

Chapter3

The ARC

Chapter 3 The ARC

3.1 Natural Conditions

3.1.1 Location and Area

The Study Area consists of 21 ARCs, Cluster and Settlement (hereinafter called as ARCs) in the Isabela province. The ARCs are located in the Cagayan River basin. The total **cumulative acreage of the Study Area is 28,466.7 ha**. San Ramon ARC has the smallest area of 232.0 ha, **while the Isabela Settlement has the largest area of 6,083 ha**, and consists of three (3) Clusters within two (2) Municipalities of the Isabela province. Since the acreage of the Isabela Settlement is too wide for one project and located in two (2) different Municipalities, therefore, **the Study carried out for the area is by cluster basis**. Consequently, a total number of 23 ARCs/Clusters was applied for this Study. (refer to Table 1-3-1)

The direct distance between Dalena & Simanu ARC located at the northern most part and San Manuel ARC located at the southern most part is about 100 km, **while the distance between Progreso ARC located at the eastern most part and Capirpirwan ARC located at the western most part is about 55 km**.

14 ARCs out of 21 ARCs are located at the west side of the **Cagayan River**. The Study Area is topographically divided into three (3) categories, namely, 'Flat area', 'Mixture area' and 'Hilly area'. **About 12 ARCs are located in the 'Flat', six (6) ARCs in the 'Mixture' (means mixed topography of flat and hilly) and three (3) in 'Hilly' categories.**

3.1.2 Climatic Conditions

(1) General Climate

According to the Coronas climatic classification, the Study Area is classified as the Type III. The Type III has not clearly pronounced seasons i.e., relatively dry season from January to April and the wet season during the rest of the year. The maximum rain periods are not clearly pronounced, with short dry seasons lasting only from one (1) to three (3) months.

(2) Climatic Conditions of the Study Area

The Study Area is scattered around the Isabela province. All Study Area has no climatic observatories, therefore climatic data observed at **Isu**, Echague by PAGASA are used for analysis of the general climatic conditions. The annual mean temperature is 27.3 °C.

December is the coolest at 20.1 °C while May is the warmest at 35.4 °C. The annual mean related humidity is 87.6 %. May is reported to have the lowest monthly mean value at 80.5 %. The highest monthly mean value is obtained at 94.8 %, in November. The annual mean rainfall is 1,793 mm. The so-called dry season is from January to April, however, the monthly rainy days with more than 1 mm is five (5) days on the average. The annual mean evaporation is observed at 1,445 mm which is less than that of the annual mean rainfall. The monthly mean wind speed is between 1.0 to 5.0 knots (mile/hour) while annual mean wind speed is 3.0 knots. (refer to Figure 3.1.2 and Appendix)

3.1.3 Soils

The soils in the objective ARCs/Clusters vary from sandy loam to clay. Sandy loam is found at the river terraces and clayey soils are found in the hilly areas. Loam and clayey soils are found at the intermediate places. The soils are not generally fertile, but good for cultivation if they are well managed. The sandy loam shows high potential for high yield of corn and upland crops with proper application of fertilizers. The loam and clayey loam in the paddy field keep high yield of palay, too. The loam, clayey loam and clay at the sloped area are exposed to erosion, degrading soil fertility. Due to this, proper soil management is required. The soils are slightly acidic at around pH 5.9 or 6.0.

According to the report, 'Soil Productivity Rating For Soil Degradation Assessment In the Philippines: A Case Study in Isabela' in 1999, by Ohkura T., Carating R.B. et al, SRDC-JICA Technical Cooperation Phase II, the soils in Isabela Province are classified into 13 types by US taxonomy. Among the 13 types, four (4) types are found in the objective ARCs, shown in Soil Map of Isabela in the report.

Aeric Tropaquepts which mean airy tropical wet soils with red spots by oxidation seasonally, exist at the middle part of the left bank side of the Cagayan River in the south of the province and at both sides of the bank Cagayan River in the north. This type of soils is found in more than half of the objective ARCs which produce mainly palay, such as Lapogan, Quiling, San Miguel, Amalungan-Rizal, Capirpiriwan, Fermeldy, Luzon, Canan, Andarayan, Bantug Petines, San Miguel Burgos, San Ramon, and partly in Yeban Norte/Benito Soliven, Dalena & Simanu

Typic Eutropepts which mean typical tropical medium developed wet soils with high basic saturation scatter mainly at the left bank side of the Cagayan River. This type is found in the ARCs as San Manuel, Minagbag, Cabaruan, Dammao, Viola Estate Cluster, partly in Isabela Settlement, Yeban Norte/ Benito Soliven.

Aquic Eutropepts which mean wet tropical medium developed soils with high basic saturation occupy a small area and **scattered at the right side** of the Cagayan River in the north of the province. This type is found partly in the ARC of Dalena & Simanu.

Typic Dystropepts which mean typical tropical medium developed soils with low basic saturation scatter at the hilly areas. This type is found in the ARC of Progreso and partly **in the** Isabela Settlement.

Table 3-1-1 Present Conditions of ARC/Cluster





No.	Name of ARC	Name of Municipality	Area of the ARCs (ha)	Number of Barangay	Location of ARC/Cluster	Topographic Condition	Existing Irrigation System
1	Lapogan	Tumauni	993.2	1	East of the Cagayan	Flat	
2	Quiling	Roxas	240.0	1	West of the Cagayan	Flat	MRIS
4	San Manuel	Echague	1,519.0	1	West of the Cagayan	Mixed	
5	San Miguel (Ramon)	Ramon	535.3	1	West of the Cagayan	Flat	MRIS
6	Amulungan - Rizal	Santiago	325.0	1	West of the Cagayan	Flat	MRIS
7	Isabela Settlement						
7-1	La Suerte Cluster	Angadanan	1,935.0	5	East of the Cagayan	Hilly	
7-2	Dipasivi Cluster	San Guillermo	2,118.0	4	East of the Cagayan	Hilly	
7-3	Cenea Cluster	San Guillermo	2,030.0	5	East of the Cagayan	Hilly	
8	Minagbag	Quezon	3,952.0	1	West of the Cagayan	Mixed	CHICO
9	Cabaruan	Naguilian	2,968.0	1	East of the Cagayan	Mixed	MRIS
10	Capiririwan	Cordon	1,322.0	1	West of the Cagayan	Mixed	MRIS
11	Fernely	Tumauni	519.2	1	East of the Cagayan	Flat	
12	Luzon	Cabatuan	965.0	1	West of the Cagayan	Flat	MRIS
13	Progreso	San Guillermo	721.0	1	East of the Cagayan	Hilly	
14	Yeban Nort/Benito Soliven	Benito Soliven	1,552.0	2	East of the Cagayan	Mixed	
15	Canan	Cabatuan	901.0	1	West of the Cagayan	Flat	MRIS
16	Andarayan	Delfin Albano	475.4	1	West of the Cagayan	Flat	
17	Bantug Petines	Alicia	464.0	1	West of the Cagayan	Flat	MRIS
18	Dalena & Simanu	San Pablo	2,038.8	3	East of the Cagayan	Mixed	NIS & Simanu CIS
19	Dammao	Gamu	720.0	1	West of the Cagayan	Flat	
20	San Miguel (Burgos)	Burgos	678.8	1	West of the Cagayan	Flat	MRIS
21	San Ramon	Aurora	232.0	1	West of the Cagayan	Flat	MRIS
22	Viola Estate Cluster	Reina Mercedes	1,262.0	4	West of the Cagayan	Flat	
	Total		28,466.7	40			

Note: MRIS : Magat River Integrated Irrigation System

CHICO : Chico River Irrigation System

NIS of Dalena : San Pablo-Cabagan Irrigation System

LEGEND:

-  Type I – Two pronounced seasons: dry from November to April wet during the rest of the year
-  Type II – No dry season with a very pronounced maximum rainfall from November to January
-  Type III – Seasons not very pronounced, relatively dry from November to April: Wet during the rest of the year
-  Type IV – Rainfall more or less distributed throughout the year

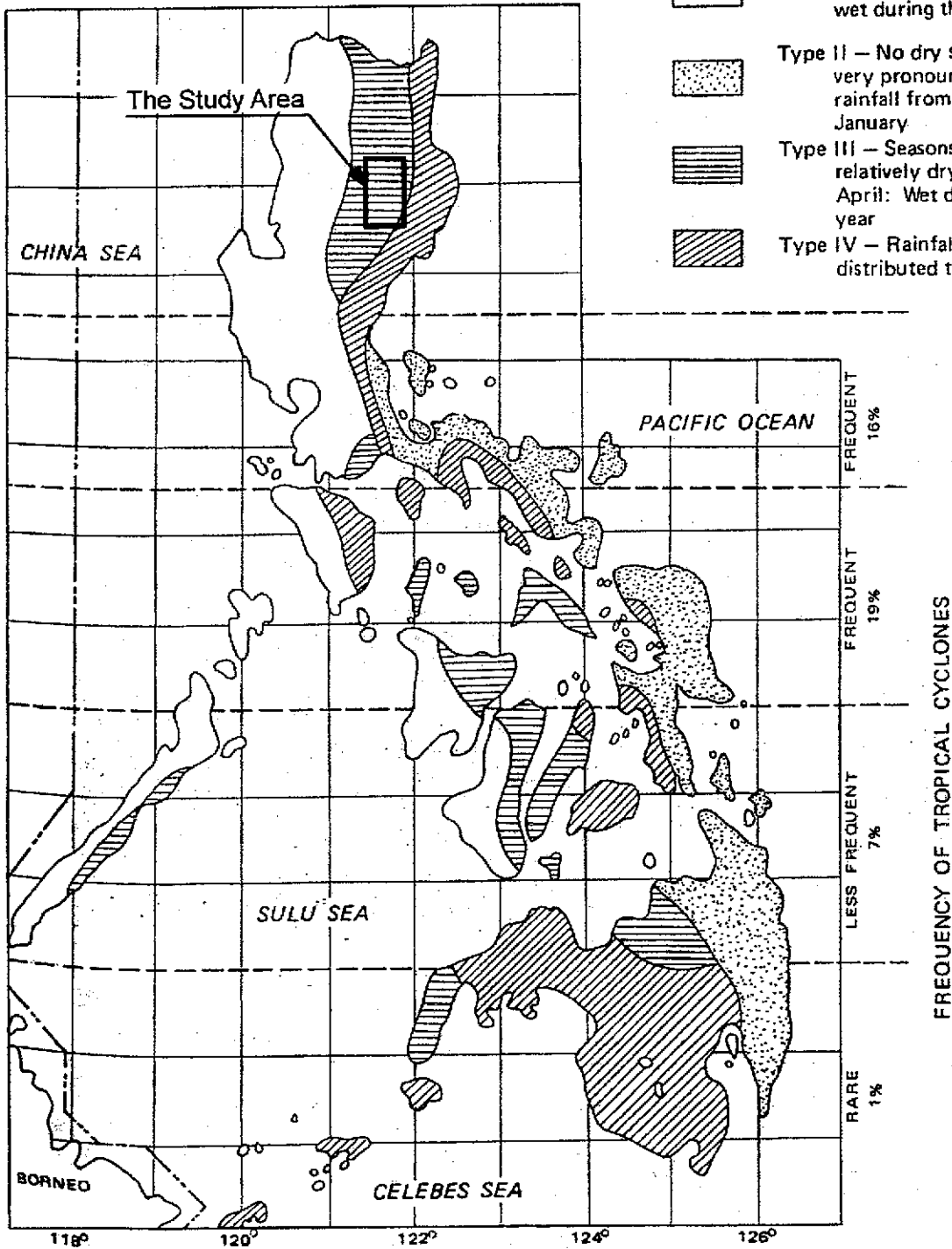
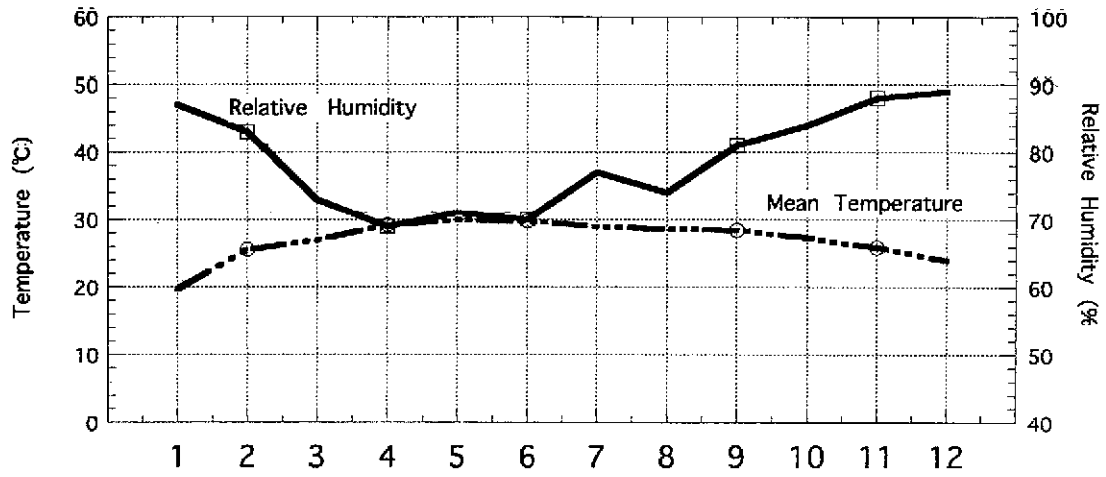
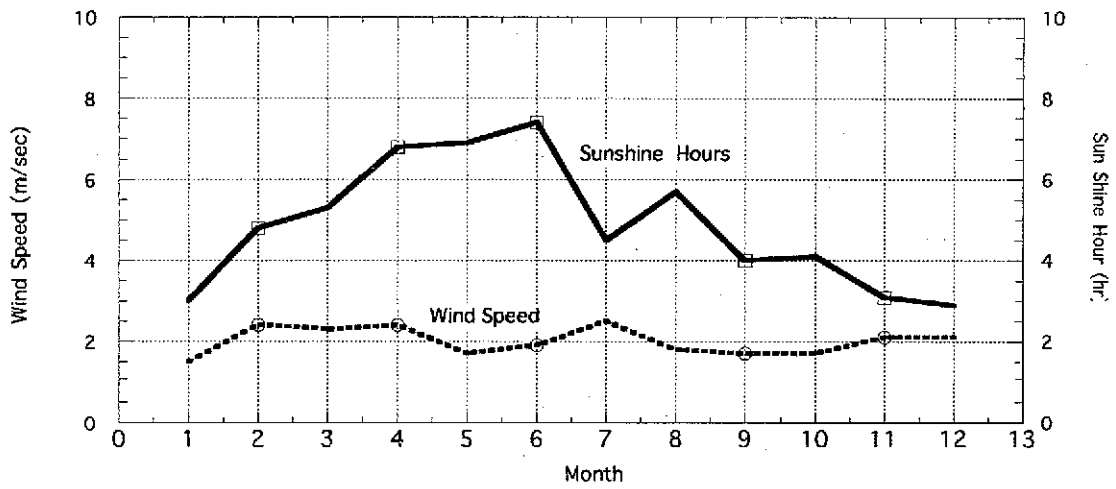


Figure 3-1-1 Climatic Zone of Philippines

Monthly Mean Temperature and Humidity



Wind Speed and Relative Humidity



Monthly Rainfall

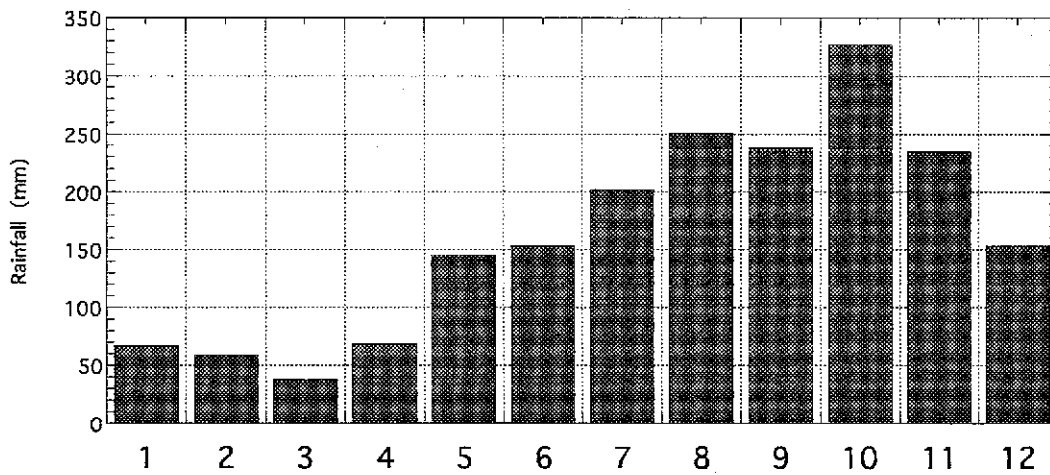


Figure 3.1.2 General Climatic Conditions of Isabela Province (Isu Observatory, Isabela)

3.2 Agriculture

3.2.1 Present Conditions of Agriculture

(1) Farming Conditions

Paddy and corn are the major crops in the 21 ARCs. Rice is the staple food for the people in the Philippines, and the most important crop in the country. Paddy is grown twice a year with irrigation system in the plain, or at the bottom valleys of the hills. Where paddy is grown under natural rain, it is grown only once a year. Dry field paddy is grown as well but on a limited scale. Yellow corn is used mainly for processing animal feed. Though white corn is produced at only 2.1 % of total corn, it is the substitute of rice as staple food in Fermeldy ARC. Corn is grown at the slope of hills or at the flat fields of the river terraces.

Vegetables, industrial crops and fruit trees are grown at the backyard for home consumption. The surplus is sold at the local market. Few crops are grown for commercial purposes, such as mungbean, eggplant and tobacco. There are also a few established orchards such as calamansi, mango and banana. Among them, banana is grown widely in the hilly areas in Isabela Settlement and Progreso. Few heads of animals are kept at the homestead for domestic use such as, Carabao, cattle, pig, goat, chicken, game fowl, etc. Dairy farm is not found in the surveyed ARCs, nor big scale animal farm in the target ARCs.

