agreed upon that the Steering Committee for the Study, the members of which were attached as ANNEX-I, should be held at the important stages of the Study like at the explanation times of Progress Report(I), Progress Report(II) and Draft Final Report, as agreed upon in the Minutes of Meeting for S/W.
4. Both sides confirmed that the main role of the Steering Committee for the Study was to ensure the smooth implementation of the Study by supporting and consulting the Study execution. However, the Study itself shall be made by the Study Team in close coordination and agreement with the responsible counterpart agencies for the Study as mentioned in S/W.
5. Both sides confirmed that the suitable office spaces with necessary equipment and furniture in Hanoi, Vinh and Nam Dan would be provided with the expense of the Vietnamese side as mentioned in S/W.
6. Both sides agreed to collaborate each other for the efficient implementation of the Study so that the objectives of the Study could be attained, as described in S/W.

**MEMBER LIST
OF
STEERING COMMITTEE AND WORKING GROUP
FOR
THE STUDY ON MODEL RURAL DEVELOPMENT
IN
NAM DAN DISTRICT, NGHE AN PROVINCE**

1. STEERING COMMITTEE FOR THE STUDY

1-1 VIETNAMESE SIDE

- (1) MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT AND
MINISTRY OF PLANNING AND INVESTMENT

LEADER

Mr. Nguyen Quang Ha Vice Minister, Ministry of Agriculture and Rural
Development (MARD)

MEMBER

Mr. Nguyen Cat Giao Director of International Cooperation Department,
MARD
Mr. Huynh Xuan Hoang Director of Planning and Plan Department, MARD
Mr. Nguyen Xuan Thao Director of Agricultural and Rural Development,
Ministry of Planning and Investment (MPI)
Mr. Tran Ao Phong Director, National Institute of Agriculture Planning
and Projection (NIAPP)

(2) OTHER RELATED MINISTRIES AND AGENCY

MEMBER

Mr. Vu Mong Giao Vice Minister, Ministry of Finance
Mr. Pham Khoi Nguyen Vice Minister, Ministry of Sciences, Technology
and Environment
Mr. Tran Xuan Nhi Vice Minister, Ministry of Education and Training
Mr. Le Ngoc Trong Vice Minister, Ministry of Health Service
Mr. Ho Xuan Hung Chairman of Nghe An People's Committee

1-2 JAPANESE SIDE

(1) MEMBER

Mr. Masaru Todoroki Resident Representative of Japan International
Cooperation Agency (JICA)
Team Leader of the Study Team

(2) OBSERVER

Mr. Masahito Yamataka Japanese Expert for MARD
Mr. Takamichi Iwai Japanese Expert for MARD
Mr. Sho Kosugi

2. WORKING GROUP FOR THE STUDY

LEADER

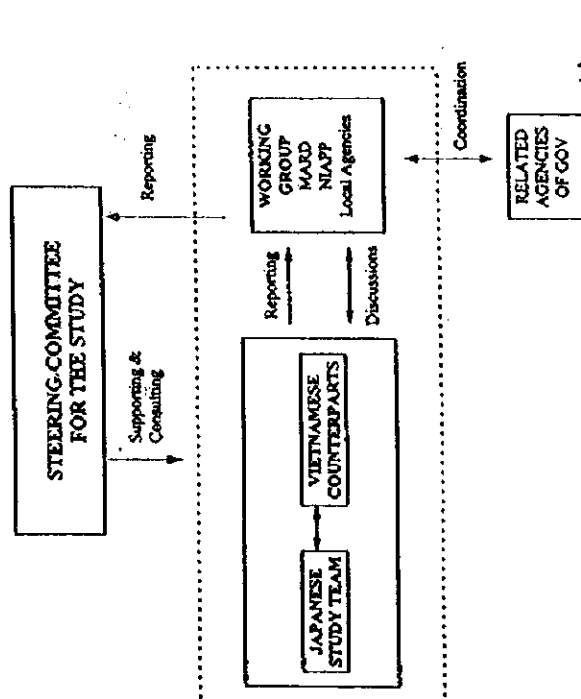
Mr. Vu Nang Dung Vice Director, NIAPP

SECRETARY OF THE PROJECT

Mr. Tran Thanh Han Project Coordinator, NIAPP

MEMBER

Mr. Vu Cong Lan Head of International Cooperation and Project
Management Division, NIAPP
Mr. Nguyen Tar Dien Vice Director of Planning and Investment
Department, People's Committee of Nghe An
Province
Mr. Ngo Van Bao Director of Agriculture and Rural Development
Department, People's Committee of Nghe An
Province
Mr. Nguyen Van Be Chairman of People's Committee of Nam Dan
District
Ms. Dao Thi Loc Senior Officer of International Cooperation
Department, MARD
Mr. Tran Dinh Tung Expert of Planning and Plan Department of MARD



LIST OF ATTENDANCE
FOR
THE DISCUSSIONS
ON
INCEPTION REPORT OF THE STUDY

1 VIETNAMESE SIDE

Nguyen Cat Giao	Director, Int'n Cooperation Dept./MARD
Hoang Thi Dung	Expert, Int'n Cooperation Dept./MARD
Tran Dinh Tung	Expert, Planning & Plan Dept./MARD
Tran An Phong	Director, NIAPP
Vu Nang Dung	Vice-Director, NIAPP
Tran Thanh Han	Expert, NIAPP
Vu Cong Lan	Expert, Int'n Coop.Division/NIAPP
Nguyen Le Bich Hang	Ditto
Nguyen Ha Hue	Ditto
Vuong Thu Tran	Ditto
Bui Thi Sy	Expert, Rural Development Division/NIAPP
Cao Son Thuy	Ditto
Nguyen Quoc Trung	Ditto
Dao Can	Expert, Science & Technology Division/NIAPP
Nguyen Van Chien	Expert, Aerial Photo Division/NIAPP
Nguyen Cong Pho	Expert, Environmental Center/NIAPP
Nguyen Nguyen Han	Expert, Remote Center Director/NIAPP