There are differences in farming in the ARCs depending on the availability of water and topography. The first one is 'the Almost Flat' with available irrigation, where paddy is mainly grown twice a year. The second is 'the Mixture of Flat & Hilly' and 'the River Terraces' under rainfed condition, where corn is grown mainly twice a year. The third is 'the Almost Hilly' with higher slopes, distant from the market and where corn is mainly grown and often with banana. The 21 ARCs are classified into the three (3) categories as follows (refer to Table C1.6 in Appendix C);

- A. Almost Flat: 2. Quiling, 5. San Miguel, 6. Amulungan-Rizal, 12. Luzon, 15. Canan, 17. Bantug Petines, 20. San Miguel Burgos, 21. San Ramon
- B. Mixture of Flat & Hilly and River Terraces:
 - 1. Lapogan, 4. San Manuel, 8. Minagbag, 9. Cabaruan, 10. Capirpiriwan, 11. Fermeldy, 14. Yeban Norte, 16. Andarayan, 18. Simanu-Dalena, 19. Dammao, 22. Viola Estate
- C. Almost Hilly: 7. Isabela Settlement (7-1. La Suerte Cluster, 7-2. DIPASIVI Cluster, 7-3. CENEA Cluster), 13. Progreso

An Agrarian Reform Beneficiary (ARB) holds 1 to 3 hectares, 2.1 ha on the average, except Isabela Settlement where wider area, 4.3 ha on the average, was rendered to ARBs.

Corn is grown by 68.4 % of farmers while paddy is raised by 52.8 % of farmers. (refer to Appendix C.1)

In paddy growing, farmers plow and harrow the fields with hired hand tractor, or sometimes with their own Carabao or cattle. Planting is done either by direct seeding or transplanting, and its ratio is fifty-fifty depending on the location. The farmers employ labor to fill the lack of family labor in transplanting including pulling of seedlings. The wage per day is about 90 to 100 pesos and labor for transplanting requires about 12 man-day/ha. The farmers apply chemical fertilizers as compound 14-14-14, 16-20-0 or urea twice, one for basal application and another for top dressing. They use herbicide and pesticide as well. They employ again labor for harvesting, cutting paddy plants manually at the middle part of the straw, hire a threshing machine, and haul the paddy to the homestead to dry. The labors for cutting paddy require about 100 peso/day and require about 12 man-day/ha as well, but one cavan is paid per 14-16 cavans when paid in kind. Paddy is usually dried under the sun for 2 days and ready for sale or kept for home consumption. (refer to Appendix C.1 (3) and (4))

Corn growers plow the fields twice and harrow them once to prepare them for planting with hired tractor or Carabao. They till the rows with Carabao once when corn grows as high as 50 cm. They apply fertilizer and pesticide. They harvest corn with hands and take grains out with a hired corn sheller. They carry the corn to the homestead and dry them under the sun. (refer to Appendix C.1 (3) and (4))

Farmers need capital for farm input of labors, seeds, fertilizers, chemicals, hiring of hand tractor or tractor, Carabao, threshing machine and corn sheller. Most of farmers rely on private traders in cash or in kind for their capital needs. When they harvest their product, most of harvests are sold to the traders to repay the debt of farm input. The private traders give them loans at very high interest, as high as 7 % a month or 30 % per a cropping season. They have other sources of capital as banks, cooperatives, etc., but the private traders give them loan in the easiest manner.

(2) Production and Yield

Production from the farm described here is only on major crops as paddy and corn because the other crops as vegetables, fruit trees and animals are grown in a small scale for home consumption and only the surplus of the products are sold to market.

Paddy produced totally in the 21 ARCs in 1997 was 844,804 cavans (42,240 MT in weight). Total paddy production was 497,352 MT in the whole Isabela Province in the same year, revealing that the target ARCs produced only 8.5 % of the whole provincial production.

The eight (8) ARCs in the Almost Flat category produced 568,660 cavans of paddy, which is more than 2/3 of the whole 21 ARCs. The eleven (11) ARCs in the Mixture of Flat & Hilly and the River Terraces category produced 224,080 cavans of paddy, while the two (2) ARCs in the Almost Hilly category produced 52,064 cavans. (refer to Table C.1.6 in Appendix C)

Yields of paddy per hectare differ by ARC. The average paddy yield with irrigation was 97 cavans/ha in the wet season and 106 cavans/ha in the dry season on the average in the Almost Flat category. The lowest yield was 53 cavans/ha and the highest recorded yield was 148 cavans/ha. Rainfed paddy yielded only 39 cavans/ha. In the Mixture of Flat & Hilly and River Terraces category, average paddy yield with irrigation was 74 cavans/ha in the wet season and 77 cavans/ha in the dry season, the lowest and highest yield of which is 45 and 100 cavans/ha, respectively. Rainfed paddy yield was 43 cavans/ha in the area. In the Almost Hilly category, paddy yielded 43 cavans/ha in the wet season and 52 cavans/ha in the dry season with irrigation. Rainfed paddy yielded 43 cavans/ha. It is clear that irrigation brings much better yield in paddy growing. The yield in the dry season is better than that in the wet season. (refer to Table 3.2.1 below and Table C.1.6 in Appendix C)

Table 3.2.1 Average Yield of Paddy (cavan/ha)

Land categories	Wet season	Dry season	Av. Yield	Av. yield	Rain-fed
	Av. Yield	Av. yield	Maximum	Minimum	Average
Almost Flat	97	106	148	53	39
Mixture of Flat & Hilly, River terraces	74	77	100	45	43
Almost Hilly	43	52	52	43	43

The whole Isabela Province produced 728,565 MT of corn in 1997. Corn produced in the 21 ARCs in 1997 was 1,151,350 cavans (57,568 MT in weight) which is only about 7.9 % of the provincial production. The eight (8) ARCs in the almost flat category, the eleven (11) ARCs in the mixture of flat & hilly and river terraces category, and the two (2) ARCs in the almost hilly category produced 95,345 cavans, 725,919 cavans and 331,086 cavans, respectively in the same year. The second category produced 63 % of the total production in the 21 ARCs. White corn production is only about 2 % of the total corn production. The rest, 98 % is yellow corn. (refer to Table C.1.6 in Appendix C)

Average yield of corn does not vary much by ARC. But a slight tendency of decreasing yield is seen in the sloped areas. Corn yielded 84 cavans/ha in the wet season and 82 cavans/ha in the dry season in the almost flat category. The highest yield was 120

cavans/ha, and the lowest was 63 cavans/ha. In the mixture of flat & hilly and river Terraces category, average yield of corn was 78 cavans/ha in the wet season and 73 cavans/ha in the dry season, with the highest yield of 108 cavans/ha and the lowest yield of 42 cavans/ha. In the Almost Hilly category, average yield was 70 cavans/ha in the wet season and 72 cavans/ha in the dry season, with a highest and lowest yield of 80 and 61 cavans/ha, respectively. (refer to Table 3.2.2 below and Table C.1.6 in Appendix C)

Table 3.2.2 Average Yield of Corn (cavan/ha)

Land categories	Wet season	Dry season	Av. yield	Av. yield
	Av. yield	Av. yield	Maximum	Minimum
Almost Flat	84	82	120	63
Mixture of Flat & Hilly, River terraces	78	73	108	42
Almost Hilly	70	72	80	61

(3) Present Cropping Pattern

The most typical cropping pattern in the target areas is either double cropping of rice or double cropping of corn, shown below as Cropping patterns I and II. These patterns are found in most of the target ARCs. Cropping patterns III, IV and V are very rare, III is found in three (3) ARCs, of Quiling, Fermeldy and Viola Estate Cluster. The pattern IV is observed only in Viola Estate Cluster, and V is seen only in Lapogan. Planting time of paddy is limited with available irrigation water. Paddy is planted in most of the ARCs for wet season in May because it is the time when water is released from the Magat dam. It causes farmers to sell paddy at the same time when the price is the lowest in a year. But corn is usually planted one month earlier. It is usual that paddy and corn are planted in November and December, and are harvested in March. (refer to Table B.2.1 in Appendix B)

Cropping pattern I	Paddy	Paddy	
Cropping pattern II	Corn	Corn	
Cropping pattern III	Corn	Tobacco	
Cropping pattern IV	Corn	Mungbean	Tobacco
Cropping pattern V	Rice	Corn	

(4) Supply of Agricultural Materials and Tools

Almost all the agricultural materials and tools are supplied by private traders.

However, fertilizers are supplied partially by agricultural cooperatives though the amount is very limited. Department of Agriculture supply farmers seed to some extent.

The paddy is plowed and leveled usually by a Carabao /cattle or a hired hand tractor. More farmers use draft animals than hand tractors. As hand tractor is expensive, ranging from 25,000 to 63,000 pesos, the average farmer in the ARCs can not afford to buy it. Rich farmers own hand tractor and rent out to other farmers. The cornfield is usually plowed by Carabaos, or by hired 4-wheel tractors as well. As the 4-wheel tractor costs more than 2 million pesos, it is beyond farmers' capacity. Only rich traders or entrepreneurs can buy it, and rent it to farmers. According to the farmer survey conducted by the Study Team, both the paddy and the cornfield are plowed with animals at 48.2 %, with animals and machines at 11.2 %, and with machines at 37.5 %. They are leveled with animals at 60.5 %, with animals and machines at 3.9 %, and with machines at 33.4 %. The cornfield is cultivated at the vegetative stage with animals at 87.3 %, with animals and machines at 1.3 %, and with machines at 10.5 %.

A plow and leveler cost only 800 to 1,200 peso/piece. A hoe costs 180 pesos, a shovel at 500 pesos, a sickle for cutting paddy at 50 to 60 pesos. A shoulder sprayer costs 1,200 pesos, most of farmers buy it individually. A water pump for irrigation costs about 58,000 pesos, depending on the type. Double purpose thresher for rice and corn costs 70,000 to 90,000 pesos, and a corn sheller cost from 50,000 to 75,000 pesos. Most of farmers hire them instead of purchasing them.

Certified paddy seed costs 620 pesos per bag of 40 kg. Farmers buy the seed from private traders (45.1 %), and from Department of Agriculture (19.9 %). Seeds from own farm (35.8 %) are also used by farmers. Since corn seeds are hybrid, farmers buy them every year. There are three major corn-seed producers such as Cargil, Pioneer and Cornworld. The price of corn seed differs from 1,050 to 1,800 peso/bag. Private traders supply corn seed to 72.6 % of farmers while the DA provides farmers to 15.1 %. However, 7.3 % use self-produced seed.

Only few kinds of fertilizer are used, such as a compound fertilizer, 14-14-14 and 16-20-0, and urea. Only 1.8 % of farmers use organic fertilizers. A chemical fertilizer costs 360 to 380 peso/bag of 50 kg. Pesticides are used by 67 % of farmers, herbicides by 50 %, and fungicides only by 12.7 %. Pesticides used are Karate, Cymbus, etc. while herbicides used are Machete, 2-4-D and Rilof. Pesticide costs is 650 to 800 peso/liter while herbicide from 250 to 420 peso/liter. (Refer to Table C.1.7)

(5) Food Processing

Food processing is rarely found in the ARCs except at CENEA cluster in Isabela Settlement that produces banana vinegar, pineapple vinegar and banana chips. Though yellow corn is processed as animal feed, it is processed at factories after it is sold to private traders. Tobacco is also processed at factories after farmers sell dried leaves. Cattle are raised as draft animal and later slaughtered for beef. No dairy is produced. People in Isabela do not take cow milk and its products because they are not used to the smell of milk. Most of meat is sold fresh except some sausage from pork. The processed products come from big cities like Manila. Food processing has not been developed in the area, because farmers are not equipped with skills and know-how, or are without initial capital.

(6) Marketing

Main farm products in the area are paddy and corn. Other products as vegetables, fruits and meat that are marketed locally. Only the marketing of rice and corn is described hereunder. Though some cooperatives deal with rice, the amount is very little. The MPCFI in Andarayan ARC deals about 5,000 cavans of paddy a year.

Big private traders usually established sale routes to consumers with milling factory. They sell most of paddy to Manila, which supplement rice from the Central Luzon. It is said that Isabela traders gain a lot from paddy deal when the main granary is hit by the natural hazards or diseases, occurring about once in four years, because the market depends on rice from Isabela in such a case. Thus rice from Isabela Province becomes a strategic commodity for traders from the situation.

Paddy production in Isabela Province is approximately 497,000 MT a year and 42,000 MT of them (about 8.5 %) is produced by the target ARCs. When weight loss through post harvest treatment as drying, threshing and milling is assumed as 40 %, 497,000 MT of paddy becomes 299,000 of clean rice, and 42,000 MT of paddy is equivalent to 25,000 MT of clean rice. And if 220,000 MT of clean rice (annual consumption of rice per capita is 111 kg in Isabela Province.) is reduced as self-consumption in Isabela Province, 78,000 MT of clean rice is sold outside the province. Rice sold outside the province is estimated at about 26 % of the total production.

Corn is sold to Bulacan Province or Manila and processed as animal feed for broiler, pig and tilapia, and also sold as a snack at stalls, etc. 272,000 MT of corn is sold outside the province, about 37 % of the total as well as rice. There are about 30 traders on rice, corn and tobacco in the area. Most of big traders are Chinese-Filipinos. The traders on rice and corn usually have 30 to 50 employees and those on tobacco about 50 to 100 employees who are sent to farmers to deal with the farm products. It is heard that an employee works for about

10 farmers.

The National Food Authority (NFA) buys rice and corn, but the deal does not exceed 5 % of the products in Isabela Province. NFA is required by the government to be a private body in the near future. It seems difficult for farmers to sell NFA rice and corn continuously in this sense. Practically farmers do not expect much from NFA.

(7) Livestock and Fishing in the Internal Water

Livestock in the target ARCs is kept in a very small scale. Cattle or Carabao kept is only one or two heads at the homestead. They are used as draft animal and consumed as meat when aged. According to the agricultural statistics in 1997, there are 7,650 heads of cattle and 6,121 Carabaos raised in the 21 ARCs. It does not mean that all the farmers raise them. Many farmers still hope to raise either of them. As Carabao is a very important draft animal, it is prohibited to slaughter a bull younger than 7 years old and a cow younger than 11 years old. On the other hand, there are big pastures raising a number of beef cattle with natural grass outside the ARCs. There are no dairy farms at all but it is found sometimes that children sell Carabao milk at the roadside. A horse is used as a draft animal as well, but only 131 heads are raised in the 21 ARCs.

About 5 to 6 white pigs are kept at a pigpen. Black pigs roam around the village. In total, 9,062 pigs are raised in the 21 ARCs. As dog meat is prohibited, goat is raised for meat instead. Its production is growing, and 1,130 heads are raised totally in the 21 ARCs. There are cases where poor farmers raise goats of the rich and share in the profit.

Chickens are kept free at the homestead. It is estimated that approximately 40,000 heads are raised in the 21 ARCs. The chickens grow on natural feed, dry rice and corn stalks, etc. Eggs and meat are consumed when necessary. Guinea fowls are also found in some villages. There are few turkeys kept for Christmas. Ducks are raised in the water reservoirs and paddy, and not only slaughtered for meat but also the egg is sold as 'balot' just before hatching.

Fishing in the internal water is well developed because Isabela Province is located far from the sea and the Cagayan River runs through at the center of the province. Fresh fish is sold more at the market than sea fish. Catfish, carp and tilapia are the main fish caught in the Cagayan River. There many farmers living on half farming and half fishing near the river. Tilapia are raised in baskets in the river or kept free in the water reservoirs.

(8) Agricultural Research and Extension

Researches on agricultural technologies are undertaken by the Cagayan Valley Integrated Agricultural Research Center (CVIARC) under the Department of Agriculture at Ilagan. The center is working on upland crops as hybrid varieties of corn, seed production of legumes, identification of fruit varieties, cultivation of mother trees for propagation, growing seedlings, etc.

The San Mateo branch of PhilRice is concentrating on researches on rice plant. It works on cultivating methods of different varieties and adaptability of each variety to the locality. It puts much importance on extension of a hybrid variety at present, and concentrates on seed production of a hybrid variety, PCB Rc 72H (so called Mestizo) which is one of varieties developed by the International Rice Research Institute (IRRI).

The Regional Crop Protection Center (RCPC) works on countermeasures against main pests and diseases, Integrated Pest Management (IPM) & Integrated Nutrition Management (INM), seed fungus culture of rice straw mushroom, etc. The Soil & Water Management Office works for soil conservation and Soil Laboratory analyzes soil fertility.

The Provincial Veterinary Office and Livestock Experiment Station (LES) promote livestock raising. As LES specializes on mutton sheep, Cagayan Valley Upland Crop Research Outreach Station (CVUPROS) in the neighboring Quirino Province works on cattle. Livestock division of the station works on beef cattle raising, and research and extension of pasture grass. Fish culture of the fresh water is worked by Cagayan Valley Research Outreach Station of Fresh Water Resources (CVROSFR) which produces mainly fry of tilapia and extends fish culture.

Agricultural technologies are extended centrally by the above research stations and centers, and dispersed to farmers by the Municipal Agriculturists (MA) and Technical Assistants (TA) of the local government units.

(9) Crop Insurance

Farmers are always dissatisfied with crop insurance. There are merely 300 farmers who avail of the insurance of the Philippine Crop Insurance Company (PCIC) in the Study Area. The dissatisfaction by farmers is summarized as 1) PCIC has not explained farmers clearly on the damage assessment, 2) the applicants should fill a complicated form, and 3) compensation paid is much lower than expected. It is also because farmers do not understand well the system of the fraternal insurance. Most of farmers still believe that compensation should be paid not only on production cost but also on expected profit and solatium.

3.2.2 Problems

(1) Monoculture

Agriculture in the target ARCs is characterized as an intense monoculture of rice or corn. Monoculture hits easily farm economy when there is a big drop of price, natural disasters and a big break of pests and diseases. It may be said to weaken resistance of farmer's livelihood. Also, continuation of double cropping of a single crop every year gives negative impacts on agricultural productivity because it lowers soil fertility and helps in breaks of pests and diseases.

(2) Low Productivity

Paddy yields is approximately 100 cavan/ha (5 MT/ha) on the average even with the presence of a large irrigation system, 75 cavan/ha (3.8 MT/ha) when irrigated with pumps, and merely 40 cavan/ha (2 MT/ha) under rainfed condition. Corn yields on the average is only 70 to 84 cavan/ha (3.5 to 4.2 MT/ha). Yield per unit of rice as well as corn is low because agricultural technologies of farmers are behind. Low productivity is added with the loss in the course of post-harvest treatment.