2 JAPANESE SIDE

(1) Study Team

Mr. Masahito Yamataka	Team Leader
Mr. Yujiro Itakura	Irrigation & Drainage
Dr. Yasuoka Uchiyama	Agronomy
Mr. Youhei Kijose	Rural Sociology & Farmer's Organization
Mr. Takao Sakamoto	Water Supply
Mr. Kazuhiro Tsuchida	Road/Structure Design and Cost Estimation

(2) Advisory Team

Mr. Shin Imai	Team Leader
Mr. Kozo Ito	Coordinator

(3) Japanese Expert for MARD

Mr. Takamichi Iwai
Mr. Sho Kesugi

MINUTES OF MEETING

ON

PROGRESS REPORT (I)

FOR

THE STUDY

ON

MODEL RURAL DEVELOPMENT

IN

NAM DAN DISTRICT, NGHE AN PROVINCE

BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

AND

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

B - 4

Hanoi, January 13, 1997.



Mr. Nguyen Cat Giao
Director
International Cooperation Dept.
MARD



Mr. Masahito Yamanaka
Leader
Study Team
JICA



Dr. Vu Nang Dung
Vice Director
NIAPP

In accordance with the Scope of Work for the Study (hereinafter referred to as "S/W") on Model Rural Development in Nam Dan District, Nghe An Province (hereinafter referred to as "the Study"), the Government of Japan dispatched through Japan International Cooperation Agency (JICA) the Study Team headed by Mr. Masahito Yamanaka for implementing the Study to Viet Nam.

At the end of the field survey of the Phase I study of the Study, the Study Team officially submitted twenty (20) copies of the Progress Report (I) and explained its contents with an emphasis laid on the results of data collection and their review, present conditions of the Study Area, the basic concepts for formulating the Project, criteria for selecting the Priority Projects etc. to the Vietnamese organizations represented by Nghe An Province People's Committee and National Institute for Agricultural Planning and Projection (NIAPP) under Ministry of Agriculture and Rural Development (MARD) on December 25, 1996 and January 9, 1997, respectively.

As a result of explanation and exchange of opinions on the Report, the following points were agreed upon by the Vietnamese side and Japanese side:

1. The Vietnamese side confirms that the contents of the Progress Report (I) are prepared in due compliance with the conditions and methodology set forth in the Inception Report for the Study.
2. The basic concepts for formulating the Project and the criteria for selecting the Priority Projects presented in the Report have good correlation with the result of the diagnosis and analysis of the prevailing potential and constraints on rural development in the Study Area. The detailed review on the Report will be made by the Vietnamese side and the proper comments on it will be sent to the Study Team by the end of January 1997, if any.

3. The Vietnamese side agrees upon that the Study Team will proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Progress Report (I).

7

ANNEX

LIST OF PARTICIPANTS FOR THE EXPLANATION AND DISCUSSION ON PROGRESS REPORT (I) OF THE STUDY

(1) Date : December 25, 1996

Place : Nghe An Province People's Committee

1. Vietnamese Side

1. Mr. Hoang Tat Thang Vice Chairman of Nghe An People's Committee
2. Mr. Nguyen Tat Dien Vice Director of Planning & Investment Department
3. Mr. Nguyen Van Be Chairman of Nam Dan People's Committee
4. Mr. Phan Duc Tien Vice Director of Nghe An Agricultural Bank
5. Mr. Tran Quoc Toan Vice Director of Commercial Department
6. Mr. Thai Van Nguyen Vice Director of Science, Technology and Environment Department
7. Mr. Phan Van Lap Vice Director of Nghe An Power Company
8. Mr. Vu Nang Dung Vice Director of NIAPP
9. Mr. Vu Cong Lan Head of International Cooperation Dept., NIAPP
10. Mr. Tran Thanh Han Project Coordinator, NIAPP
11. Ms. Dao Thi Loc Head of Foreign Economic Division., Planning and Investment Department, Nghe An
12. Mr. Dang Duy Hoa Head of Agricultural Division, Planning and Investment Department, Nghe An
13. Mr. Phan Thanh Mien Head of Technical Division, Nghe An Center of Extension Transportation Department
14. Mr. Phan Bui Tan Planning and Investment Department
15. Mr. Ngo Xuan Tung Agricultural and Rural Development Department
16. Mr. Duong Duc Minh Training and Education Department
17. Mr. Tran Minh Doan Health Care Department
18. Mr. Phan Duc Ai Agricultural and Rural Development
19. Mr. Mai Khac Nhu Planning and Investment Department
20. Mr. Thai Van Nuan Farmer's Organization
21. Mr. Nguyen Van Ky Training and Education Department
22. Mr. Phan Anh Tuan Planning and Investment Department
23. Mr. Phan Huy Duc Planning and Investment Department
24. Mr. Nguyen Viet Ninh Planning and Investment Department
25. Mr. Nguyen Hai Duong Planning and Investment Department
26. Mr. Nguyen Van Thien Planning and Investment Department
27. Mr. Vo Quang Hai Planning and Investment Department
28. Mr. Tran Xuan Hung Center of Rural Domestic Water Supply
29. Mrs. Nguyen Thi Tam Planning and Investment Department

2. Japanese Side

1. Mr. Masahito YAMANAKA Team Leader
2. Mr. Yujiro ITAKURA Deputy Leader, Irrigation & Drainage Engineer
3. Dr. Jorge TOKESHI Agro-Economist & Agricultural Financial

(2) Date : January 9, 1997
Place : NIAPP OFFICE

1. Vietnamese Side

1. Vu Nang Dzung Deputy Director
2. Vu Cong Lan Intl. Coop. Division Head
3. Vu Thi Ngoc Tran Intl. Coop. Division Vice Head
4. Tran Thanh Han Senior Expert, Project Secretary
5. Nguyen Le Bich Hang Intl. Coop. Division
6. Vuong Thuc Tran Ditto
7. Nguyen Ha Hue Ditto
8. Nguyen Duc Hoa Cuong Ditto
9. Bui Thi Sy Center for Rural Development
10. Tran Nhat Lam Center for Rural Development
11. Dao Quoc Luan Center for Rural Development
12. Hoang Quoc Chinh Center for Rural Development
13. Cao Son Thuy Center for Rural Development
14. Nguyen Quoc Trung Center for Rural Development
15. Nguyen Khang Environmental Center
16. Phan Viet Tien Pedecy Division
17. Nguyen Huong Tra Environmental Center
18. Nguyen Nam Hung Center for Rural Development
19. Le Hung Tuan Technical Transfer Center
20. Bui Ngoc Tram Remote Sensing Center
21. Nguyen Thi Quynh Huong Remote Sensing Center
22. Tran Thi Phuong Lan Center for Rural Development

2. Japanese Side

- a. Study Team
 - Mr. Masahito YAMANAKA Team Leader
 - Mr. Yujiro ITAKURA Deputy Leader, Irrigation & Drainage Engineer
 - Dr. Yasuoka UCHIYAMA Agronomist
 - Mr. Yohei KIYOSE Rural Sociologist and Farmer's Organization
 - Dr. Jorge TOKESHI Agro-Economist & Agricultural Financial
 - Mr. Takashi KITAGUCHI Natural Environment Expert
 - Mr. Takao SAKAMOTO Water Supply Engineer
 - Mr. Kazuhiro TSUCHIDA Road Engineer/Structure Design and Cost Estimation Expert
 - Mr. Yuuka NAKADA Aerial Photograph Specialist
- b. JICA Expert
 - Mr. Sho KOSUGI

MINUTES OF MEETING


ON
INTERIM REPORT
FOR
THE STUDY
ON
MODEL RURAL DEVELOPMENT
IN
NAM DAN DISTRICT, NGHE AN PROVINCE
BETWEEN


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)


AND

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

Hanoi, May 26, 1997


Dr. Nguyen Dinh Huong
Deputy Director
International Cooperation Dept.
MARD


Mr. Masahito Yamamoto
Leader
Study Team
JICA


Dr. Vu Nang Dung
Director
NIAPP

In accordance with the Scope of Work for the Study (hereinafter referred to as "S/W") on Model Rural Development in Nam Dan District, Nghe An Province (hereinafter referred to as "the Study"), the Government of Japan dispatched through Japan International Cooperation Agency (JICA) the Study Team represented by Pacific Consultants International, headed by Mr. Masahito Yamamoto, for implementing the Study to Viet Nam.

At the beginning of the field survey of the Phase II study of the Study, the Study Team on May 24, 1997 officially submitted twenty (20) copies of the Interim Report and explained its contents to the Vietnamese organizations represented by the National Institute for Agricultural Planning and Projection (NIAPP) under the Ministry of Agriculture and Rural Development (MARD). Emphasis was put on the results of Master Plan study and preliminary selection of the Priority Projects which are recommended to be implemented as soon as possible.

As a result of the explanation and exchange of opinions on the Report, the following points were agreed upon by and between the Vietnamese side and Japanese side:

1. The Vietnamese side confirms that the contents of the Interim Report are prepared in due compliance with the conditions and methodology set forth in the Progress Report (I) of the Study.

2. The Master Plan and selected Priority Projects presented in the Report have generally good correlation with the results of the diagnosis and analysis of the prevailing potential and constraints in the Study Area. The detailed review on the Report will be made by the Vietnamese side and the comments on it will be given to the Study Team through the joint work of the Study Team and the Vietnamese counterparts during the Phase II field work.

3. The Vietnamese side agrees upon that the Study Team will proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Report.



MINUTES OF MEETING

ON

PROGRESS REPORT (II)

FOR

THE STUDY

ON

MODEL RURAL DEVELOPMENT

IN

NAM DAN DISTRICT, NGHIE AN PROVINCE

BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

AND

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

B. 7

Hanoi, August 28, 1997

Mr. Nguyen Cat Giao
Director
International Cooperation Dept.
MARD

Mr. Masahito Yamanaka
Leader
Study Team
JICA

Dr. Vu Nang Dung
Director
NIAPP

In accordance with the Scope of Work for the Study (hereinafter referred to as "S/W") on Model Rural Development in Nam Dan District, Nghie An Province (hereinafter referred to as "the Study"), the Government of Japan dispatched through Japan International Cooperation Agency (JICA) the Study Team represented by Pacific Consultants International, headed by Mr. Masahito Yamanaka, for implementing the Study to Viet Nam.