(3) High Production Cost

Each farmer buys agricultural materials from private traders individually. As farmers plant rice and corn nearly at the same time in the Study Area and they need the materials at the same time, they are forced to buy fertilizers and chemicals at highest price. An individual purchase does not allow a negotiation on the price and farmers buy them as the trader's desire.

Moreover, as ARBs are poor, they do not have the necessary capital for the needed tractor, wage, seed, fertilizer and chemicals. Thus, most of farmers (more than 90 % according to farmers) borrow the farm input from private traders with very high interest of about 7 % per month or 30 % per a crop season. A simple calculation implies that it hikes the production cost at 30 %. Unless they borrow the input, there is no capital to grow crops in the field, especially main crops grown on a large scale. Immediately after a crop is harvested, most of the harvest goes to the trader's hands as payment of debt of the input. The price of harvests is set lower than the market price. Thus, farmers start to borrow again the input for the following season.

(4) Low Price of Farm Products

Paddy was sold at 8 peso/kg on wet season crop in 1999, and corn was 6 peso/kg. Both are not profitable with the prices if compared with the production cost. The prices of the major crops are at low level. Moreover, since drying of grains was not enough in the wet season, farmers were obliged to sell paddy at 6 peso/kg, 2 pesos cheaper than the dried paddy. The price of wet corn is lower by 2 peso/kg as well.

In addition, the cropping season is almost simultaneous in the target areas that most of paddy and corn are sold at the same time during September and November when the price is the lowest throughout the year. The price hikes mostly in August. Some farmers lose money from their cropping of the low price and high cost (sayad in Ilocano term). It happens more often in corn growing.

(5) Damages on Crops

Rice plant is affected seriously by Rice Tungro Virus disease (RTV disease) in some ARCs and no harvest at all in the most serious case. Young seedlings are eaten heavily by snails where direct seeding is usually practiced. Corn is damaged often by corn stem borers. Continuous corn planting degrades soil fertility, reduces yield, and induces soil erosion at the slope of hills. Natural calamity, especially typhoon with strong wind and flood often hits the target areas, causing much loss of farm produce. Drought, however, occurs as well.

(6) Low Diffusion of Agricultural Technologies

Research development and extension on agricultural technologies are undertaken by the Department of Agriculture (DA), research stations and centers under the department, and agricultural offices at local government units, which are equipped with necessary facilities. Running cost is, however, lacking for research activities and extension services at the centers and offices.

Extension services to farmers are not enough. Take RTV disease for example, control measures against the disease were established at RCPC, but the technology has not been well diffused to the farmers. Another example is observed on corn growing that most of farmers do not practice spacing, fertilizer application and crop protection methods, which are recommended by the research center.

3.3 Agriculture and Agricultural Infrastructure

3.3.1 Present Conditions

(1) Conditions of Irrigation

Within the Province of Isabela there are three (3) National Irrigation Systems (NIS) such as, Magat River Integrated Irrigation System (MRIIS), Chico River Integrated Irrigation System (CRIIS), San Pablo - Cabagan Irrigation Project (SCIP) and more than 40 Communal Irrigation Systems (CISs). NIS are established, controlled and operated by the National Irrigation Administration (NIA). CIS are controlled and operated by Irrigators' Associations (IA) individually established for each system by NIA. Beside these organized irrigation facilities there are Small Water Impound Measures (SWIM) projects controlled by the Department of Public Works and Highways (DPWH), Bureau of Soils (BS), Department of Forestry (DOF), etc. as well as privately constructed small irrigation facilities.

The construction office of NIS established by NIA carries out the construction works of the irrigation facilities. After completion of construction works, the construction office will be reorganized as the water management office, which takes charge of the operation and maintenance of the main facilities and the main canals. For the operation and maintenance of the terminal irrigation facilities and collection of water charges, NIA organizes the beneficiary farmers into IAs. CIS are planned and constructed by the provincial office (NIA-PIO) at the request of the local municipalities (particularly the municipal offices), and IA organized by the beneficiary farmers performs the operation and maintenance. The construction costs of CIS excluding the administration fee of NIA are to be repaid by the farmers at no interest in yearly repayment within 50 years in the maximum. Within the scope of SWIM, small dams or barrages are constructed by various governmental agencies for the purposes of soil or forest conservation and the water resources thus created are used for irrigation purposes. These dams or barrages are realized when the purpose and the size meet the standards adopted by each government agency at the request of the municipal offices. Hence, there will be no cost contribution on the part of the farmers. Farmers install the small-scale irrigation facilities individually or by groups of farmers. DA or the DAR may effect aid directly for the improvement of agricultural management of the farmers.

Of the 21 ARCs under the study, eleven (11) ARCs are in the beneficiary areas of NIS. As to Capirpirwan and Minagbag, only a part of the ARC area is being irrigated. For San Miguel (Burgos) situated at the end of NIS, the designed amount of irrigation water is not delivered from the intake facilities due to excessive intake at the upstream irrigation areas. For this reason the collection rate of water charge is low.

(2) Conditions of Roads

a) Conditions of Roads

The total length of the existing roads in the Study Area is 360 km with a present road density of 12.6m/ha. The roads in the Area classified as the plain area are generally gravel roads. Thus, there is practically no restriction for traffic during the dry season. However, due to flooding of the rivers and drainage canals during the rainy season, the roads, especially those situated in the lower areas of the plain, become part of the water way and the surface layer gravel is sometimes washed away and the roads are interrupted. Also, because of lack of maintenance, the road surfaces are uneven and bumpy hampering smooth traffic. There are many places of the steep slope portions in the ARCs situated in the hilly portions of the areas classified as the mixed area and in the areas classified as hilly areas. The road surface is fully washed away and became muddy, and vehicles slip disabling them to move due to improper gradient or insufficiency of side ditches. Especially, the Progreso ARC and a part of the Isabela Settlement situated in the hill area, are isolated during this rainy period. The roads are eroded in the form of gully as they are created only by forming the surface of the original land, with uncompressed gravel surface or without any pavement. In these ARCs, it becomes difficult to transport the agricultural products using a conventional bull cart. It is customary to use a log and/or bamboo sled pulled by cows or the rafts through small rivers. (refer to Table 3.3.1)

b) Conditions of Maintenance

Provincial roads are constructed and maintained by the provincial government. The construction and maintenance of the roads of the Isabela province are under the jurisdiction of the Provincial Engineer Office (PEO) of the Isabela provincial government. At Cauayan, there is a motor pool having about four (4) ha. The motor pool has a manufacturing plant of prefabricated concrete parts for bridges, etc. equipped with a sorting machine of aggregates and batching plants. At the request of the municipal government, PEO carries out maintenance or construction of not only provincial roads but also the Municipal or Barangay roads and construction or technical support for construction of river crossing structures such as bridges and culverts. Repair and maintenance of the provincial roads are fully implemented, but other than that the selection of places of repair is decided depending on the importance of the place. As there are too many requests, PEO is not able to cope with all the requests of the municipal governments. Major reasons for not being able to cope with all the requests are old construction machinery, low rate of operation, lack of spare parts, etc. Also, instruments related to surveying and designing are outdated. The annual investment of the Province for the road affairs, which are operated on direct management basis, amounted to about 5,200,000 pesos in 1997. The cost for the construction and repair of the roads created by the provincial governments are financed fully by the provincial government.

c) Municipal roads

Some municipal governments with sufficient financial strength, technical capability and ample machinery are able to perform construction and repair of the municipality roads. But as most of the municipal governments lack financial resources and machinery, thus construction and maintenance of roads depend on the help of the provincial government. The annual investments for the last three (3) years of the municipal governments for the roads vary widely from about 110,000 to 3,640,000 pesos. There is no clear regulation concerning the amount of the expenses for the construction and repair of the municipal roads to be borne by the farmers. They vary from full or 50 % charge for the costs of land expropriation, fuel of the construction machinery and manpower. The municipal governments usually pay other charges including materials. It is determined by each municipal government.

(3) Conditions of Post Harvest Facilities

The post harvest facilities for palay and corn consist of solar dryers and storage facilities. As solar dryers, the farmers utilize multi purpose solar dryer near their houses and multi purpose pavement (MPP) roads. The multi purpose drying facilities are constructed by paving the open space adjoining the public facilities (Barangay hall, basketball court, etc.) under supervision and control of the Barangay. There are drying facilities attached to the storing facilities controlled by the cooperative. MPP roads are paved by concrete and utilized as a solar dryer. In most ARCs/Clusters, Barangay or the cooperatives have the solar dryer. (refer to Table 3.3.1)

However, as the solar dryers for the grains utilizing the concrete paved roads are insufficient in number, many farmers use spread sheets (nets) on the roads or the agricultural fields. When the harvested produces are dried on the concrete paved road, there are chances of small stone and sand entering the grains being dried or of cereals damaged. The farmers signified desire for the introduction of the multi purpose solar dryer as the drying facilities. Rich farmers have their own paved yard and are drying their grains. Their sizes vary between 10 and 3,000 sq.m.

The drying capacity of the existing facilities is estimated for the harvested palay and corn of the ARCs/Clusters during the rainy season. The total production volume of the grains is 1,008,000 cavans (palay 423,000 cavans and corn 585,000 cavans). Supposing 80% of the whole, i.e., about 800,000 cavans are to be dried at the drying facilities during the rainy season, the necessary space for drying would be:

$$800,000 \text{ cavans} / 30 \text{ days} / 0.845 / 0.135 / 0.15 \text{ cu.m} / 2 \text{ days} = 779,000 \text{ sq.m}$$

The capacities of the multi-purpose drying facilities and the multi-purpose pavement road are calculated at the present capacity of approximately 90,000 sq.m, which means only 12 % of the required spaces. (refer to Table 3.3.1)

The cooperatives of Amulungan-Rizal and Canan own a mechanical dryer. But as the activities of the cooperatives is not well, so the machines are out of use. The warehouse is meant to store palay and corn until the prices of the agricultural product rise. The ARCs, which has warehouses, are Amulungan-Rizal and Canan. As the activities of Amulungan-Rizal had ceased to function, the cereal storehouse is not in use. (refer to Table 3.3.1)

3.3.2 Problems

(1) Lack of Irrigation Facilities

As described beforehand, the average yield of rainfed paddy on an palay base is quite low as compared to that of irrigated paddy. The rainfed paddy cultivation has a low yield because the commencement of the cultivation is determined by the rainfall, and run the risk of almost no yield when there is no rainfall at the required time.

(2) Bad Water Management of Irrigation Facilities

At the ARCs in NIS service areas, there are cases where excessive irrigation water is distributed to the paddy fields, because the water control at the intakes does not function properly or other cases where water distribution is insufficient or even impossible due to overdraft of water at the upstream. The reasons for these are the lack of personnel and budget at the management office, which controls NIS and the outdated water management system.

(3) Lack of Drying Facilities

The existing drying facilities cover only 20 % of the required space. Because of lack of drying facilities the agricultural produces such as palay and corn may be sold without drying. The private middleman buy insufficiently dried grains but their prices are lower by 2.0 pesos/kg compared to fully dried grains.

(4) Lack of Warehouses

The selling prices of grains are at the bottom at the harvesting time and tend to rise thereafter with time. Therefore, if the farmers can arrange to sell only the amount necessary for urgent cash requirement and store the rest to sell it later, then farmers can get higher prices. Most of the ARCs studied do not own warehouse to adjust the selling time. The cooperatives with warehouses are not making use of them except one.

(5) Insufficiency of Farm Roads

The average length of farm roads (including main roads and roads in the farmlands) of the Study Area is 11.6 m/ha. At the harvest time of crops, threshers are pulled into the field by Carabaos. As the farm roads are scarce, the threshers are mostly transported from Barangay to the farmland through the nearby fields where crops have been harvested. When the rain lasts long or heavy rain occurs during the short period of harvesting, transportation of the thresher becomes impossible. The crops not harvest at the optimum time are of inferior quality. Crops with lower quality can be sold but at lower price.

Crops after threshing at a field have to be transported by Carabao or by a man to the roads accessible for vehicles. As the number of Carabao is limited, crops at the peak harvesting time have to be hauled by hired labors. One person can haul only one bag containing about 50 kg of crops at a time. When the hauling distance exceeds 500 m, the hauling cost is more than 20 pesos/bag.

The roads in the Study Area are in a very unsuitable condition for transportation of crops to the market. The road conditions from the village to the town, where the market is, are likewise not good. This fact is rendering difficult the cultivation of crops susceptible to damage such as leafy vegetables, soft fruit and flowers. There are even cases like San Vicente of La Suerte Cluster where farmers are reducing the cultivation area for not being able to transport the crop out of their fields, even if they own more farmland. This reduces chance of more income for the farms.

There are cases among the ARCs where the structure crossing creeks or rivers have been washed away in a flood and have not been rehabilitated. Transportation to the municipal capital are shut. Farmers are using Carabao(s) and manpower for transporting crops. The cost of such transpiration is very high.

The maintenance of the municipal and Barangay roads is the responsibility of the municipal office. However, late starts of repair works are causing increase of working period or the volume of rehabilitation works. No compactions of the road subsurface and incomplete side ditches are causing the muddy road surface. All these causes are due to lack of sufficient maintenance equipment at the municipal office, which is hampering the maintenance works being carried out in an optimum way at the optimum time.

Table 3-3-1 Present Conditions of Post Harvest Facilities by ARC/Cluster

	Name of ARC/Cluster	Area (ha)	Length of Raod (km)	Post Harvest Facilities			
				Multi- Purpose Dryer (places)	Multi Purpose Pavement (place)	Mechanical Dryer (place)	Warehouse (place)
1	Lapogan	993.2	9.0	12	1	0	0
2	Quiling	240.0	7.0	1	1	0	0
3	(omitted)	-	-	-	-	-	-
4	San Manuel	1,519.0	10.0	1	1	0	0
5	San Miguel (Ramon)	535.3	8.0	9	1	0	0
6	Amulungan - Rizal	325.0	10.0	2	0	1	1
7	Isabela Settlement						
7-1	La Suerte Cluster	1,935.0	28.0	8	5	0	0
7-2	Dipasivi Cluster	2,118.0	51.0	3	2	0	0
7-3	Cenea Cluster	2,030.0	22.0	7	6	0	0
8	Minagbag	3,952.0	29.0	22	1	0	1
9	Cabaruan	2,968.0	15.0	2	1	0	0
10	Capirpiriwan	1,322.0	30.0	6	2	0	3 *1
11	Fermeldy	519.2	2.5	8	0	0	0
12	Luzon	965.0	5.0	2	2	0	0
13	Progreso	721.0	5.0	1	0	0	0
14	Yeban Nort/Benito Soliven	1,552.0	23.0	6	0	0	0
15	Canan	901.0	4.5	5	1	1	1
16	Andarayan	475.4	5.0	3	0	0	0
17	Bantug Petines	464.0	12.0	2	3	0	0
18	Dalena & Simanu	2,038.8	22.0	10	4	0	0
19	Dammao	720.0	3.0	4	0	0	0
20	San Miguel (Burgos)	678.8	16.0	4	2	0	0
21	San Ramon	232.0	5.5	2	0	0	0
22	Viola Estate Cluster	1,262.0	8.0	17	0	0	0
	Total	28,466.7	330.5	137	33	2	3 (3)
	平均		11.6 (m/ha)	6.0 (/ARC)	1.4 (/ARC)		

Note *1 : Private Own

3.4 Farmers Organization

3.4.1 The Present Situation

(1) Multi Purpose Cooperative Inc. (MPCI)

There are five (5) types of cooperatives as shown below (refer to Appendix E-1).

- Credit Cooperative is one which promotes thrift among its members and created fund in order to grant loans for productive and providential purposes;
- Consumers Cooperative is one of which the primary purpose is to procure and distribute commodities to members and non-members;
- Producers Cooperative is one that undertakes joint product whether agricultural or industrial;
- Marketing Cooperative is one which engages in the supply of production inputs to members and markets their products;
- Service Cooperative is one which engages in medical and dental care, hospitalization, transportation, insurance, housing, labor, electric, light and power, communication and other services; and
- Multi-Purpose Cooperative is one which combines two (2) or more of the business activities of these different types of cooperatives

According to the CDA, there are more than 1,280 of cooperatives in the Isabela province, of which 882 are agriculture related cooperatives in the form of Multi-Purpose Cooperative Inc.(MPCI). The reason of predominance of MPCI deems the wider business range and lesser restriction of business activities.

Most MPCIs are established during the period of 1989 and 1993, and all of them are registered to CDA. According to the interview from CDA Regional Office, only 2 % of registered cooperatives are submitting the annual report: that is one of the obligations of registered cooperative. Also the database of CDA denotes that only 728 or approximately 60 % of total cooperatives have made some sort of activity, and others have none. It is noted that most of the cooperatives have only one or two business lines, among which, re-lending to members is the most common one. The long lasting MPCIs with more than 10 years of operational history have a similar situation; they do not increase in resources and business lines.

There are 31 MPCIs in the Study Area and 28 MPCIs are accessible in the Study period. Among the 28 MPCIs actually surveyed, 21 are carrying out re-lending activities. However, it is observed in some MPCIs that the officials of MPCI have lost a borrowers' list, and/or a number of borrowers have transferred to other Barangay.

(2) Female Organization

The Study Area consists of 45 female organizations (supportive organizations) with a total of approximately 7,000 membership. Female organizations that are established for the purpose of cleaning and greening the Barangay, generating subsidy, and saving expenses on farm household are set up on Barangay basis. The popular organizations among which are, Isabela Green Lady's Association of Isabela (IGLO) organized by first lady of the provincial Governor, Rural Improvement Club (RIC) organized by DA, Auto-Savings Group (ASG) organized by DAR (refer to Table 3-4-1).

It is the tendency of the farm female to name organization that she belongs to on a case-to-case basis, viz. when PCO established an advantageous loan scheme, she uses the name of IGLO, but she changes the name to RIC in case credit donor is DA. According to the data from PCO, DA, and DAR, the number of female who belong to the above three organizations are more or less 4,000 in the Study Area. It is estimated that one female belongs to 1.3 organizations in average.