At the end of the field survey in Phase I of the Study, the Study Team officially submitted twenty (20) copies of the Progress Report (II) and explained its contents to the Vietnamese organizations: the People's Committee of Nghie An Province on August 14, 1997, and the International Cooperation Department of the Ministry of Agriculture and Rural Development (MARD) and the National Institute for Agricultural Planning and Projection (NIAPP) under the MARD on August 19, 1997. An emphasis was laid on the results of preliminary feasibility study on the Priority Projects which had been selected through the Phase I study and the further survey and discussions between the Vietnamese side and the Study Team in Phase II.

As a result of explanation and exchange of opinions on the Report, the following points were agreed upon by and between the Vietnamese side and Japanese side:

1. The Vietnamese side confirms that the contents of the Progress Report (II) are prepared in due compliance with the conditions and methodology set forth in the Interim Report for the Study.
2. The results of preliminary feasibility study on the selected Priority Projects presented in the Report have generally good correlation with the results of the diagnosis and analysis of the prevailing potential and constraints in the Study Area and also with the intentions of the agencies concerned and the people in the Area. The detailed review on the Report shall be made by the Vietnamese side and the comments on it shall be sent to the Study Team by September 10, 1997.
3. The Vietnamese side agrees upon that the Study Team will proceed to the next stage of the Study in accordance with the methodology and schedule mentioned in the Report.

LIST OF PARTICIPANTS ATTENDING THE MEETING FOR DISCUSSION

ON PROGRESS REPORT II

VINH, 14TH AUGUST, 1997

I. Nghe An Province

1. Nguyen Hoang Kim Vice Chairman of People's Committee
2. Nguyen Tat Dien Vice Director of Planning and Investment Dept.
3. Ngo Van Dao Director of Agriculture and Rural Development Dept.
4. Phan Van Hong Head of Planning Division - Planning and Investment Dept.
5. Dang Duy Hoa Head of Foreign Economic Division - Planning and Invest. Dept.
6. Nguyen Tri Tue Investment Division - Planning and Investment Dept.
7. Nguyen Hong Chuong Director of Transportation Department
8. Thai Cung Science, Technology and Environment Department
9. Nguyen Van Quang Chairman of Farmer's Organization
10. Nguyen Gia My Financial Department
11. Phan Hoang Vuong Director of Agricultural Bank
12. Le Dinh Chinh Vice head of Nghe An Provincial Office
13. Nguyen Van Ty Department of Health
14. Phan Van Ly Separment of Planning and Investment
15. Nguyen Van Chuong Irrigation Company
16. Pham Ngoc At Provincial Economic Board
17. Tang Van Viet Vice head of Provincial Economic Board
18. Nguyen Kim Dieu Nghe An Provincial Office
19. Nguyen Van Quang Director of Rural Water Program
20. Nguyen Huu Dac Nghe An Power Company
21. Ho Xuan Ha Vietnamese Newspaper Agency

II. Nam Dan District

22. Nguyen Van Be Chairman of People's Committee
23. Nguyen Vuong Loc Vice Chairman of People's Committee
24. Le Khanh Hoa Head of Planning Division
25. Bui Huu Dong District People's Council

III. NIAPT

26. Vu Nang Dung Director
27. Vu Cong Lan International Cooperation Division
28. Tran Thanh Han Project Coordinator
29. Vu Thi Ngoc Tran International Cooperation Division
30. Pham Tan Cung Irrigation Engineer
31. Nguyen Duy Vien Economist
32. Nguyen Ha Hue International Cooperation Division
33. Le Minh Nhat Water supply Engineer
34. Vuong Thuc Tran International Cooperation Division
35. Bui Ngoc Tram International Cooperation Division
36. Nguyen Viet Ninh Planning and Investment Department
37. Phan Thanh Muoi Planning and Investment Department
38. Nguyen Hai Duong Planning and Investment Department

IV. JICA Study Team

39. M. Yamanaka Team Leader
40. Y. Itakura Deputy Team Leader/Irrigation and Drainage
41. T. Sakamoto Rural Water Supply
42. K. Tsuchida Transportation/Cost Estimation
43. Y. Nozaki Project Evaluation
44. Y. Kiyose Socio-Economy and Farmer's Organization

LIST OF PARTICIPANTS IN DISCUSSION ON PROGRESS REPORT II

(In National Institute for Agricultural Planning and Projection, August 19, 1997)

I. Ministry of Agriculture and Rural Development

1. Mr. Nguyen Cat Giao Director of International Cooperation Dept.

II. National Institute for Agricultural Planning and Projection

2. Mr. Vu Nang Dung Director
3. Mr. Vu Cong Lan Head of International Cooperation Division
4. Mr. Tran Thanh Han Project Co-ordinator
5. Mr. Pham Tan Cung Agricultural Planning Team No1
6. Mr. Vu Tuan Anh Rural Development Center
7. Mr. Nguyen The Tuan Rural Development Center
8. Ms. Vuong Thuc Tran International Cooperation Division
9. Ms. Bui Ngoc Tram International Cooperation Division
10. Mr. Nguyen Ha Hue International Cooperation Division
11. Mr. Le Hung Tuan Rural Development Center
12. Mr. Nguyen Van Thung Rural Development Center
13. Mr. Nguyen Xuan Thanh Natural Resource and Environment Center
14. Mr. Le Minh Nhut Rural Development Center
15. Mr. Nguyen The Cong Agricultural Planning Team No1

III. JICA Experts for MARD

16. Mr. S. Kosugi JICA Expert
17. Mr. T. Iwai JICA Expert
18. Mr. H. Okubo JICA in Ha Noi

IV. JICA Study Team

19. Mr. M. Yamanaka Team Leader
20. Mr. Y. Itakura Deputy/Irrigation and Drainage

21. Mr. Y. Nozaki Project Evaluation
22. Mr. T. Sakamoto Rural Water Supply
23. Mr. K. Tsuchida Transportation/Cost Estimation
24. Mr. Y. Kiyose Socio-Economy and Farmer's Organization

MINUTES OF MEETING

ON

DRAFT FINAL REPORT

FOR

THE STUDY

ON

MODEL RURAL DEVELOPMENT

IN

NAM DAN DISTRICT, NGHE AN PROVINCE


BETWEEN


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)


AND



MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)

Hanoi, December 10, 1997


Mr. Nguyen Cat Giao
Director
International Cooperation Dept.
MARD


Mr. Masahito Yamamoto
Leader
Study Team
JICA


Dr. Vu Nang Dung
Director
NIAPP

 
Mr. Kazutomo Hihara
Leader
Advisory Team
JICA

In accordance with the Scope of Work for the Study (hereinafter referred to as "S/W") on Model Rural Development in Nam Dan District, Nghe An Province (hereinafter referred to as "the Study"), the Government of Japan dispatched through Japan International Cooperation Agency (JICA) the Study Team represented by Pacific Consultants International, headed by Mr. Masahito Yamamoto, for implementing the Study to Viet Nam.

As a result of the Study, the Study Team officially submitted twenty (20) copies of the Draft Final Report on the Study (hereinafter referred to as "the Report") and explained its contents with an emphasis laid on the results of the feasibility study on the selected priority projects to the Vietnamese organizations represented by International Cooperation Department of the Ministry of Agriculture and Rural Development (MARD) and National Institute for Agricultural Planning and Projection (NIAPP) under MARD on December 9, 1997.

As a result of explanation and exchange of opinions on the Report, the following points were agreed upon by and between the Vietnamese side and Japanese side:

1. The Vietnamese side confirms that the contents of the Report are prepared in due compliance with the conditions and methodology set forth in the Progress Report (II) on the Study.
2. The Projects proposed in the Report have generally good correlation with the result of the diagnosis and analysis of the prevailing potential and constraints in the Study Area and also intentions of the agencies concerned and the people in the Area. The detailed review on the Report will be made by the Vietnamese side and the comments will be sent to the Study Team by December 31, 1997.
3. The Study Team will modify and/or correct the Report based on the above comments, if necessary and will send the Final Report to MARD through the Headquarters of JICA, Tokyo within two months after receiving the said comments from the Vietnamese side.
4. The Vietnamese side has no objection for the Final Report being open to the public immediately after the Final Report is received by MARD.
5. The Vietnamese side expressed their strong wish for the financial assistance from the Government of Japan for early implementation of the Priority Projects. The Japanese side suggested that the Vietnamese side should submit immediately the official request to the Government of Japan for the financial assistance for the early implementation of the Priority Projects and promised to convey the said strong wish of the Vietnamese side to the Government of Japan.

(S)

**LIST OF ATTENDANCE
FOR
THE DISCUSSIONS
ON**

DRAFT FINAL REPORT OF THE STUDY

1 VIETNAMESE SIDE

Huynh Xuan Hoang	Director, MARD
Tran Dinh Tung	Expert, MARD
Vu Nang Dzang	Director, NIAPP
Vu Cong Lan	Expert, NIAPP
Vu Thi Ngoc Tran	Expert, NIAPP
Nguyen Ha Hue	Expert, NIAPP
Vuong Thuc Tran	Expert, NIAPP
Tran Thanh Han	Expert, NIAPP
Nguyen Hoang Kim	Vice Chairman, Nghe An People's Committee
Ngo Van Bao	Director, Nghe An People's Committee
Nguyen Tai Dien	Vice Director, Nghe An People's Committee
Nguyen Van Be	Chairman, Nam Dan People's Committee
Duong Phuc Minh	Expert, Nghe An People's Committee
Nguyen Hong Ha	Expert, Nghe An People's Committee
Le Van Quy	Expert, Nam Dan People's Committee
Vu Mong Giao	Vice Minister, MOF

2 JAPANESE SIDE

(1) Study Team	Team Leader
Mr. Masahito Yamanaka	Irrigation & Drainage
Mr. Yujiro Itakura	Rural Sociology & Farmer's Organization
Mr. Youhei Kiyose	
(2) Advisory Team	
Mr. Kazutomo Hihara	Coordinator, JICA
(3) Japanese Expert for MARD	
Mr. Takamichi Iwai	
(4) JICA Hanoi	
Mr. Hisatoshi Okubo	




ANNEX C : RECORD OF THE WORKSHOP

RECORD OF THE WORKSHOP

Vinh city, May 29, 1997

The workshop on the study on Model Rural Development in Nam Dan District, Nghe An Province was opened on May 29th, 1997 and the results of Phase I Study were explained by the Study Team to the representatives of related office concerned of the Province and of the farmers Nam Dan District. The major points of discussions and comments are summarized as follows:

Mr. Nguyen Hoang Kim, Vice Chairman of the Nghe An People's Committee :

- It is necessary to make clear of the investment source(s) for the projects.
- It is possible to conduct study in conjunction with investment, so that finding out sectors possibly to be invested and satisfying demand of project's implementation progress.

Mr. Minh, Nam Dan's Party Secretary :

- Government's motto is to develop comprehensively agriculture, through improving infrastructure as well as shifting agricultural structure. However, this aspect is not detailed in the Report.
- Commune grouping presented is also somewhat not clear and some correction of commune's name are required.
- Labour contribution to the project's implementation is certainly but budgetary support is important too. Therefore, investment mechanism is required to be known.
- As it is already mentioned in the Report, Mechanization would be feasible for implementation if granted by the Japanese Government. It is not urgent for carrying out if financial contribution is required from farmers.
- It seems to long to complete all projects by 2010.