Press Relations Officer (PRO), Sergeant at Arms (Sgt.), and Song Leader are peculiar to female organization. PRO is in charge of information dissemination and acts as the speaker of the organization with regard to project operation. Sgt. is peacekeeping body of the organization, and Song Leader is the leader of the choir group.

(3) Irrigator's Associations (IAs)

Asides from the above, several IAs are organized under the initiative of NIA. According to the interview to NIA, there is a total of 30 IAs, which are under the communal irrigation system (CIS) in the Isabela province. Out of which, 18 IAs are functioning. The cause of non-active for the remaining are mostly attributed to the damage of irrigation facilities by typhoons and floods. NIA also indicates that generally IAs of NISYS are rather active than that of CIS, because NIA's commitment to IA members is stronger in NIS than in CIS (refer to Table 3-4-5).

(4) Diocese of Isabela Province

It is said that Roman Catholic believer accounts for 80 % of the Isabela province¹. Diocese of Isabela Province is composed of one bishop, 50 priests, and more than 800 pastors assigned in Barangay basis located at Ilagan and covering 37 municipalities. In urban areas

¹ As others, many derivations from Christianity are prevailing, such as "Church of Christ", "Church of Living God", "Philippine Independent Church" and "Iglesia ni Kristo".

of the Province, the voluntary catholic organizations such as Knight of Columbus and Catholic Women's League are organized. Their main activities are i) setting up workshop for the members, ii) educational activities, and iii) engaging in social services. The members of these organizations are usually the persons with high profile such as medical doctors and lawyers.

There are considerable numbers of precedents in the Philippines that the evangelist is concerned to establish MPCIs and many of the successful stories are being borne from these MPCIs. As is also observed at the vicinity of Study Area; one of the 27 founders of Epiphany MPCIs was a pastor. St. Rose of Lima Credit and Development Cooperative Inc. (CDCI) in Gamo municipality and San Mariano MPCIs, both are established by the support of Belgian priest, Father John, are the same example in this sense.

(5) Major Institutions to Support Farmers' Organizations in the Study Area

Farmers' organizations (MPCIs) are the recipient of production capital. Some MPCIs are undertaking collective purchasing/selling of agro inputs/outputs, thus the vitality of MPCIs significantly affects the environment of production of the farmers.

DAR is the implementing agency of CARP and is mandated to support ARBs after distributing land. Development Facilitators (DF) who are assigned to the Study Area are 21; DAR hires them at a salary level of 10,000 to 18,000 pesos per month. DAR encourages DF to live in the assigned Barangay, but not all DFs are following this instruction.

As the credit arm to ARBs, LBP plays a significant role. There are six (6) branch offices of LBP in the Study Area, however, two (2), out of six (6) are outstanding branches, which do not deal with credit under CARP. LBP is rendering assistance not only to cooperatives but also to landowners and other financial institutions, which are involved in CARP implementation.

First Isabela Cooperative Bank (FICO bank) with six (6) branch offices in Isabela is carrying out Micro Finance Program to poor farmers and attained a remarkable result.

NGOs such as Plan International and Bidani are also supporting farmers' organizations. Plan International is concentrating to the projects principally related to education for child, while Bidani is focusing on improving nutrition intake.

Philippine Crop Insurance Corporation (PCIC) is in charge of crop insurance program stated in the Presidential Decree 1467. Since the program and its operation hold a

lot of problems, farmers do not repute the system. Due to the pressures from the central government, PCIC faces a restructuring problem and they are asked to reduce operation cost by 50 %. Only one office with two staff covers the whole of Isabela Province at present (refer to Appendix D).

Cagayan Valley Confederation of Cooperative (CAVALCO) has more or less 200 cooperative affiliates in the territory. Out of 31 MPCIs in the Study Area, 6 are registered as members of CAVALCO. This federation is under the umbrella of the National Confederation of Cooperatives (NATCCO), which is a nationwide network of around 1,800 cooperatives with 230,000 members. CAVALCO is providing training, consultancy services, life insurance services, and micro finance to the member cooperatives (refer to Appendix E-4).

(6) Characteristics of Organizational Structure in the Study Area

DAR is assisting newborn ARCs to set up a farmers' cooperative, and DF is assigned to proceed to this task based on the development guidelines. Then, DF proposes organizational structure to the beneficial farmers together with cooperative by-laws. The model of organizational structure, which is presently applied by DAR is summarized as follows (refer to Appendix E-2);

- Under General Assembly, Board of Directors and three committees (Audit Committee, Credit Committee, and Election Committee) are allocated.
- Under BOD, Education Committee, Treasurer, Secretary, and Manager are placed.
- The president of the cooperative is elected by means of voting by all members.

It is common that the officials of MPCIs also hold the post in the other organization like Barangay committee and IA. In some ARCs, a Barangay captain holds the post of the president of MPCIs. Thus, MPCIs have a structure, which is easily affected by politics. It is often the case that the MPCIs are run by the president together with few officials and the members are not informed how the MPCIs are being carried on. The members of MPCIs are usually very conservative and obeying an instruction from the top management. Consequently, only the members recognize a few officials as a source of information.

Towards the role of each position, DAR has also a model "position objective". The objective for major position is summarized as follows (refer to Appendix E-3);

- Board of Directors has a responsibility to overall supervision and control over the cooperative.
- Audit Committee has to audit all transactions forwarded by the cooperative.
- Election Committee is responsible for popular and quality leadership through clean

- elections and leadership development.
- Education Committee is in charge of development of effective education
 - Credit Committee has a responsibility for effective provision of lending services to members
 - Manager has to contribute to the growth and viability of the cooperative through the effective and efficient management of the day-to-day operations of the institution consistent with the operating policies and directives promulgated by the Board of Directors.
 - Business manager is in charge of the business operation/project of the cooperative; serves as investment and marketing officer.

Principally, most of MPCIs and supportive organizations are applying model organizational structure, however the following characteristics are observed in the Study Area.

- Audit Committee is not commonly established. There is no organization, that assign outsiders to the committee member.
- Also, except a few MPCIs, Manager or Business Manager is scarcely placed. In some advanced cooperatives, Business Manager is assigned. In most cases, a female who is above college graduate level is assigned to this position.
- Credit Committee is not established at all. President and Treasurer normally shoulder the role of Credit Committee specified above.
- There are few cooperatives that are paying some incentives to the officers, however most of the cooperative officers are on volunteer basis. An incentive to be assigned to coop officer is thus very scarce. In the Study Area, a level of the incentive to officers ranges from 10,000 to 18,000 per month.

(7) MPCIs as Financial Conduit

Out of 31 MPCIs in the Study Area, 17 or 55 % have debts from formal financial institutions. As of 3rd quarter of year 1999, outstanding loan provided to these 17 MPCIs amounted to 50 million pesos. The 32 million pesos accounting for 65 % of the total is rendered to 13 MPCIs by LBP². Only few MPCIs are paying loan regularly on due date.

The nine (9) MPCIs out of 17 have overdue loan, out of which, 6 cases are from LBP. It is the tendency for the non-payer to put the blame on natural calamities such as typhoons and El Nino phenomenon, which they used as excuse for their delinquency. On the other hand, they are paying properly to private lenders. The credit loan with five (5) to seven (7) % monthly interest is still common in the Study Area. The private lenders are playing a major role for this transaction (refer to Appendix D-5).

² Assumed 9,200pesos/member, or 3,100pesos/farm, provided the total membership of 17 MPCIs are at 3,500.

(8) Present Penalty System

Inside the rural community, farmers usually tried to take actions to optimize a total portfolio of self-interest, given/provided proximity, and materialistic incentives. Simultaneously, what frightens the farmers most is the blackball from the rural community with which they are already familiar. Accordingly, the penalty that brought about a blackball from community is regarded as the most strict one. Generally, the penalty is taken for granted as a discouragement of participation to farmers' organization, and an application of strict penalties is very seldom.

3.4.2 Problem

(1) Delay of Organizational Expansion

It is considered that the participation rate to farmers' organization in 5 model ARCs is more than 100 %, however if limited to MPCIs which is functioning as a conduit of government loan, only 32 % of total farm household participates. The participation rate is highest at Minagbag ARC (92 %), followed by Andarayan ARC (61 %). In spite of DAR and other government's effort since 1980, the increase of participation rate to MPCIs is proceeding very slowly. It prevents farmers from loaning from official financial institutions and obliges them to borrow money from private lenders with 5 to 7 % monthly interests. Most of the usage of this high interest loan is headed for purchasing farm inputs and consequently brought about the increase in production cost.

(2) Consciousness of Easy-made MPCIs

Most of the MPCIs that has been established aiming only for government's loan³ has a problem of nonpayment⁴ of such loan. There are only few cooperatives that formulate payment policy even though their proposal on official loan is accepted. In this sense, it is said that MPCIs has a very weak value with thin-bondage⁵ among its members.

The course of forming easy-made MPCIs is also attributed to the incredible

³Most of the officials in MPCIs interviewed in the field survey pointed out that the cause of weak value of MPCIs is attributed to low collection rate of CBU and nonpayment of loan. For a long time, it has been common idea that the establishment of MPCIs is just for obtaining loan, while on the government side, an easy loan provision system has been functioning toward easy made cooperatives.

⁴According to the interviews, the following four segments are observed in delinquent MPCIs; (1)10 % good payers, (2)30 % non-payers (not willing to pay, but can afford), (3) 40-50 % non-payers (Cannot afford, but willing to pay), (4) 10 % non-payers (Not affordable and not willing).

⁵It is the general tendency that once the government loan is accepted, the number of members mushrooms. At present, the total accumulative CBU among 29 MPCIs in the Study Area accounts for 1.1 million pesos or 3,160 pesos/member.

government policies that has been carried out so far. In other words, the farmers' consciousness has been fostered by the government's unstable policies⁶ and strategies, for example, a MPCCI without paying its debt (or went bankrupted) could obtain a new loan from new administration or the different government agencies that provide the MPCCI the same training. By doing so, the farmers gradually conceive the "defective system from the government" and come to the idea that "All government assistance are free of charge".

(3) Existence of Delinquents

It is the obligation of MPCCI members to contribute to the defined CBU in due time and pay loan on due date. However, there are considerable number of delinquents who do not pay CBU or debt even when they can afford to pay. The existence of delinquents declines the value of cooperative and endangers fairness among its members. Consequently, the delinquency, thereby affecting the cycle of CBU accumulation, cannot sustain the stability of the coop organization.

(4) Wrecked Rules of Cooperatives

The conciseness of coop members is also weak because most of the cooperatives has been formed in an instant manner. It is common at present for most cooperatives to receive a template from DAR, and create own policy and by-laws. With little modification on DAR's template, the rules are submitted to CDA. It means that these rules are not generated internally, but externally. The result is that the cooperatives as the recipient of CARP do not function in line with the government's expectation.

Further, one of the reasons of coop's weak value is defective penalty system toward the delinquents. Even though the penalty system exists, there is no combination of penalties⁷ enacted in the coops in the Study Area. For example, the penalty that required the delinquents not only the increase in interest of loan, but also the obligation to participate in the credit management seminar, are not commonly implemented. Thus, the penalty system does not contain the factor to improve the way of thinking of delinquents.

(5) Lack of Accountability

⁶For instance, Masagana 99 enforced in 1970s aimed to incorporate ARB to Samahang Nayong, and ended in vain. The course of failure is attributed to the unfavorable tactics and campaign activities of the farmers, thus the following ideas are commonly prevailing; viz. 1) MPCCI should be formed for obtaining loan but not for making business, 2) Establishment of MPCCI is one of the mandates.

⁷ Like Japanese traffic illegality, both materialistic penalty (money) and the training are given as penalty.

Many of LBP loans rendered in early 90s did not require borrowers a collateral and these loans are considered as non-performing loan. Further, relending inside the coop sometimes brought conflict, because it is sometimes undertaken through verbal contract not executed by written document. Thus, the coops are not accustomed to make formal contract, so that it is very difficult for them to perform the coop's accountability toward external business entities. Accordingly, the coops can not complete the contract fully, and make themselves difficult for access to market. This resulted to one of the reasons why they can not have an opportunity to obtain non-farm income.

(6) Short Term History Since Unification

Many of ARCs are set up by the immigrants from outside and have a short-term history since unification with each other. Type of inhabitants are varied; viz. immigrants of peasant from Hacienda (Yeban ARC etc.), immigrants of a mountain tribe (Barangay Abut in Minagbag ARC), immigrants of a fleet of retiree of military (La Suerte Cluster), and mixture of immigrants for live tribe (most of the remnants). Generally, those immigrants formed the Barangays in the Study Areas in later 70's to 80's and these Barangays are rather new compared to other areas. Accordingly, the unification of inhabitants' opinion is comparatively tough and people tend to be hesitant with each other. Consequently, the "pakikisama" attitude⁸ prevails and due to non-functioning of self-rehabilitation, the community activities lost bondage of will. The activity of coop is thus getting weaker.

(7) Lack of Negotiation Opportunity and Skills toward the Public Sectors

Except Epiphany MPC I in Minagbag MPC I, there is little case that the cooperative discussed directly with project implementor. Epiphany MPC I has a skill in preparing project proposal, so they can obtain more government support than the others can. For most of the cooperatives, on the other hand, can not transfer inhabitants' needs nor complain about overall system to LGUs and NGOs. Consequently, an appropriate fund and technology to solve problem are very difficult to be provided⁹.

(8) Variable Support Lines Surrounding Farmers' Organization

Basically, social preparation undertaken by DARPO intends to introduce a spirit of

⁸For example, nobody paid attention to coop officer's improper act such as embezzlement, or nobody paid caution to non-payer of loan, etc.

⁹It is very obvious in case of post harvest facilities. The consolidation level on post harvest facilities varies by ARC. Some has facilities with beyond farmer's skill and over capacity, and others have no facility at all. In both cases, proper technology is not provided, accordingly, post harvest is not conducted at coop level and upgrading of product quality is not expected. Thus, selling price of product still remained cheap.

"Bayanihan" into organization of cooperative. However, there are several government agencies such as DA, DENR, and NIA that are organizing farmers' organization with its own criteria of organization. Since there are variable support lines and they are not well networked, so many farmers' organizations having similar purpose of establishment are set up in the Study Area. This condition made DARPO difficult to narrow down the strategy to solve the problem of organization. Further, since the talented farmers are fragmenting to several cooperatives, it is difficult for each cooperative to gather competitive members at once.

(9) Political Interruption

In the Study Area, the proof of political intervention can be seen, for example; 1) there are huge lands which are owned by politician with fame, remaining undistributed here and there, 2) some ARCs with big amount of loan still unpaid can obtain another huge amount of grant through the politician. Consequently, the farmers have to accept distortions caused by unfair social system based in unfair distribution of profits.

3.5 Rural Banking

3.5.1 Present Condition

(1) General Condition

Acquisition of finance in the Study Area has been carried out through; a) government financial institutions, b) private banks, and c) private traders (illegal).

- a) The government financial institutions include LBP, DBP, Quedancor, and so on. Lately the government is intending to put LBP as the sole financial institution in charge of farmers' organization. Out of 31 MPCIs in the Study Area, 17 have payable loans to government financial institutions. Out of 13 MPCIs' loans from LBP, nine (9) are already overdue (refer to Appendix D-5).
- b) Rural Banks and Rural Cooperative Banks set up under the finance supply approach in 70s are housed in one to three places in a municipality. These banks are utilized mainly as savings bank for the CBU of the cooperatives. There are some institutions such as FICO Bank and Meilig Rural Bank that are commercializing micro finance¹.
- c) It is said that private lenders control 80 % of total procurement of finance by the farmers and typical farm household has a debt from them. Farmers conceived this debt as one of the normal customs of the community. These credits are usually allocated to purchase farm inputs and sometimes to education and medical expenses.

Above three (3), LBP and private lenders are focused as follows.

(2) Land Bank of the Philippines (LBP)

a) Contents of support

LBP's prevailing assistance to CARP are basically divided into four; i) assistance programs for landowners, ii) programs for countryside financial institutions, iii) lending programs for agri-based cooperatives², and iv) technical assistance and other

¹ Micro finance program (MF) is undertaken by some institutions of private sector. In NGO sector, there are BIDANI (small amount approx.3,000pesos/loan) and CAVALCO (bigger amount around 20,000pesos/loan). MF carried out by FICO Bank is making remarkable result, but due to the commercialism of private sector, this is not yet widely spread out to poor bracket. The weak point of BIDANI's MF is size of fund, because the source of finance does not come from LBP but from private fund. Therefore, the accumulative lend off has not exceed 1 million pesos yet. The amount is quite small compared with that of CAVALCO and FICO Bank.

² LBP has stringent criteria, which defines the eligibility of cooperative. According to this, the cooperative is firstly pre-qualified on the following conditions;

programs for cooperatives. The loans rendered to farmer cooperatives are also classified into three (3) types; i) production loan, ii) working capital loan, and iii) fixed asset loan. Regardless of the name of the facility, the interest rate for the cooperative is constant at 12 % p.a. for both production and working capital loans, and 14 % p.a. for fixed asset loan, respectively. Toward all types of loans, LBP charges borrowers a supervision fee of two (2) %.

b) Contents of loan facilities

There are 18 types of loan facility available at present. According to the top management of LBP, the regular cooperative-loan is not so profitable for LBP due to low repayment rate of borrower. Further, LBP also has to repay the fund resources to DOF with eight (8) to ten (10) % p.a. interest. This is applicable when a fund resource originates from the Government's loan such from JBIC and WB. DOF mediates all international loans to the line agencies (refer to Appendix D-6).

There are several co-finance loans that are available to cooperatives. The interest of these loans is sometimes cheaper than LBP's "Regular Lending Program for Cooperatives", in case that a portion of fund from LBP's counterpart allows no-interest or grant. The Table below explains primary co-finance program set up for the support of cooperative.