H.E. Nguyen Quang Ha, MARD Vice Minister :

- Some more comments on Mr. Minh's presentation are needed. However, in general, Mr. Minh agrees with the Report.
- Priority projects which are presented by the Study Team, are fall in A classification.
- It should be understood that by the year of 2010 clarified as a target year, each project will separately be undertaken for 2 - 3 years by specific sub-contract. Such project will be obtained investment from the Japanese Government as well as Vietnamese Government correspondent budget then farmers are required to contribute their labour forces, only.
- I agree with Mr. Yamanaka's idea on importance of rural credit.
- Besides improvement and upgradation of confection mill, other industries for processing agro-product are also required to develop.

Mr. Quyen, Director of the Planning and Investment Service :

- The Report has satisfied with given requirements.
- I agree with evaluation of existing condition in the study area as well as application of the new HDI. It is preferable, however, to apply GDP in evaluating socio-economic

aspects since it is more directly assess, notably the slowdown economics that subsequently result in poor education and reduced life expectancy as well. Both indexes of GDP and HDI are needed to combine, aiming to obtain more accuracy conclusions on current situation because HDI seems effective for evaluation of large-scale areas such as region, country, etc.

- I support to 24 prioritized projects. However, due to their complication that they could be classified into 3 levels on the other hand : national, province and beneficiary. Aspects of public health, environment protection, etc. are required to be developed together with agricultural development then the priorities could be re-arranged as follows:

- * Agricultural production : priorities are given to the production, seed provision, extension and improvement of infrastructure.
- * Soil erosion prevention : more attention will be focused on re-greening barren lands (agro-forest production) and combination of long and short term crops.
- * Improvement of Nam - Nam dike system and transport in the area.
- * Public health and sanitation.
- * Building infrastructure and upgrading school system, even though education in Nam Dan is highly evaluated in country-wide but it is far from urgent demands at present.

Representative farmer from Nam Loc commune :

- Preparation of report and efforts in studying all done by the Study Team are highly appreciated. Local people are looking very much forward to seeing prioritized projects will soon be deployed.

Representative farmer from Nam Kim commune (Mr. Hong, Chairman) :

- Fully agree with the Report, and among them there are 3 issues need to be emphasized :
 - * Irrigation and transport, both are aiming to deal with difficulties of intensive cultivation.
 - * Due to permanent inundation which causes diseases, a guidance for land protection in Nam - Nam area is needed.
 - * Proper agricultural production management is also required.

Conclusion by H.E. Nguyen Quang Ha, MARD's Vice Deputy :

- Highly appreciation is given to the contribution and all the efforts made by the Study Team in the preparation of the Report.
- Highly appreciation is also given to the NIAPP's coordination with other provincial and district agencies concerned in building up an integrated model rural development.
- Supportive idea is given to the selection of Nam - Nam area for investment since its poorest and most difficulties they are experiencing.
- Vietnamese side exposes consensus on proposal to develop comprehensively rural area in Nam Dan district then it would certainly become typical model for other rural areas in the country.

- Local people express their most desire that the Study would soonly be completed and that prioritized projects are quickly be deployed in the area.

For the above comments and/or questions expressed by the Vietnamese side, The Study Team Presented the following major points:

- There are several schemes of international cooperation systems in JICA and this study is one of technical assistance among them. In the study, several types of development projects are proposed and finance system for implementation will be analyzed and recommended for each project. Therefore, for the implementation of some projects requiring international cooperation from any donor, the usual procedure such as submission of request letter must be required.
- HDI is still under the study and the methodology for applying HDI for the project evaluation is not established yet. The Study Team is now trying to find out new project evaluation method applying HDI and some of possibilities and difficulties are described in the Interim Report. It is considered that such kind of study is necessary for comparison the effects of different types/scale/characteristics of projects especially for the establishment of rural development plan consisting of mulch sectors. In the Master Plan, the prioritization was done based on the usual methodology.
- Concerning the mechanization, it is expected not only improvement of labour productivity but also following aspects:
 - * Increase of farmers income with converting from buffalo to meat cattle
 - * Increase of agricultural production by applying suitable cropping period and saving the harvesting loss
 - * Increase of sowing area for second crop with shortening of period for main crop season
 - * Mitigation of heavy load of farming especially for women
 These effects will be analyzed in detail in phase II study.
- Prioritization of proposed projects will be finalized based on the discussion between Vietnamese side and the Study Team through the Phase II Field Survey.

Vinh City, May, 29 1997

**LIST OF PARTICIPANTS IN WORKSHOP
IN VINH CITY**

I/ Ministry of Agriculture and Rural Development

- | | |
|------------------------------|--|
| 1. Prof. Dr. Nguyen Quang Ha | Vice Minister of MARD |
| 2. Mr. Tran Dinh Tung | Expert of Plan Department (MARD) |
| 3. Mrs. Dao Thi Loc | Expert of International Cooperation Dep.
(MARD) |

II/ NIAPP

- | | |
|----------------------------|---|
| 1. Prof. Dr. Vu Nang Dung | Director of NIAPP |
| 2. Prof. Dr. Tran An Phong | Member of Steering Committee |
| 3. Mr. Vu Cong Lan | Head of International Cooperation Div.
(NIAPP) |
| 4. Mr. Tran Thanh Han | Project Coordinator |
| 5. Mr. Pham Tan Cung | Expert of Rural Development Division
(NIAPP) |
| 6. Mr. Nguyen Duy Vien | Ditto |
| 7. Mr. Nguyen The Cong | Ditto |
| 8. Mr. Nguyen Xuan Khuong | Ditto |
| 9. Mr. Bui Thi Sy | Ditto |
| 10. Mr. Le Hung Tuan | Expert of Technical Transfer Center |
| 11. Mr. Nguyen Ha Hue | International Cooperation Division |
| 12. Ms. Vuong Thuc Tran | Ditto |
| 13. Ms. Bui Ngoc Tram | Remote Sensing Center |

III/ People's Committee of Nghe An Province

- | | |
|-------------------------|---|
| 1. Mr. Nguyen Hoang Kim | Vice Chairman |
| 2. Mr. Tran Anh Quyen | Director of Plan and Investment Dep. |
| 3. Mr. Nguyen Tat Dien | Vice Director of Plan and Investment Dep. |
| 4. Mrs. Nguyen Thi Lien | Vice Chairman of Woman Union |
| 5. Mr. Nguyen Huu Tai | Director of Finance Department |

6. Mr. Hoang Van Quang	Director of Fresh Rural Water Program
7. Mr. Nguyen Hong Truong	Director of Transportation and Communication Department
8. Mr. Pham Van Tuyen	Vice Director of Agricultural and Rural Development
9. Mr. Nguyen Quang Toan	Vice Director of Electricity Department
10. Mr. Mai Khac Nhu	Expert of Public Health Department
11. Mr. Dang Duy Hoa	Head of International Economic Division
12. Mr. Nguyen Viet Ninh	Expert of Plan and Investment Department
13. Mr. Tran Huu Ich	Expert of People's Committee of Nghe An Province
14. Mr. Nguyen Van Thong	Expert of Plan and Investment Department

IV/ People's Committee of Nam Dan District

1. Mr. Nguyen Van Minh	Chairman of People's Council
2. Mr. Nguyen Van Be	Chairman of Nam Dan District
3. Mr. Nguyen Quoc Kien	Vice Chairman of Nam Dan District
4. Mr. Vuong Dinh Loc	Ditto
5. Mr. Le Khanh Hoa	Head of Plan and Investment Division
6. Mr. Nguyen Xuan Que	Head of Agriculture and Rural Development Division

V/ People's Committee of Communes

1. Mr. Pham Ngoc Hung	Chairman of Nam Hung Commune
2. Mr. Nguyen Van Tu	Chairman of Nam Nghia Commune
3. Mr. Nguyen Van Dong	Chairman of Xuan Lam Commune
4. Mr. Nguyen Dinh Dang	Chairman of Nam Xuan Commune
5. Mr. Hoang Chien	Chairman of Hung Tien Commune
6. Mr. Le Dang Quy	Chairman of Xuan Hoa Commune
7. Mr. Hoang Dang Tan	Chairman of Nam Cat Commune
8. Mr. Nguyen Khac Nhi	Chairman of Nam Thai Commune
9. Mr. Le Xuan Thanh	Chairman of Nam Loc Commune
10. Mr. Ho Viet	Chairman of Nam Anh Commune
11. Mr. Luong Trong Quang	Chairman of Nam Giang Commune
12. Mr. Ho Xuan Binh	Chairman of Nam Cuong Commune
13. Mr. Pham Ngoc Duong	Chairman of Hong Long Commune

14. Mr. Duong Khac Dam	Chairman of Nam Phuc Commune
15. Mr. Tran Quang Dai	Chairman of Van Dien Commune
16. Mr. Vo Van Hong	Chairman of Nam Kim Commune
17. Mr. Nguyen Van Minh	Chairman of Nam Linh Commune
18. Mr. Nguyen Thuc Dinh	Chairman of Nam Trung Commune
19. Mr. Nguyen Hong Giao	Chairman of Nam Tan Commune
20. Mr. Vuong Khanh Diep	Chairman of Kim Lien Commune
21. Mr. Bui Huu Tu	Chairman of Nam Thanh Coomune
22. Mr. Nguyen Thanh Vinh	Chairman of Nam Dan Town
23. Mr. Vo Van Quy	Chairman of Khanh Son Commune
24. Mr. Nguyen Van Hue	Chairman of Nam Thuong Commune

ANNEX D : REPLY TO THE COMMENTS ON DF/R

REPLY TO THE COMMENTS ON DF/R

No.	COMMENTS	REPLY
1	In general, most Vietnamese participants express their high appreciation to the concepts, methodology and prioritization of projects that indicated in the Report. Notably, the concepts raised by this Study for rural development could be applicable and extendable for other rural areas in Vietnam.	The Study Team expects that this Study will contribute to the establishment of appropriate projects for integrated rural development of Viet Nam.
2	Vietnamese side, especially localities, agreed fully that the selection of Nam Nam area as a priority area to undertake project for model rural development and proposed for obtaining grant-aid from the Japanese government.	For the grant-aid support from the Japanese Government, Vietnamese Government should request to Japanese Government through the normal procedure.
3	Establishment of a "Promoting Project Office" for the Project in the MARD for implementation and O/M as initiated by the Draft Final Report is necessary.	A new organization for the implementation of the Integrated Development Project is recommended in Chapter 6 of the Report.
4	Regarding rural development policies of the GOV, besides infrastructure development, the Study is required to include more studies and emphasize the development of agro-industry and industry in the rural areas like Nam Dan district as well as creation of more job for employment.	Around 40,000 of labor force will be increased by 2010 and it is difficult to create new employment opportunity in Nam Dan District. Therefore, it is necessary to consider several programs such as transmigration and urban development. However, the consideration of counter measures for this problem is out of scope of the Study.
5	According to the project cost indicated in the Report prepared by the Study Team, the contemplation and confirmation should be specified for how much contribution or appropriate portions will be available from various sources like a) Japanese grant-aid, b) Loaning and c) National contribution (central, province	Grant-aid projects should be discussed between the Vietnamese and Japanese Governments based on the results of the Study. The basic information and materials for financial issues are prepared in the Report.