- 1) Credit Assistance Program for Beneficiaries Development (CAP-PBD)
 - <Eligible Borrower> Coops in ARC
 - <Eligible Project> Production loan, Pre/Post harvest facilities
- 2) DAR-NLSF Livelihood Credit Assistance Program (DAR-NLSF)
 - <Eligible Borrower> Coops in ARC
 - <Eligible Project> Small size agro-processing, rural industries, livestock
- 3) DAR-TLRC Partnership Program for Non-Rice Livelihood Projects
 - <Eligible Borrower> Coops, Federation
 - <Eligible Project> Production (except rice), agro-processing
- 4) DAR-Quedancor for CARP Barangay Marketing Centers Program
 - <Eligible Borrower> Coops
 - <Eligible Project> Warehouse, post harvest facilities
- 5) DAR-LBP Countryside Partnership Program
 - <Eligible Borrower> Small coops
 - <Eligible Project> Production loan, fixed asset loan
- 6) DAR-KMI Peasant Development Fund
 - <Eligible Borrower> Coops, Federation

-
- i. The coop must be registered with CDA and submit various kinds of documents to them.
 - ii. The coop must have more than 50 members composed of small farmers
 - iii. The coop must have minimum paid-up capital of 30,000 pesos.
 - iv. The coop must have duly authorized financial statements.
 - v. The coop must have qualified manager, treasurer, and bookkeeper with high educational background.

<Eligible Project> Agro-processing

(3) Private Lenders

For ARBs, most popular and convenient way to obtain finance is from private lenders. Despite the long lasting business promotion by the government and private banking sectors, private lenders are still recognized as the most popular financial source. The private lenders usually ask borrower for 5 to 7 % monthly interests. The reasons why farmers are still relying on them are explained as follows:

a) Closeness in terms of mental and physical access

Private lenders live at nearby borrowers. Without former procedure, borrowers can contact them. Among the private lenders there are hierarchy, which segregates their position; viz. a private lender who deals with bigger community usually has a higher position. Thus, the private lenders are networking each other from Barangay to municipal and provincial level. That is the reason why private lenders can provide close and convenient services.

b) Minimum document requirement

Private lenders do not request borrowers for a written contract. Since however, the contract is concluded in a verbal promise basis, the borrower tends to repay it pouring his best effort. The reasons for this are; 1) the farmers do not want to lose stable financial sources which might be helpful in case of the sudden demand for big capital, and 2) the farmers do not want to destroy the relationship with his neighbors, especially with the persons called “Compadre” and “Conduit” who are related with each other based on give/receive benignity. Thus, private lenders do not ask for written document nor evaluate the eligibility of the borrower, and their financial business is based more on “relationship” as the contract of finance, and “benignity” as the collateral of credit.

c) No dealing commission

Private lenders are able to deliver money within a few hours, while public services require a few weeks at average. Further, the borrower has to shoulder dealing commission, and other miscellaneous expenses.

d) Free usage of loan

Private lenders provide credit without any limitation of date, time and usage.

Private lenders usually observe the borrower. They foresee the harvest time of borrower and visit him directly on that date. In the Study Area, the private lender who is

supporting farmer's negotiation with trader is seen at on-farm. Generally, private lenders recover more than rented amount in kind at on-farm level. Thus, they can recover the rent at one time. Private lenders are trying to increase recovery rate of loan by monitoring borrowers intermittently.

Likewise, rural banking sector in Isabela Province allows monopoly by the private lenders. According to the interviews, mainly "Big 4" or "Big5" private lenders' groups control the rural credit system in the province. Further, it is said that the above, about a hundred of private lenders at field level, there exists four (4) to five (5) strata of hierarchy. It is considered that high interest rate charged to the credit resulted from market mechanism that has to sustain this structure.

3.5.2 Problem

(1) High Interest Rate

The interest rate requested by private lenders is at five (5) to seven (7) % a month or over 50 % a year, which is far beyond the opportunity cost of the Philippines at more or less 14 %. The fact obviously indicates that rural banking system carried out by private lenders having inconsistency with market mechanism and conducted with lender's overwhelming advantage.

What the procurement cost of capital (interest) exceeds the opportunity cost of capital means, the farm households whose production costs are rented from private trader can not recover interest from whatever production he makes. Accordingly, it is obvious that the high interest rate lowers the productivity of agriculture.

(2) Resistance to Payment

There are three reasons³ for the farmers who do not pay such CBU and LBP loan, these are 1) farmers really can not afford to pay due to calamity, 2) farmers can afford but are negative toward payment⁴, and 3) farmers are willing to pay but collection system is defective.

³According to the interviews, the following four segments are observed in delinquent MPCIs; (1) 10 % good payers, (2)30 % non-payers (not willing to pay, but can afford), (3) 40-50 % non-payers (Cannot afford, but willing to pay), (4) 10 % non-payers (Not affordable and not willing). Deems to be difficult for (4) segments to repay without changing the sense of value.

⁴According to the interview to 10 plus non-payers, they no longer have the intention to repay. Some non-payers intentionally try to distort the activities of the cooperative to exempt the responsibility for payment. In other words, the idea that the loan from government should be obtained on "first come, first serve" basis is still predominant in many cooperatives. The responsibility to pay money to the government is not common yet.

(3) Physical and Mental Distance to the Government Financing System

Since the latter part of 80s, the government has been encouraging to establish cooperatives for the purpose of expansion of windows for rural banking. The government also has been stressing to provide the credit through LBP. The main reason why these projects does not take effect is attributed to physical and mental restrictions such as: 1) poor road access, 2) stringent procedure of public financial institutions, 3) lack of financial institutions within the reach, and so on. These restrictions push the farmers to rely on private lenders. Further, the ARBs who belong to the cooperative with unpaid loan can not ask for another loan until the cooperative has paid it. This is one of the reasons for the delay in the organizational expansion. Since the governmental financial institution defines the cooperative as a channel of government loan, only less than 40 % of ARBs are entitled to have a loan from the government.

(4) Government Policy without Consistency

The government policy towards rural banking sector has been changing and disappointing the farmer beneficiaries. In 1970s, the priority has been placed on supply finance under the government's initiative. Then the policy has shifted to acceleration of mega competition under the strategy of liberalization of finance in 80s, further it has changed direction to unification of LBP. The government policy after 1980s became unstable which then placed a friction between rescuing poor farmers and globalization of banking sector. As a result, the government's policy is directed to modernization of the sector while sacrificing LBP as a scapegoat. The loans in early 90's in the Study Area are provided in line with "Credit Supply Approach" that has been enforced since 1991; LBP's turning point as a sole financial donor to the cooperative. At that time, LBP can not help adopting unstable financial policy, which make borrowers idle towards payment and allowed LBP's branch offices for dull procedure in the appraisal and monitoring processes.

3.6 Farm Economy

3.6.1 Present Condition

(1) General Characteristics

Among 22 ARCs, only Fermeldy is eating corn as a staple food, and the others eat rice. In the corn production area, they are buying rice in cash, which is generated from the sale of corn. There is a variety of income levels in the area, but generally the ARBs are enjoying higher income increase than Non-ARBs.

According to Food Intake Survey, an inhabitant in Isabela Province consumes at 126.6 kg of rice and 110.9 kg of corn annually, which is three (3) and six (6) % above the national average.

The major source of income for both ARBs and non-ARBs is agriculture. Major off-farm income is generated from animal rent and farm labor work. Animal rent, usually applied for land preparation is popular off-farm source of income at 715 pesos/ha for corn land and 2,000 pesos/ha for rice field; commonly, an owner of draft animal is hired simultaneously. In Yeban ARC, the rent at 715 pesos/ha for corn land is the same amount as hired hand-tractor. The lowest rent is observed in Fermeldy ARC at 200 pesos/day.

Orchard produce is contributing to cash generation, but except Cabaruan ARC farmers are not so intensive. There is some vanguard in Cabaruan, who are obtaining more than 500,000 pesos of annual cash income through the nursery production.

(2) Rural Rich, Rural Poor

Farm budget analysis illustrates the findings that rich family has a profit, the average family is balanced, and the poor family has no countermeasures to repay loan. It is assumed that typical rich families obtain more than 500,000 pesos/year of cash income with a profit. However, typical average families earn 200,000 pesos/year with balanced expenditures, while typical poor families get more or less 30,000 pesos/year of cash income with overdue debt at more or less 30,000 pesos. The occupancy ratio of rich, average and poor for ARB household is estimated at 5 : 70 : 25¹.

According to RRA conducted by the Study Team, farmers in the Study Area define rich, average, and poor by the following criteria;

¹ Estimated at 15:70:15 in case of non-ARB.

a) Rich Farmer

Farmers believe that the rich family has more than three (3) ha of land and lesser family members. Especially, the one who has lesser number of children who have finished schooling is considered rich. Draft animals and farm machinery are also taken into consideration, however, home appliances such as TV, video and other hi-tech appliances are not considered. There are some ARBs who are categorized as rich, but in most cases, they are the black sheep in the society (refer to Appendix D.9).

b) Average Family

Average families have one (1.0) to three (3.0) ha of land. They are always in debt, but they can afford to repay after harvest, if not, they will repay if they have money. It is also the condition that family members are living together.

c) Poor Family

Even if they have no loan, families (especially parents) who work in separate places are categorized as poor. Additionally, those who have less than one (1.0) ha of land (including farm workers), plenty of children to send to school, and have an overdue debt are regarded as poor. The farmers who are living in nipa house without any concrete or steel materials also belong to this bracket. Besides cultivating own land, poor farmers are working as farm workers for another farm. The volume of farm inputs is about 1/3 compared with average typical farm. As for farm income, the dependency to family members is rather high, however, due to poor economic background, the expense for educational purpose is small. In many poor families, the family members are living separately.

(3) Farm Budget Model of Typical Farm Household

According to the farm economy survey, the typical farm household in the Study Area owns 1.8 ha of farmland with more or less 65,000 pesos/year of accruable income. Out of the total income, 88 % is from farm income, and the remnant is from off- and non-farm incomes. The household expenditure is approximately balanced with household income. The following table illustrates the breakdown of expenditure items. Table 3.6.2 indicates the comparison of farm budget with the Isabela province and Region II.

It is noted that the average income and expenditure in the Study Area accounts for 65 %, and 90 % of provincial average, respectively. It indicates that the degree of poverty at the Study Area is higher than that in the province.

(4) Lifestyle of Farmers

Through the RRA survey, the income sources and different situations of ARB households have been identified. To generate income, the majority of ARBs relies on on-farm activities, especially palay and corn production. A few segments of the farmers have only diversified their crops to tobacco and other cash crops. Livestock is not significant as an income source for ARBs. Carabao and cattle are sometimes rented to other farmers when land preparation is required. Few farmers are engaged in inland fish production in the Study Area. Fingerling production at the household level has been just started on experimental basis. Agro-processing is the far-reaching stage of development.

There are many types of non-farm activities in the Study Area although all are considered as small scale. Other than cultivating own or leasehold land, many of farmers work as laborers at others' farms as carpenters, welders, etc. and earn usually 50 to 100 peso/day. Some wives are contracted by public institution and produce decorated Christmas balls to gain six (6) pesos each. Some of them are engaged in money transaction activities such as 1) re-lending money to others with 2 % higher interest rate than what they borrow or 2) collecting money every day after a bet game is conducted in the community, and earn some margin from it. With additional income mainly from crop production, some were able to own and operate Sari Sari store. Some buy and become tricycle drivers and work full time or seasonal. If farmers have extra agriculture land in or outside the community, it is tenanted. Some farmers can also rent their agriculture machinery such as tractors, harvesters or threshers to other farmers.

A few in each ARC work as the Barangay officers such as the Barangay captain or Kagawads and receive 500 to 2,000 peso/month. There are many ARB households with wives working abroad – Hong Kong, Taiwan, etc. and send money to the families. Although it requires huge placement fee for them to go and work abroad, it still generates certain amount of profit.

On the contrary, there are ARBs who possess only small land and have difficulty producing even their own food. Most of them have to work as farm laborers, or in some cases, retail vegetable and dried fish within the community. The income is used only to buy food for them. As money lending is common practice in the Area, it is easily understood that there are some ARBs whose land ownership has been forfeited by money lenders because the ARBs failed to pay their debts due to hardship such as sickness or calamities.

(5) Present Condition on Livelihood Project

Many of government agencies, LGUs, and NGOs are supporting to rural female groups and housewives on various types of livelihood projects. Major government

institutions include; DA, DTI, DOLE, DSWD, DOST, and their related research laboratories. BIDANI and Plan International are major NGOs that are doing this support (refer to Table C.3.1 of Appendix C).

Livelihood projects intend to improve life style of farmers and are conducive on improvement of nutrition intake, minimization of family expenditures and, increase of off- and non-farm income. Those projects undertaken during 1998 and 1999 vary from dressmaking to goat raising. Other livelihood projects include; ginger production, pig fattening, simple food processing, exhibition farm, Ubi production, quality improvement of local chicken meat, Tilapia production, and so on. Although there is a variety of the projects, the degree of promulgation is still low.

3.6.2 Problem

(1) High Interest Rate

The interest rate requested by private lenders is at 5 to 7 % a month or over 50 % a year, which is far beyond the opportunity cost of the Philippines at more or less 14 %. The fact obviously indicates that rural banking system carried out by private lenders having inconsistency with market mechanism and conducted with lender's overwhelming advantage.

What the procurement cost of capital (interest) exceeds the opportunity cost of capital means, the farm households whose production costs are rented from private trader can not recover interest from whatever production he makes. Accordingly, it is obvious that the high interest rate lowers the productivity of agriculture.

(2) Resistance to Payment

There are three reasons² for the farmers who do not pay such CBU and LBP loan, these are 1) farmers really can not afford to pay due to calamity, 2) farmers can afford but are negative toward payment³, and 3) farmers are willing to pay but collection system is defective.

(3) Physical and Mental Distance to the Government Financing System

²According to the interviews, the following four segments are observed in delinquent MPCIs; (1) 10% good payers, (2)30% non-payers (not willing to pay, but can afford), (3) 40-50% non-payers (Cannot afford, but willing to pay), (4) 10% non-payers (Not affordable and not willing). Deems to be difficult for (4) segments to repay without changing the sense of value.

³According to the interview to 10 plus non-payers, they no longer have the intention to repay. Some non-payers intentionally try to distort the activities of the cooperative to exempt the responsibility for payment. In other words, the idea that the loan from government should be obtained on "first come, first serve" basis is still predominant in many cooperatives. The responsibility to pay money to the government is not common yet.

Since the latter part of 80s, the government has been encouraging to establish cooperatives for the purpose of expansion of windows for rural banking. The government also has been stressing to provide the credit through LBP. The main reason why these projects does not take effect is attributed to physical and mental restrictions such as: 1) poor road access, 2) stringent procedure of public financial institutions, 3) lack of financial institutions within the reach, and so on. These restrictions push the farmers to rely on private lenders. Further, the ARBs who belong to the cooperative with unpaid loan can not ask for another loan until the cooperative has paid it. This is one of the reasons for the delay in the organizational expansion. Since the governmental financial institution defines the cooperative as a channel of government loan, only less than 40 % of ARBs are entitled to have a loan from the government.

(4) Government Policy without Consistency

The government policy towards rural banking sector has been changing and disappointing the farmer beneficiaries. In 1970s, the priority has been placed on supply finance under the government's initiative. Then the policy has shifted to acceleration of mega competition under the strategy of liberalization of finance in 80s, further it has changed direction to unification of LBP. The government policy after 1980s became unstable which then placed a friction between rescuing poor farmers and globalization of banking sector. As a result, the government's policy is directed to modernization of the sector while sacrificing LBP as a scapegoat. The loans in early 90's in the Study area are provided in line with "Credit Supply Approach" that has been enforced since 1991; LBP's turning point as a sole financial donor to the cooperative. At that time, LBP can not help adopting unstable financial policy, which make borrowers idle towards payment and allowed LBP's branch offices for dull procedure in the appraisal and monitoring processes.

Table 3-6-1 Annual Income and Expenditure on Typical Farm Household in the Study Area

Commodities	Expenses	Annual Expenses (peso)
Food and Beverages	1,000 peso/month	12,000
Close and Interior	50peso/month	600
Education	1,000 peso/month plus Tuition Fee	13,000 ¹⁾
Leisure and Amenity	Christmas, Gambles, Birthday and Baptismal	2,800
Production Cost ** 1.2ha of Rice,0.6ha of corn, 1head of swine, 0.3ha of vegetables)	6,000 peso/ha (Rice) 7,000 peso/ha (Corn) 9,000 peso/year (Livestock:swine) 960 peso/ha (mongo)	32,000 ²⁾ (Approx. 6,400 pesos are loaned from private lenders)
Off Farm Expenses	583 peso/ month	10,000 ²⁾
Interest of Loan	100 peso/month	1,200
Others		
Total Expenses		Approx. 65,000

Note: 1) The cost of education varies depending upon the financial capability. The rich family spends 3,500pesos/month for one child, while the poor family spends less than 200pesos/month, or gives up education for the children.

2) About 20 % or 6,400pesos are loaned from private lenders. The repayment increase to 10,000pesos after 5 % of interest is levied onto the capital.

Table 3.6.2 Income and Expenditure of Typical Farm Household in the Study Area

	Income			Expenditure		
	1997	2000	%	1997	2000	%
Study Area	-	65,000	100%	-	65,000	100%
Region II	87,000	93,000	143%	69,000	76,000	117%
Isabela Province	90,000	96,000	148%	66,000	73,000	112%

3.7 Problems of Supporting Systems

(1) The supporting capability of the DARPO is not satisfactory and needs to be improved

a) Accumulation of debt of the MPCIs due to the lack of assessment of their financial eligibility

The MPCIs like Minagbag carry on debt of more than 1,000,000 pesos. In the study area, there are five (5) ARCs carrying the MPCIs that are extremely inactive due to huge debts. In most cases, the DARPO allowed to finance them without carefully assessing their financial eligibility.¹

b) Lack of follow-up activities for the accumulated huge debt of the MPCIs

In the Minagbag MPCIs, debts remained totally unpaid for the past few years. The storage and rice mills built by loan are not being utilized at all. No effective measures of the DARPO against those problems were taken. The DF attempted talking with the MPCIs many times, but the DARPO should have supported him when he so requested. The slow reaction to the situation is assumed to have worsened it. It eventually leads to the assets' foreclosure, which the DARPO tends to take.

c) Lack of experience and knowledge in community development

The Program Beneficiary Development (PBD) especially requires approaches of community development. The DFs and DARPO officials are lacking knowledge and experiences of the basics of community development, such as, the way for the beneficiaries themselves becoming aware of the problems and thinking about the solution, motivating people to work, or raising commitment to development projects. One of the reason why is because the MAROs and DFs are chiefly those who had learned agriculture or agricultural engineering. Thus the supporting system on the "soft" side such as awareness raising or capacity building is considerably weak. Training for the formulation or reinforcement of farmers organizations have been implemented over many years, but the effect is very scarce.

d) Lack of capability and mobility of DFs

Facilitating the CARP activities implemented by the related agencies, or coordinating the related agencies is mainly on the hand of DFs. In reality, however, the work is hardly implemented since many DFs have the limited capability for coordination and management. The backup from the DARPO is seldom observed. In addition, the DFs are required mobility as they should work in the field in most of their time; however, neither official transportation means were given, nor travel allowances are paid to them.

e) Lack of monitoring and evaluation to the activities

The ALDA is implementing an evaluation² once a year to each ARC, however,

¹ It is said that finance to Minagbag MPCIs was allowed by the DARRO.