No.	COMMENTS	REPLY
	and mobilization from locality). Such financial issues including disbursement should be completed before submitting to the Government for approval.	
6	The questions of who is going to loan from international organization and who is responsible to pay back, are also required to be clearly among relevant agencies and locality before final approval is made.	Implementation and O/M organizations for each project are recommended in Chapter 5 of the Report. Based on these ideas, these matters should be decided by Vietnamese side itself.
7	Several priority projects which suggested by the Study Team require to be early finalized by 2001 - 2002, for instance transport, electrification and rural water supply before 2005, for creating facilities and speeding up progress of other ones.	The Study Team has the same idea as mentioned and the proposed implementation schedule is prepared based on these points.
8	Project for improvement of Nam Nam dike and improvement of drainage system in Nam Nam area, since their important roles, should be both fallen into A rank.	Project for improvement of Nam Nam dike is recommended as A rank project. Regarding the improvement of drainage system in Nam Nam area, it is necessary to consider the drainage improvement in Ha Thin District first.
9	Credit is playing an important role in supporting necessary activities in rural area, especially farmers can borrow money from the bank for development of their production activities (fertilizers, pesticides, seeds, etc.), that have to include in the Report.	New credit systems for rural development are recommended in Chapter 4 of the Report and the Study Team has suggested to establish credit systems as national level programs due to the nature of the systems.
10	Regarding environmental protection, it would be more effectively if afforestation is applied as countermeasures for controlling soil erosion.	To continue the present afforestation program in Nam Dan District is recommended in Chapter 4 of the Report.

***ANNEX E : LIST OF STUDY TEAM MEMBER AND
COUNTERPART PERSONNEL***

LIST OF VIETNAMESE COUNTERPARTS PARTICIPATING IN NAM DAN RURAL DEVELOPMENT PROJECT

No	Sector	Japanese Experts	NIAPP Counterparts	Provincial Counterparts	District Counterparts
1	Team Leader	Masahito YAMANAKA	Vu Nang Dung		
2	Deputy Team Leader Irrigation and Drainage	Yujiro ITAKURA	Nguyen Duy Vien Cao Son Thuy	Nguyen Ngoc Chuong	Dinh Xuan Que
3	Rural Socio-Economy and Farmers Organization	Yohei KIYOSE	Nguyen Quoc Trung	Nguyen Van Suu Nguyen Dinh Lien	Dang Van Dung Ngo Van Que
4	Agronomy	Yasutaka UCHIYAMA	Dao Quoc Luan		Nguyen Huu Nhuan
5	Agro-Economy and Agricultural Finance	Jorge TOKESHI	Le Hung Tuan	Nguyen Kim Bau	Tran Van Thanh
6	Project Evaluation	Yutaka NOZAKI			
7	Agro-Industry and Marketing	Akeshi MORI	Doi Anh Tuan	Nguyen Duc Ngan	Pham Van Long
8	Natural Environment	Takashi KITAGUCHI	Pham Viet Tien	Tran Huy Dan	
9	Health Care and Sanitation	Rie KAWAHARA	Nguyen Huong Tra	Nguyen Hong Tan	
10	Education	Kenzo MIYOSHI	Hoang Quoc Chinh		Bui Thi Cuc
11	Water Supply	Takao SAKAMOTO	Tran Nhat Lam	Tran Xuan Hung	Le Van Quy
12	Rural Electrification	Hiroshi OMURA	Vu Tuan Anh	Tran Quang Phuc	Nguyen Van Phuong
13	Road/Structure Design and Cost Estimation	Kazuhiko TSUCHIDA	Nguyen Nam Hung	Tran Van Thu	Le Khanh Hoa
14	Aerial Photograph	Yutaka NAKADA	Nguyen Nguyen Han		

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No	Sector	Japanese Experts	NIAPP Counterparts	Provincial Counterparts	District Counterparts
1	Team Leader	Masahito YAMANAKA	Vu Nang Dung		
2	Deputy Team Leader Irrigation and Drainage	Yujiro ITAKURA	Pham Tan Cung	Nguyen Ngoc Chuong	Dinh Xuan Que
3	Rural Socio-Economy and Farmers Organization	Yohei KIYOSE	Nguyen Duy Vien	Nguyen Dinh Lien	Ngo Van Que
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5	Agro-Economy, Agricultural Finance and Project Evaluation	Yutaka NOZAKI	Le Hung Tuan	Nguyen Kim Bau	Tran Van Thanh
6	Agro-Industry and Marketing	Akeshi MORI	Nguyen Duc Tuan	Nguyen Duc Ngan	Pham Van Long
7	Natural Environment	Takashi KITAGUCHI	Nguyen Xuan Thanh	Tran Huy Dan	
8	Water Supply	Takao SAKAMOTO	Nguyen Xuan Khuong Le Minh Nhat	Tran Xuan Hung	Le Van Quy
9	Rural Electrification	Yukio TOYOSHIMA	Vu Tuan Anh	Tran Quang Phuc	Nguyen Van Phuong
10	Road/Structure Design and Cost Estimation	Kazuhiko TSUCHIDA	Nguyen The Cong	Tran Van Thu	Le Khanh Hoa
11	Aerial Photograph	Yutaka NAKATA	Nguyen Nguyen Han		