² ARC Level of Development Assessment; an evaluation implemented by the DAR at the provincial level to measure the progress and effects of the CARP in each ARC.

analyzing the results or making a follow-up plan is hardly implemented. Due to the lack of evaluating the performances of the governmental agencies and NGOs related to CARP activities, problems are not being recognized and solutions cannot be discussed. For example, in Fermeldy ARC, an international NGO implemented capacity building training or supports on facility construction for over 10 years. Yet the consciousness and capacity of the people are not relatively high, nor the vitality of farmers' organizations is high. If there were a system that allows evaluation of the NGO activities and proposal of an improvement plan, the situations must have been better.

(2) Lack of Specific ARC Development Strategies and Plans

About ten (10) years have passed since the commencement of the CARP projects, but the supporting services are continuously being implemented without any specific ARC development strategies.

For example, "Memorandum Circular³ 5 (MC5)" introduces a policy dividing ARCs in three (3) areas to effectively advance the development⁴. Yet the MC5 only showed a part of the development concept, and specific strategy planning is missing. Among the same or different ARCs, economic gap of the rich and the poor exists; however, the development plan is not prepared accurately to the needs of the people. The lack of specific development strategies or plans is preventing implementation of adequate supporting services or coordination of related agencies.

(3) Political Intervention

There once was the disposition to exempt debts called "Samahan Nayan" or political campaign freeing irrigation fees. Those political inventions gave negative effects on the implementation of the CARP projects. Beneficiaries of the supporting services are often chosen by political pressure, thus the unfair distribution of benefits is common.

(4) Lack of Coordination Among Related Agencies

A lot of agencies are involved in the CARP implementation, but the control and coordination among those agencies lack from the following point of views:

- a) Not any single organization is responsible for the overall budget control of the CARP at the provincial level

³ Articles inside the DAR, published irregularly.

⁴ see "Basic Approach for Development"

The CARP budget⁵ is distributed to related agencies at the central level, and the distribution and control of the budget at the provincial level is under the responsibility of each related agency. At the provincial level, the DARPO is the leading agency and the PARCCOM is the monitoring agency of the CARP; however, both agencies have no information regarding the sum of the CARP related budget.

b) Limited Participation of LGU

Since the CARP is a national program, the LGU is not incorporated in the program. The CARP is on its transition from land reform to beneficiary development; however, the DARCO remains in control. On the other hand, LGU is responsible for the development of barangay under their jurisdiction, and LGU best grasps the present conditions of the areas. Active involvement of LGU is essential to the CARP implementation, but the current system does not motivate its commitment.

c) Inconsistency of ARCDP (Agrarian Reform Community Development Plan) and BDP (Barangay Development Plan)

Although they both are plans for a single barangay, ARCDP is prepared for the DAR and BDP is prepared for LGU. The year planned, the agencies planning, and sometimes even the persons in charge of the plans in the barangay differ, and inconsistency between the plans is observed in many cases. For examples, road construction was in process in Cabaruan ARC; however, a MPDC who should have been in charge of it did not know about it. The construction was a part of the CARP project; however, it was not included in BDP and even the municipality was not informed. Different agencies take control of ARCDP and BDP; however, they actually need to aim for the same development target, and they should utilize the same resources effectively. ARCDP and BDP must be the same—or at least, there must be consistent.

d) Ineffectiveness of training programs

Many related agencies are implementing training for the capability building of the beneficiaries. Yet most training lack coordination since each agency is implementing it in its own way. Agencies separately conducting similar training are also observed. It is inefficient, and the effects of the training are not as high as expected. Even if beneficiaries make products utilizing the skills trained, the market is not available. The planning of the training programs is considered poor.

e) Ineffectiveness of Barangay Agrarian Reform Community (BARC)

BARC is established to serve to facilitate and coordinate activities at the barangay level, and DFs are expected to work with the BARC. The reality is, however, BARC is hardly established or remain inactive in other than solution for land dispute. BARC is not functioning for the development of beneficiaries and the barangay officials have basically to be in charge of it.

⁵ It is called Agrarian Reform Fund (ARF).

f) Inactiveness of the Municipal CARP Implementing Team (MCIT)

Originally MCIT is established as the coordinating agency of the CARP at the municipal level. Yet this is also not established or is not conducting any activities. This shows that agencies related to the CARP are not making any coordination in at the municipal level. MCIT is composed of officials from various agencies and the leadership of MARO as a chairman is not necessarily strong, thus it is difficult for him/her to keep the members' commitment high to the CARP. Placement of MARO between municipalities is frequent, which is preventing continuous coordination.

(5) Missing Cooperation Among Related Agencies Upon Project Implementation

Projects conducted by related agencies for the community, possess problems on coordination, as listed below:

a) Irrigation project

Introduction of irrigation facilities not necessarily raises expected effects. For example, after the establishment of irrigation facilities, the yield of rice increased a lot compared to when the area depended on rainfed cultivation. On the other hand, many cases are seen that due to problems about water management, such as the delay of the supply of irrigation water, the yield did not increase as expected. Upon discussing this case with farmers, they simply point out the responsibility of NIA for the supply of water. In fact, NIA has the responsibility, but at the same time, farmers themselves did not prepare to cultivate as scheduled or did not make an effort to discuss with NIA. Accordingly, the coordination of schedule with NIA did not go as it should have. The organizations inside the community, such as MPCI and IA, and organizations outside the community like NIA have problems in coordination and communication.

b) Farming practice

Another problem upon farming is that farmers do not have concrete principles on "what kind" of seeds to be used, "where" to cultivate and "when" to plan and harvest. Farmers or farmers' organizations do not possess sufficient technological knowledge, but the problem is not only that; lack of cooperation among related agencies such as NIA and DA is another cause. The responsibility for the selection of rice variety to be planted, for the application of fertilizer, water management laid on the hands of DA, and now LGU due to decentralization. The DAR or CDA must be responsible for the capability building of farmers organizations, which should make organizations, enable to farm collectively. In the present state, the agencies are not working in cooperation, and farmer

organizations are not well working as a unit. Consistency in farming practice is not kept.

(6) Extension Activities

Farmers are aware of low farm productivity resulting to their low income. Yet when new technologies are introduced to the community the technology does not extend among farmers easily. Generally, most of the farmers are unwilling in attempting “new skills” they have not experienced. Especially when it is related directly to their lives or expenditure, they tend to prefer the status quo.

Agricultural technologies are often not extended even when the farmers observed the successful output of introducing new technologies, understood the positive impacts, and even financial concerns were mitigated. One of the reasons is that farmers feel like the new technology requires tremendous amount of labor work. Another reason is the process itself such that the agencies did not explain the farmers, prior to extension activities, on what are included in the services. Similarly, the technologies might not have been suitable to the farmers, or lazy farmers themselves might be the problem.

(7) Lack of Improvement on the Farmers’ Consciousness

Despite the recognition of the farmers’ low consciousness as one of the biggest problems of development, the support services to improve it are not enough from the following points of view.

- a) Social preparation training have been provided to ARCs for a long time, but its impact is low.
- b) Farmers have low moral. For example, when the government provides financial supports to farmers, they perceive it as “This is with reason. This is granted.” As a result, debt is accumulated in the MPCIs because the farmers do not pay back.
- c) The result of the questionnaire survey⁶ shows a tendency that the farmers do not responsively think about the solutions of the problems, but they are largely dependent on the governmental support. The main complaint to the governmental support is only to a degree that the support was “not good enough”. When asked the problems of development, they simply express “no money” in most cases.

⁶ The survey was conducted to 600 households in the study area.

3.8 Backgrounds of Identified Problems

Problems of ARCs have been discussed in this chapter, from 3.1 to 3.8. In this section, the identified problems are further analyzed to understand the backgrounds of those problems. Its aim is to include the coping mechanisms for the solution of the root causes of the problems in the proposed development plan. Problems in agriculture, farmers' organizations, and farm economy were identified previously¹, the backgrounds of which are examined, distinguishing them into inner and outer causes. Inner causes are causes due to farmers themselves and communities; outer causes are due to other factors such as the government or other related organizations.

To clarify measures against the backgrounds, the backgrounds are further divided into three (3) groups based on their natures. Among them, socio-cultural causes are extremely significant and influential to the outbreak of the problems, and therefore will be further analyzed. The coping mechanisms will be summarized in 3.9.4, then further explained in following chapters.

3.8.1 Problems and Background - First Step for Analyzing the Backgrounds

(1) Problems regarding Agriculture

Previously, agricultural problems such as monoculture, various damages on crops, insufficient extension services were identified. The inner cause for the problem of extension services is that farmers are not eager to acquire agricultural skills, while the outer cause is that the extension system is not functioning due to institutional incapability. Yet farmers are not to be solely blamed on the inner cause. The farmers have long been making livings by producing palay and corn. Even though they do not make big money, their products were sold at prices enough to survive. For those poor farmers, to take a challenge of growing new products or acquiring new skills is not an easy task, since it requires considerable amount of courage and preparation for the risks. Blaming on the farmers is not the solution.

Debt is also a serious problem. Many farmers are in debt to and controlled by private lenders. The farmers are not able to make new products if the private lenders do not agree them to do so. Numerous problems identified are closely related with the private lenders. To effectively implement the development plan, taking measures against the private lenders is mandatory. The problem related to private lenders will appear frequently.

¹ Backgrounds for the problems of supporting systems will be explained later.

The outer causes for extension problem are related to the government, such as the lack of funds in related agencies, lack of motivation of extension workers, and absence of skills. Despite the poor facilities of agricultural research centers in the provinces, technical information from the central offices or technologies developed in each center is present. The limited budget is, however, only available due to the scarcity of the operation budget.

The recent decentralization is also a cause. Extension workers who previously were governmental employees became provincial or municipal government officers, and generally their salaries went low. Decentralization also altered the line of command for them, since the head of the municipality, who is not necessary a technician, became the direct supervisor of them. Factors like such seemed to have demoralized the extension workers. Besides, technological transfer from DA and related agencies to extension workers is not smooth, and therefore the opportunity of acquiring information or knowledge about agricultural techniques is decreasing for them.

High cost of farm produce is another problem. The backgrounds formerly explained were - high interest rate of the private lenders, high cost of seeds and fertilizer forced to purchase from the private lenders, and high hauling cost due to poor road conditions. As the outer causes, the influences of private lenders and lack of needed facilities are evident.

Backgrounds identified for low price of farm produce are: a) low market price (outer cause), b) despite low market price, selling season of the farmers is simultaneous and the price gets lower (inner cause), c) drying of the produce was not sufficient, thus farmers have no choice but to sell them at low price (outer cause). The harvesting, threshing, and hauling at proper timing are not possible; therefore, it results to low quality and eventually low price of the produce. Lack of facilities (outer cause) such as lack of storage, drying facilities, and farm-to-market road, relates to this problem. Another problem is that many farmers are in debt and have to sell products immediately after harvesting to private lenders at lower price than the market price.

High cost of farm produce and low price of production could be managed through collective actions by organizations like MPCIs. The farmers of the study area, however, are not mature yet to take collective actions. In addition, despite all the negative effects of private lenders, farmers are still unable to exclude them from their communities. This is not only due to the lack of support by the government; farmers themselves and the communities are also the cause for it. Those problems will be discussed in details in 3.9.3.

(2) Problems regarding Farmers' Organizations

One of the problems of farmers' organizations is that the number of the organizations does not grow as expected. Inner causes are the ignorance of the farmers not being aware of the benefits of becoming members, and the lack of leadership to invite and unite farmers. Lack of awareness raising from the outside is considered as an outer cause.

Many MPCIs are instant cooperatives and are in debt. Primal reason is that many farmers consider the government support as granted. They assume that even if they do not pay back the debt, they will not receive any penalty. This immorality of the farmers is a serious inner cause. This problem is also related to the government as an outer cause, since the government has long supported and provided money for weak organizations. Money was financed to the organizations even though the farmers did not pay back any money - it is no wonder that the farmers do not bother paying back the debt.

Despite the ability to do so, many borrowers of a MPCIs have no intention to pay back the debts. Three (3) inner causes are presumed for this background. One is incapability of honest members to condemn others for not paying back the money. No matter how injustice it seems, the honest farmers have no choice but to let it go. The lack of proper penalty in the rules of the MPCIs is another one. The third one is the lack of incentive for those collecting debts. An outer cause is the failure of governmental financial institutions to withdraw debts.

Lack of documentation on agreements is another problem. Inner causes are the lack of basic knowledge of the members and lack of consciousness. Farmers contact private lenders or dealers quite often, and they do not require any documentation. Consequently, the farmers are not conscious or mature enough to understand the need of documentation.

The MPCIs are lacking negotiation skills. Inner cause of this problem is that due to the lack of negotiating opportunities, apparently negotiating skills cannot grow. Another inner cause is "everybody must be the same, and do what other people do" principle² among the farmers. Lack of proper supports from the government is another problem. Obscure roles and bureaucratic sectionalism of the implementing agencies, political intervention preventing cooperation of the related agencies are the causes. These are outer causes; the responsibility is beyond farmers' level.

(3) Problems Regarding Farmer Economy

² When a single farmer excels in capacities or becomes rich, he is often outcasted from other farmers in the community. Many are afraid of it and do not prefer to take independent actions. For this reason, farmers as a whole often stay inactive unless a strong leader appears.

Problems identified in farmer economy were such as instability of farm household budget or weakness against environmental changes. Their lifestyle, which allows expenditure with no purpose and does not save at all is an inner cause of this background. The problem of limited income generating activities is an outer cause. High hauling cost of farm products due to temporal scarcity of labor is another problem, an inner cause of which is that many farmers in the same area harvest the same products simultaneously. Outer causes are hardly maintained roads and absence of transportation means.

The relationship chained with the private lenders is also pointed out as a problem; “everybody must be the same, and do what other people do” principle or the lack of consciousness are inner causes for it. An outer cause is the poor road condition that prevents other lenders from coming in. Strong cartels not tolerating the appearance of rivalries, with which the deep and wide networks of private lenders are rooted in the area, are also crucial.

3.8.2 Classification of Backgrounds—Second Step for Analyzing the Backgrounds

The backgrounds of the identified problems have been discussed. As the second step, the backgrounds are classified into three (3) groups according to their natures. Measures against the backgrounds are categorized.

(1) Infrastructure Backgrounds (e.g. Lack of or poor facilities)

The lack of or poor farm-to-market roads and drying facilities was pointed out as the background of some problems. The section 3.2 also refers to the problem that low farm productivity is caused by lack of irrigation facility. A measure against those problems is to simply provide those infrastructures.

(2) Socio-cultural Backgrounds of Farmers Themselves, Community, and Culture and Custom of the Locality

Some inner causes were pointed out as backgrounds; furthermore, roots of those causes, i.e., root causes, are discussed in Table 3.8.1.

Of the above-mentioned root causes, measures against a) lack of farmers’ understanding and knowledge, and d) lack of human resources are relatively clear. On the contrary, b) the way farmers think, c) farmers’ individual action, and e) custom of the area, all fall into the issue of the “consciousness” of farmers. To deeply grasp the consciousness of farmers, sociological examination in details is required, which will be explained in the next section. The issue, f) trapped into the debt from the private lenders, is closely related to a lot

of the backgrounds mentioned from a) to e), and therefore, the measures against this also inevitably vary. This also closely relates to the farmers' consciousness and will be explained in the next section.

(3) Organizational and Institutional Backgrounds Related to External Supporting Agencies and Systems, or the Way the Support is Provided

Organizational and institutional backgrounds can be pointed out as outer causes, other than infrastructure backgrounds. Backgrounds and their root causes are noted as following Table 3.8.2.

Measures against b) and d) in the Table 3.8.2 are relatively clear; capability building of the related agencies is a must. The issues of a) and e) in the Table 3.8.2 are massive problems. Approaching to their essential improvement seems difficult; however, it is possible to take some measures against them in the development plan. Regarding c) in the Table 3.8.2, only suggestions could be given to the Philippines Government, since this is an issue of the government's national policy. Giving some influence by the development plan might lessen the problem of f) in the Table 3.8.2; however, this is out of control of the plan itself³. The only measure to be taken is to change the consciousness of farmers, considering the issues as an inner cause. Of the other outer causes referred in g) in the Table 3.8.2, limited income generating activity could be challenged by the development plan. Yet there only are temporary measures against the lack of funds in related agencies and low market price as those are also the national policy issues of the government.

3.8.3 Root Causes of Socio-Cultural Backgrounds Third Step for Analyzing the Backgrounds

It was pointed out that the roots of internal causes in the above (2) - the way farmers think, farmers' action, custom of the area - are problems eventually connected to farmers' "consciousness." The problem, trapped into the debt from the private lenders, has complex backgrounds in both inner and outer causes. As mentioned above, the development plan intends to include measures of consciousness building of the farmers, finding the clue in the inner causes. This section analyzes the question of "what kinds of 'consciousness' is creating problems referred?", focusing more on socio-cultural uniqueness of the farmers in the area. Particularly, those considered most influential, (1) Individualism or individual's value, (2) love of money or gain, (3) over-reciprocity, (4) debt from private lenders, and (5) "wait and see" attitude are discussed.

³ This is one of the externalities in PCM.

(1) Individualism or Individual's values

“Individualism” here means individual values or actions hindering the collective actions of farmers. Limited negotiation skills of organizations, incapability of expelling private lenders from the community, individual actions of the farmers in harvesting and selling products to cause high hauling costs and low price of products - are the backgrounds already identified. Those backgrounds can furthermore be analyzed from the points of individualism or individual's values.

Weak price-negotiation skills of farmers to private lenders or outside market is one of the causes for high production cost. Despite the existence of a MPCI, farmers do not cooperate with each other in buying materials or selling products as a group, but do them individually. Whenever asked, farmers show their recognition upon the economical merits of negotiating in unity and all say that one of the ways to solve those problems is “to strengthen farmers' organizations.” In fact, however, the farmers are not keen in doing things in a group, despite the supports of the DAR and DFs. It can be said that the farmers are not yet ready to carry on the collective actions. Individualistic value called “Canya Canya” in Tagalog, seems to affect this background, which indicates that “individualism or individual's value” is stronger than the sense of being “a member of the MPCI.” One of the problems created by individualism is that farmers start rice planting separately at their own schedules which tends to spread Tungro Virus disease on their products.

In most MPCIs where vitality is high, the members rely on and have faith in their leaders. The reason, according to the members, is because the leader thinks not of his personal merits, but of the merits of the cooperative as a whole. They also insist that the leader is sincere to the members. The leaders' commitment to the others (cooperative members) that excels his individualism is the key to activate farmers' organization. On the contrary, in cooperatives where vitality is low, the leaders are most likely selfish and not committing themselves to the members. The leaders do not gain any trust and the cooperatives themselves stay inactive.

Strong family tie provoking problems is another form of “individualism” here. Neglecting rules for timely payment of their loans to the cooperative because their relatives are the officers, like the case in San Manue⁴, is one example of this. In rural areas, strong family tie usually exists due to the necessity of reciprocal help. When the tie is emphasized, the issues related the family is given priority rather than rules and regulations of the community. For example, when a person is about to be punished, the family of the person cooperates in avoiding it. This is very effective when the family members are officers of the

⁴ see 3.4.2

organization. By doing so, even though rules and regulations of the organization are formulated, they become useless.

“Compadre⁵,” though not directly observed by the study team, is another common value in Filipino society. “Compadre” is pointing out a relationship prioritizing “give-and-take” of favors. It is reported that distribution of water, or operating and maintaining of irrigation facilities did not go well due to “Compadre”.⁶ Given strong kinship between members of an organization, even if wrongdoings or objections are observed, members have a difficulty implementing and operating something impersonal – as a result, those to be blamed get away with it. Values like individualism, “Compadre,” family tie like such result in neglecting majority of the people who are outside of the bond. Collective actions are hindered due to those factors.

Lazy farmers or farmers lacking motives for work, were also mentioned as a cause for hindering collective actions in many communities. This is also considered as “individualism” as they inevitably neglect the benefit of a society. Eventually, organizational actions are not formed.

To sum up those cases, individualism or individual’s value strongly rooted in the area is one of the causes hindering collective actions needed for the farmers or farmers’ organizations upon facilitating development, and eventually distorts the sense of responsibility or justice of the farmers. In other words, socio-cultural characteristics such as strong individualism or individual’s value are the background why collective actions - such as organizational efforts against the private traders, cooperation in buying and selling materials, harvesting products together, operation and maintenance of irrigation canals - do not work.

(2) Love of Money or Gain, i.e., Materialism

Individual love of money or gain, i.e., materialism hinders equal distribution of benefits to farmers. Problems based on this background are ubiquitous in the study area. Immorality of the farmers, not paying back the loans, was previously pointed out, and this individual materialism distinctively appear here when members of the MPCIs privatize money they have borrowed. This is highly prominent for the members not showing any attempt to pay back despite the ability to do so. MPCIs as a whole will not be able to gain financial support anymore; the good performers of the MPCIs will suffer and the whole MPCIs deteriorates. On the other hand, MPCIs with high vitality are making clear financial reports

⁵ Compadre is a ceremonial family relationship formed between the godparents and the actual parents, commonly observed in Filipino society. It is a reciprocal relationship connected with obligations.

⁶JICA’s report published in March 1994

to all the members. Each cooperative member has faith and confidence on “money.” This trust allows the members to commit to the organization, and the cooperative function effectively.

In the study area, a value called “Palakasan⁷” exists. It creates people wishing to rely on authority and gain benefit, and networks around the authoritative persons and the rich are formed. As a result, society is distorted based on materialism. For example, Isabela is one of the prominent rice cultivation areas, and it was pointed out previously that old and strong rice-cartel exists. Private lenders in a barangay are almost always the same in all seasons, and this is due to the strong networks of the private lenders supported by the rice-cartel. The networks are very wide - from markets to the end, and these networks are successfully preventing new private lenders to come into the barangay. The strong network is nothing but a sign of materialism.

Severe debts of farmers are common problems in the study area. This is one of the reasons hindering the increase of farm income. “Palakasan” creates inequality of wealth - the rich become richer and the poor become poorer. Human beings’ materialism and the networks around authorities are distorting the human relationship or social structure, which is directly linked to low income of poor farmers.

Government supports are also distorted by political intervention, and sometimes this would be caused by both insiders of the government and outsiders, connected by materialism. Of course, the study team did not dare to investigate any evidence, but it is obvious. This kind of materialism affects development, negatively and greatly.

(3) Over-reciprocity

Farmers are overly conscious about “reciprocity” with others. They have a tendency to go with the flow. When the leader or the majority dominates one opinion, others do not object even if they disagree. Distinguished from the above-mentioned individualism and materialism, this value is called “Pakikisama”, a social value giving importance on reciprocity or cooperation, which is sometimes overly perceived. For example, Minagbag MPCI is not functioning well due to huge debts and its members are not obtaining any benefit by being a cooperative member. The cause for the debts is the officials of the cooperative, which the members are aware of it, but they are not taking any action for improvement. For this case, the officials of the cooperative do not seem to be strongly controlling over the members with politics or money. The members themselves are seeking to keep harmonious

⁷ Upon “Palakasan,” those who have authority are also wishing for benefit to come back. Thus this is considered as “reciprocity.”

relationship with the officials rather than accusing them. “Pakikisama” is considered as a cause for this problem.

In Quiling MPCl, an official was discredited due to some problems, and the BOD was reelected. The discredited official, however, still remains in the cooperative as a member and participates in meetings without any trouble. Usually human relationship is affected in some ways particularly in rural community once this kind of problem happens, but it does not seem like so in this MPCl. In fact, rather than condemning a person for his/her wrongdoing and excluding him/her from the community, inhabitants commonly leave a problem obscure. People implicitly tend to think of it as “safety net” for when they will ever be in the same shoe.

“Pakikisama” keeps reciprocity in organizations, but at the same time, it allows the organization to function unfairly by tolerating wrongdoings. If a single member ventures not tolerating some kind of wrongdoing, he/she will often be the one to be excluded from the organization. Scared of being expelled, therefore, members hardly object to the majority. In fact, penalties are rarely implemented even if a member breaks rules or regulations in a community or farmers organization. Introduction of penalties is not easily executed because of Pakikisama, and forcing of the penalties would upset the subtle social structure of a community. As a result, penalties are rarely regulated, and illegal actions are tolerated and protected. These are problems caused by over-reciprocity.

(4) Debt from the Private Lenders - Psychological Bindings

Although private lenders charge high interest rate, many farmers keep borrowing from them as previously cited. Strong networks among the lenders, immaturity of farmers’ organizations for negotiating in unity, scarcity of public financial institutions, and the convenience of the private lenders who are in the vicinity and do not request formal procedure are such.

Psychological relationship between the private lenders and the farmers must also be pointed out as an important factor. For the farmers, private lenders are the Saviors in many respects. Private lenders were there to help the farmers in need of urgent money. Not only in agricultural matters, but also in daily life, the ones coming immediately for the rescue of the farmers were always the private lenders. This has been repeated over the years. Private lenders emotionally appeal to the farmers that they have long helped the farmers, sacrificing themselves. Bringing out the “reciprocity”, they retain the farmers as clients of the high

interest rates. Sometimes the farmers are threatened that if they shift to other lenders, they will be outcasted by the lenders' network and will never be able to borrow money from anyone.

Patronage called "Suki" is established among the private lenders and the farmers, through psychological bindings of the above. The values "Pakikisama" and "everyone must be the same" principle explain why "Suki" is deeply rooted in the area. Another important value is "Hiya," meaning "shame", with which the farmers tend to think that changing the lender to another would betray long and personal relationship, even if it is a lender. Thus, the farmers cannot escape from the private lenders with many reasons.

(5) "Wait and See" Attitude

Farmers have a tendency not believing what they have not seen. For example, as mentioned in 3.7, even if a community receives a new farming technology from the government, only few aggressive farmers will carry it out. Unless its credibility to succeed is confirmed, most farmers will not try new things at risk. As a result, the extended technologies are seldom accepted in the community.

This "wait and see" attitude is, in most cases, resulting from the fear of losing money. It is obviously risky for the farmers to start a completely new activity that the output is unsure, especially when it requires investment. Particularly for poor farmers, the risk is too high. They will not venture on it, unless they are certain that there will be benefits. Farmers depending their fortune upon the weather, which is so unpredictable, are also in debt to private lenders, and therefore will not venture investing on another unpredictable matter.

Unless someone with strong leadership venture on it and show benefits out of it, most farmers are simply watching the happenings. "Gaya Gaya" (band wagon attitude) tells the farmers "Do not cross the road if the light is red, unless you see someone crossing it." While "wait and see" attitude allows a farmer to justify his action or be at ease, the community as a whole stays passive.

3.8.4 Summarizing the Measures

The above-mentioned backgrounds and their measures are briefly summarized here. In 3.8.2, measures against (1) infrastructure backgrounds, (2) socio-cultural backgrounds except farmers' consciousness part, and (3) organizational and institutional backgrounds, were described in each section. Regarding the farmers' consciousness, 3.9 will furthermore explain individualism, materialism and over-reciprocity, which are considered as the essential

issues for the development in the area. As per the problem of debts from private lenders, complex backgrounds are seen, and therefore measures against it must be variously considered. As this problem is also related to “consciousness”, it will be referred in 3.9. Measures against “wait and see” attitude will be considered in the plan of government’s extension services.

Table 3.8.1 Socio-cultural Backgrounds of Farmers Themselves, Community, and Culture and Custom of the Locality







Root causes	Identified backgrounds of the problems
a) Lack of farmers' understanding and knowledge	 <ul style="list-style-type: none"> i) The farmers do not understand the merit of being MPCCI members; thus the number of organizations does not increase. ii) Lack of documentation on agreements iii) Lack of negotiation skills iv) They do not save at all, so the household economy is unstable.
b) The way farmers think	 <ul style="list-style-type: none"> i) Farmers are not eager to acquire agricultural technologies. ii) Immorality of the farmers considering governmental support as granted or not considering the penalty seriously. iii) Low collection of debt due to lack of incentive for those collecting iv) Lack of negotiation skills of MPCIs due to "everyone must be the same" principle or incapability in expelling private lenders from the community v) Continuous debt from private lenders
c) Farmers' individual action	 <ul style="list-style-type: none"> i) Farmers sell their products simultaneously thus the prices go down. ii) A lot of farmers harvest the same products at the same time, thus the hauling cost gets high
d) Lack of human resources	 <ul style="list-style-type: none"> Leaders are incapable in persuading farmers for joining to the MPCCI
e) Custom of the area	 <ul style="list-style-type: none"> i) MPCCI members do not blame on wrongdoings of the others ii) Punishment is not regulated as a rule
f) Trapped into the debt from the private lenders - chained relationship	 <ul style="list-style-type: none"> i) Farmers are not able to grow any products unless their private lenders allow them ii) Interest rates and cost of farm inputs are high iii) Due to the debt, farmers must sell their products cheaply to their private lenders immediately after harvesting

Table 3.8.2 Organizational and Institutional Backgrounds related to External Supporting Agencies and Systems, or the Way the Support is Provided

Root causes		Identified backgrounds of the problems
a) Reduction of salary, change of commanding line, clumsy technological transfer due to decentralization	←	Lack of motivation and absence of skills of extension workers
b) Lack of knowledge and understandings of related agencies	←	Lack of awareness raising to motivate farmers to form an organization
c) Failure of the government policy providing loan for or giving support to weak organizations	←	Immorality of farmers such as taking the government support as granted or assuming that there will not be any penalty
d) Lack of understanding and knowledge of financial institutions	←	Ineffectiveness of governmental financial institutions in collecting the debt
e) Obscure roles, bureaucratic sectionalism, and political interventions of the implementing agencies	←	Supports are implemented without any previous coordination among the related agencies
f) Palay cartel and private lenders' network	←	Chained relationship with the private lenders
g) Others	←	i) Limited income generating activities ii) Lack of funds in related agencies iii) Low market price

3.9 Substantial Issues

As for the background of the problems stated above, further investigation is made focusing "Individualism", "Materialism", and "Rural Customs". This section clarifies how does each value affect the rural society, farmer himself, other persons in the same community, and whole community levels.

(1) Unfair Social System

"Individualism" seems to affect directly the behavior of oneself and the whole community, then gradually influences other persons in the same society. For example, the one who has a principle that "the loan from the government institutions is not necessary to pay" does not pay loan even though he has enough capability to pay (rule out his own behavior). This attitude simultaneously brings about the non-payment by the cooperative (affects the behavior of the whole community), and indirectly reduces the incentives of the fee collector and good payers (affects the behavior of other persons in the same society). Thus, this distorted individualism forms "Unfair Social System" consequently.

(2) Mal distribution of Wealth

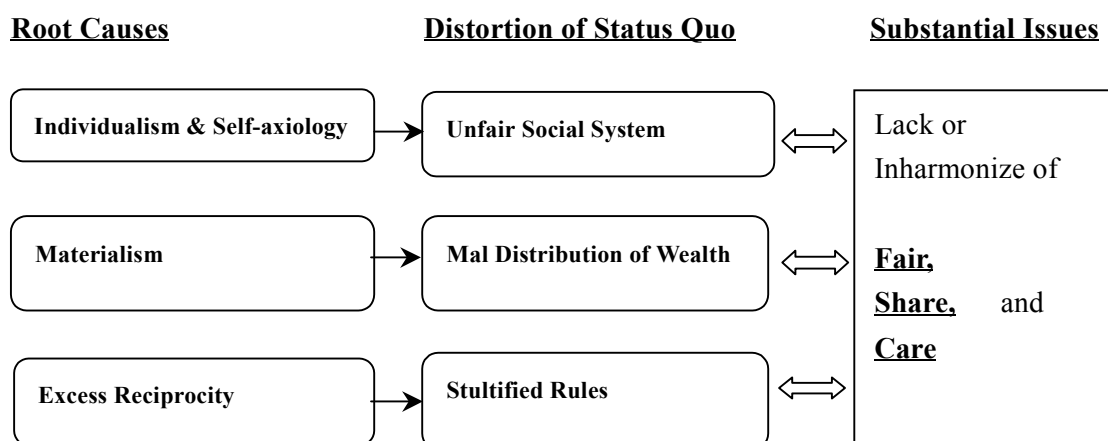
"Materialism" seems to affect directly the behavior of oneself and other persons in the same society, then gradually influences that of the whole community. For example, in the case of farm-to-market road construction out of LGU's budget, the route of road is often selected more conveniently for the authorized people in the barangay (& rule out own and other persons' behaviors). Although the road construction will benefit specific inhabitants in the barangay in this case, it will simultaneously tighten the income of rural poor like landless farmer and their family members who have been raising income through carrying farm products to the barangay (affects the behavior of the whole community). This kind of example is commonly observed in the Study Area. The ideas toward the authority, representing by aforementioned "Palakasan" make the rural rich more wealthy, and the rural poor much poorer. Thus, this distorted materialism forms "Mal distribution of wealth" consequently.

(3) Stultified Rules

"Excess Reciprocity" is considered to affect directly the behavior of the whole community and other persons in the same society, then gradually influences that of oneself. For example, the endemic idea of "Pakikisama" indicates the mercy spirit that the one forgives the malpractice of each other. They do not like to blame other people and eventually the

guilty is no longer punished and the offense is repeated once more. It is due to this distorted custom that the officials of cooperative are not accused for their embezzlement and nobody do not like to gather the proof of their crime even though everyone believe their malpractice (affects the whole community). Once this bad habit has been allowed, the behavior of good persons will also be affected (& affects his own and other persons in the same society) and in effect inhabitants will not follow the rules of the community. Thus, the excess reciprocity gives a bad influence on establishing and managing community rules. Consequently, the "Stultified Rules" are prevailing as the social regulations of farmers' organization.

(4) Conclusion



From a series of analysis above, the essential issues related to the development of the Study Area are concluded as the distortion of status quo resulted from lack of harmony of "Fair", "Care", and "Share".

3.10 Diagnosis of Organizational Culture

3.10.1 Application of Diagnosis of Corporate Culture (DCC)

Diagnosis of Corporate Culture (DCC) has adapted a total of 44 farmers organizations in the Study area, out of which 22 are MPCIs and the remaining are support organizations such as IGLOs, RICs and ASGs. The total number of respondents is 633, out of which 231 are male and 261 are female, the valid sample numbers were 492. (refer to Table3-4-2).

DCC will numerate the organizational vitality applying two-measurement axes called "Strategic Vitality" and "Organizational Vitality". "Strategic Vitality" reflects the organization's culture, which correlates with business achievement (coefficient rate between "Strategic Vitality" and company profit is 0.69), while "Organizational Vitality" measures more on smoothness of communication. "Strategic Vitality" is composed of 10 sub-indicators and "Organizational Vitality" includes 5 sub-indicators. DCC is a fully computerized package program and the result of which is completely objective and neutral¹(refer to Appendix E-5).

3.10.2 Background of Organizational Vitality in the Study Area

(1) MPCIs with Higher "Strategic Vitality" than Average

Epiphany MPCI is one of the superior cooperatives famed by CDA and CAVALCO. At present, "Strategic Vitality" of this MPCI remains low due to the rapid increase of members and the lack of suitable rules to cope with the membership's increase. However, it is considered that the influence of Epiphany MPCI has been prevailing to nearby MPCIs. The reason for this is that the "Strategic Vitality" at nearby MPCIs consisting of Andarayan, Fermeldy, Lapogan, and Quiling is marking high score. Besides, despite that both Lapogan and Quiling MPCIs has been sluggish in 1990s, these MPCIs has revitalized from late 1990s after new BODs are elected All of these MPCIs are concentrated at a nearby area of Epiphany MPCI.

(2) MPCIs with Lower "Strategic Vitality" than Average

There are two (2) types of MPCIs. The first is MPCIs which has a high "Strategic Vitality" before but lost the accelerating drive by some reasons, and the second is MPCIs which has never been able to find out the direction yet since its establishment.

¹Analysis is made based on the empirical findings, which are obtained from former experiences of DCCs on Asian companies/cooperatives. DCC has already covered a total of more than 300 organizations with more than 80,000 respondents.

For the “some reasons” underlined above, the following are observed:.

- Some cooperatives negotiated with PCIC for the rehabilitation of those affected by calamity, but their expectation is not realized, because of;
 - ✓ Insufficient understanding of indemnity system of PCIC
 - ✓ No exemption from loan interest after the damage of calamity resulted from the bureaucratic transaction by LBP
 - ✓ Unclear procedure by PCIC, as is proceeded at regional level but actually at field level.
- Some cooperatives have elected new BODs who are not capable of management and not influential.
- Some cooperatives which have grown and increased in membership, but met difficulty in applying existing by-laws and policy to all.
- Some cooperatives have lost their way due to policy change by the government, for example the ban for logging toward woodcutters' cooperatives.

(3) MPCIs with Higher "Organizational Vitality" than Average

One of the characteristics of the MPCIs belonging to this category is that the area in which the MPCIs is located is equipped with the irrigation facility. It is considered that the water management requires farmers to discuss with each other very intensively and frankly, because it is directly related to income. The good communication deems to increase the score of "Organizational Vitality".

By the same reason, the MPCIs that is located in the area with convenient access have higher "Organizational Vitality" than others.

The MPCIs, which are located in the area where various tribes mingled with each other, also have higher "Organizational Vitality". La Suerte Cluster of Isabela Settlement is an exceptional one. This cluster grew from the immigrant place of retired veterans. The immigrants to this cluster have a common experience as military force, so that some components composed of "Organizational Vitality" such as "Delegation of Authority" and "Appropriate Regulation" deems to be high.

Those cooperatives like San Ramon MPCIs² that foster famous talents with political power and San Miguel Burgos MPCIs where an NGO engages in social preparation have also higher "Organizational Vitality" as a whole.

Those cooperatives that have flexibility in establishing and modifying community rules also have high "Organizational Vitality". Epiphany MPCIs and/or St. Rose of Gamu

²The villagers are proud of their barangay.

CDCI are good examples. The Epiphany MPCCI has a flexible rule that was being modified by the appropriate advices from CDA and LBP. Through disclosing their rules and business contents to outside the cooperative, the management of cooperative has been securing transparency. St. Rose of Gamu CDCI also keeps the same function. The cooperative has an advisory priest who is checking the cooperative's activity from outside.

Thus, the flexibility on management of community rules increased "Organizational Vitality". This flexibility is possessed by the cooperatives, which have a transparency in business operation together with high level of leadership.

(4) MPCIs with Lower "Organizational Vitality" than Average

There are two cases. The first case is that the officials of cooperative are intentionally not restricting free communication in order for them to keep strong initiatives toward a variety of ethnic parties. The second case is that the members of cooperative do not have intention to communicate with each other due to some special problems confronting inside the organization. It is the general case that the cooperatives applicable to the first case belong to "Kintaro Candy" and the second case to "Patay".

The difference in each case is explained as follows;

- i) In the first case, the transparency in coop management is still remaining, or they have never met any such problem that may affect the members.
- ii) In the second case, the members of cooperative can not express their problem or unsatisfaction, because of prevailing "Pakikisama" custom.

It is the usual case that the cooperatives even though they are positioned in "Kintaro Candy" can easily lower the position to "Patay", once the members doubt the transparency of cooperative.

(5) MPCIs in "Vibrant"

The characteristics of cooperative which belongs to this field are; i) the cooperatives with existing irrigation facility in the barangay and the members of cooperative are obtaining stable income, ii) the cooperatives with bigger distributed land through CARP and the members of cooperative are obtaining rather high income, iii) the cooperatives dealing with palay selling to NFA. The reason for this is the deemed influence of coop officials that attracts respect from the members.

Generally, the cooperatives belonging to this field have more than 200,000 pesos of accumulative CBU. The stable and timely collection of CBU requires members' wealth. In many of vibrant cooperatives, there is irrigation facility. It may be obvious that the

irrigation facility stabilized the income of villagers. However, this fact does not explain the necessity of irrigation facility from initial stage of development, because there are some cooperatives without the facility also belonging to this segment like La Suerte Cluster of Isabela Settlement.

According to the officials of La Suerte MPCl, they do not want to borrow money from the government institutions until the organization becomes strong. Thus, if the coop officials are prudent, the cooperative is vibrant even though the stock of CBU is still small. La Suerte MPCl is running a sari-sari store, which is owned and operated through their own effort. Although the cooperative has never prepared written rules yet, the vibrant vitality of the cooperative is kept by the influence and leadership of coop officials.

(6) MPCIs in "Anarchy"

There are three (3) types of MPCl that position to this field. These are;

- i) Income level is rather high, but the structure of income (percentage of on-, off- and non-farm income) differs by member. The cooperative is located in the area with good accessibility and blessed with various kinds of communication opportunities with other people. The outstanding MPCIs are Cenea, San Miguel Ramon, and Luzon.
- ii) Due to the superiority and good reputation, the members have increased rapidly. For this increase, the management can not regulate all members. Epiphany MPCl and Cenea MPCl are outstanding.
- iii) The cooperatives which have lost the business direction, or by the change of government policy, the consciousness of members have fragmented. San Pablo MPCl at Dalena & Simanu MPCl are outstanding.

San Pablo MPCl has lost the centripetal force because of the change of policy by the government³. The MPCl being composed of three fragmented Barangays has difficulty in communicating densely. From the viewpoint of ethnic constitution, it also seems to be difficult that these three Barangays are organized into one. It is tough idea that this MPCl revitalized without the provision of proper action from outside.

(8) MPCIs in "Patay"

There are two (2) types of cooperative that fell into this field. The first type is that the cooperative fell to this field just after new BODs are elected (Amulungan-Rizal MPCl and Dammao MPCl are outstanding), and the second type is that the cooperative has lost "Strategic Vitality" triggered by some reasons, are stated (2) above.

³The MPCl has been established aiming to upgrade the lifestyle of woodcutters under the initiatives of DNR. Afterwards, the government has proclaimed a ban for logging.

3.10.3 Factors which Influence to Organizational Vitality of Cooperative

(1) Influence from Advanced Cooperative

Obviously, the cooperatives with similar vitality level are concentrating geographically. The reason for this is assumed that the organizational vitality of the cooperative affects adjacent cooperatives. Lapogan MPCCI and Quiling MPCCI are revitalized lately. Actually, it is a fact that the famous Epiphany MPCCI and CAS MPCCI (Andarayan ARC) are adjacent to them.

The geographical distribution of cooperative by vitality level is analyzed as follows;

- i) The cooperatives in "Vibrant" are concentrating to center to southern part of the Study Area. These locations are close to big rivers.
- ii) The cooperatives in "Kintaro Candy" are on the northern part, placed on the western part of Maharlika Highway.
- iii) The cooperatives in "Anarchy" are scattering.
- iv) The cooperatives in "Patay" are scattering

It is assumed that "Strategic Vitality" which has strong correlation with business achievement is influenced by the adjacent MPCIs, and if the vitality in adjacent MPCIs is higher, the better influence is given. The officials of Viola Estate Cluster clearly explained that their cooperative was influenced by the adjacent cooperatives.

Also, the reason why there are many "Patay" cooperatives in Ilagan ward is explained from this assumption. Ilagan is the center for palay trading and the big traders are concentrating in this area. It is assumed that organization of MPCCI is hindered in this area, because the powerful persons are reluctant to comprehend the policy of the farmers' organization.

Judging from the geographical distribution and a series of interviews, the factors of success (the factors, which increase income) are promulgated to nearby MPCIs, while the factors of failure have not prevailed to others.

(2) Influence on Irrigation Facility

The common features being seen at specific vibrant MPCIs at San Miguel Ramon, Canan, San Manuel, Bantug Petines are; i) all MPCIs are geographically adjacent as mentioned (1) above, ii) most of them have irrigation facility. Thus, those ARCs are obtaining higher farm income than others.

According to the interview to the inhabitants in these ARCs, the task of coop president has remarkably increased after the consolidation of irrigation facility, because due to the necessity of water management, many of negotiable matters has happened and it is the role of the president to consolidate these discussions. From this fact, it is assumed that introduction of irrigation facility accelerated the discussion on agricultural production and creates an appropriate rules to regulate overall system. It also seems to upgrade the capability of the president in terms of coordination and delegation of authority for the cooperative.

(3) Existence of Ethnic Problem

Ilocanos immigrated to the midst of native tribes on the left bank of Cagayan River, and this mixture became the final ethnic composition at many of ARCs in the Study Area. In the process of immigration of other tribes, it is inevitable that firstly, the idea for the necessity of cooperation is acquired, and then, influential leaders with stringent initiatives organize the community. The organization is thus maintained and showed the characteristics of "Kintaro Candy". Especially, the ARCs with lesser common resources (such as irrigation facility and land) showed this tendency.

The ARCs mingled with native tribes, and Ilocanos do not have ethnic problems, however, the ARCs with more than three kinds of ethnic mixtures are sometimes suffering from it. These problems can be observed at ARCs where native tribes, Ilocanos and Tagalog are living together or at urbanized ARCs where new tribes find it easy to immigrate.

The following ARCs have never properly organized yet, and the organizational vitality is still low.

- i) ARCs with short history
- ii) ARCs whose ethnic unification is interrupted by some reasons⁴.
- iii) ARCs in which there is no inevitable necessity for unification⁵.

There are some ARCs formed merely by immigrants. Generally, those ARCs are united and showed higher organizational vitality. The MPCIs at Isabela Settlement are outstanding. The inhabitants are sharing common sense, because they are veterans who have shared tough age together at National Defense Force.

(4) Leadership of Coop Officials

⁴For example, the interruption by NPA and National Army at Minagbag MPCIs in 1980s.

⁵Luzon and Canan MPCIs located along Maharlika Highway are good examples. Those MPCIs have good information access and various non-farm income sources, but the members' interest is difficult to unite.

DCC is adopting 5 indicators to measure the ability of leadership for coop officials. Among them, 3 indicators named "Power of Influence", "Presentation of Goal", and "Consideration" have considerable correlation to organizational vitality. According to the interviews to MPCCI members, they placed much importance to frankness, prudence and transparency for leader's capability. Thus, the honesty is counted as the most important factor for Filipino cooperative activities.

(5) Type of Motivation

The incentives to move coop member deem to depend upon to whom this job benefits, or how important this job is.

The organizational vitality in the Study Area depends upon whether the rule of the community is properly incorporating to the incentive factors. It is true that the cooperative that is adopting the rules without incentives has low organizational vitality.

The field survey clarifies that the farmers' actions are classified into three, based on the recipient of benefit as shown below.

- a) Actions which relate to one's benefit or contribute to one's fame.
 - ✓ Toward this action inside the organization, the motivation of farmer's action is "granted" or is given "materialistic incentives". But it is not until the farmers observe whether the action will increase benefit for themselves that they will start to move. This is called "Wait & See" attitude.
- b) Actions which contribute to other person's benefit
 - ✓ There are two patterns. The first one is actions which contribute to give and take attitude "Reciprocity" to other person. It is considered that the farmers' actions like the election of coop officials, or the participation to bayanihan (or the selection of participants) are based in these incentives.
 - ✓ The second one is actions to which materialistic incentives are provided. There are abundant examples in this case. The outstanding examples are i) farm workers are employed for the carrying of farm products at inaccessible production road, ii) the percentage of labor cost increases during planting and harvesting months.
 - ✓ From the analysis above, to accelerate actions, it is necessary to give either materialistic incentives (for example, toward the job of collecting CBU etc.) or self-satisfactory award (the award based on the achievement).
- c) Actions which contributed to organization's benefit
 - ✓ The incentives for this action have two patterns. The first incentive is self-satisfaction that is fulfilled by the achievement of individualism. This type of action can be seen when the cooperative formulates the business plan (such

plan for obtaining a loan, or for consolidating infrastructure) or when the cooperative makes an aggressive presentation to the donor of project.

- ✓ The second incentive is the mutual give and take attitude or “reciprocity” to other person, which is often seen in social activities. Supposed without the request or initiatives from whom the one owes benignity, the Bayanihan will not be carried out.

(6) Flexibility on Formulation of Rules and Policies

Having said in the previous section, the cooperatives that have flexible rules and policies changeable by the business environment are positioning above average in "Organizational Vitality". In case that the high capability of leadership is added to this flexibility, the cooperative will shift to "Vibrant" field⁶. In all cases, "transparency" is the base requirement. The "transparency" is defined in the following three items:

Existence of watch (advice) from outside the cooperative

Existence of system and custom to disclose the document for coop management

Existence of constant stock place for accounting and auditing document, and universal format for these document

(7) Share of Resource and Idea

It is commonly observed at the cooperatives with high "Strategic Vitality" that the members of such cooperatives are sharing common resource or idea. The common resource or idea acted as a centripetal force. The following are observed as such resources in the Study Area.

a) Christian Belief

Epiphany MPC I and St. Rose of Gamu CDCI are the outstanding examples. The evangelist like the priest has been involved in forming both cooperatives, and based in Christian belief, the coop members are sharing the materialistic resource. The physical resource at Epiphany MPC I means irrigation water, while the draft animal is for St. Rose of Gamu CDCI.

b) Physical Resource

If the physical resource is too small to share equally, the farmers can not help uniting each other. There are some cases that these conditions strengthen the tie between the farmers. For example, in Quiling MPC I, the case is observed in the sharing of labor force for handling of harvest. In the case of San Manuel MPC I, sharing of 4-wheel tractor. In these cases, the physical resources are limited in number and in capacity toward the demand of farmers, so they tried to form a fair rule and share it equally.

⁶Like La Suerte MPC I and Dipacamo Palawan MPC I, even the assets of cooperative is not big, the organizational vitality is high. Thus, the financial conditions like the stock of CBU, or the increase of assets are necessary condition, but not necessary-sufficient condition.

c) Common Experience

There are some cases that the common experience made the farmers' organization vital. The cooperatives in Isabela Settlement, exceptional to that of Cenea Cluster are the outstanding cases. This ARC is an immigrated place of veterans and the immigrants have been sharing the tough age at the military. Although not all barangays consisting of this ARC have cooperatives, the people are uniting mutually even though they are living in other barangay.

d) Common Enemy

Further, at the cooperatives in Isabela Settlement, exceptional to that of Cenea Cluster, only few traders are controlling hauling. By sharing the idea with common enemy, the cooperatives are increasing in organizational power.

3.10.4 Scenario on Coop's Vitality Shift

(1) Term of Coop's Establishment

Generally, the newborn cooperatives of which the business have not yet been done on full-scale basis, position to "Kintaro Candy" field. At the term of coop's establishment, the initiative of the government is strongly influential and then, the establishment stage begins. The mandated leaders with a strong leadership organize the newborn cooperative, thus having a bureaucratic color. Accordingly, at the initial stage of coop's establishment, the organization is formed by small number of leaders, and its vitality shows "Kintaro Candy".

(2) "Kintaro Candy" "Vibrant" (Scenario)

This shift is formed on the condition that the coop's business and the member's communication go smoothly and progressively. This shift is observed on the following conditions for the cooperative in the Study Area.

- The income of coop members is stable, so that the accumulation of CBU constantly increases (good irrigation facility, big land holding area)
- The coop's business is going well (network with NFA, success of sari-sari store, obtaining of LBP loan)
- The asset and nature of members are in conformity, and the direction of members' will is consistent.
- The power of leadership keeps high.

(3) "Kintaro Candy" "Patay" (Scenario)

This shift is formed when the feeling of unfairness diminished the members' trust to the coop officials, and failure of coop business to have incentives or no profit at all will cause ill reaction from the members. The following examples are seen as the trigger point of shift

in the Study Area.

- The calamity affected some of the farmers. The cooperative can not subsidize the indemnity as the members' expect it, then some members can not pursue obligation. Someone in the cooperative has to shoulder the burden and by this event, the sense of unfairness is borne.
- By the new election of coop officials, the power of leadership weakens and the stream of business is corrupt, or new officials were good persons, but lack the technical know-how to manage the cooperative.
- The capability and desire of members are not uniform. The opinion of strong persons overwhelms that of others in the end, but in truth others do not agree and becomes uncooperative.

(4) "Kintaro Candy" "Anarchy" (Scenario)

The shift occurs when the intentions of coop members dispersed, because the cooperative has no direction. This shift tends to occur at the cooperatives whose members are having rather high income and good accessibility to information. Compared with the coops on category (3) above, the cooperatives belonging to this field have the following features.

- The coop members are rather well off in terms of owned resources and farm budget. For example, due to the availability of irrigation facilities and source of sidelines, there are not many gaps in the income of the members.
- The cooperative being located in suburban area is convenient to obtain information, because of good accessibility. On the other hand, since the income level of coop members is not uniform, the direction of members' will is scattered.

(5) "Vibrant" "Anarchy" (Scenario)

This shift occurs at Epiphany MPCCI (Minagbag MPCCI) and Cenea MPCCI (Isabela Settlement). They are both known as successful cooperatives in the Study Area and hold the largest number of membership at 450, and 350, respectively.

However, the management of such big numbers of members is about to exceed the number of capable officials. These cooperatives deems to have fallen down from "Vibrant" field, and have shown the following features:

- The coop's business has succeeded and the coop has become famous. Most businesses at Epiphany MPCCI and vinegar production made of banana or pineapple at Cenea MPCCI makes them famous. As the result of fame, there is abundant information inflow, and the dialogue among the members has accelerated, then succeeded again.
- The cooperative gets to have many new entrants. As the number of members

increased, the control power gradually gets weak. Now, the direction of members' desire is dispersed at these cooperatives.

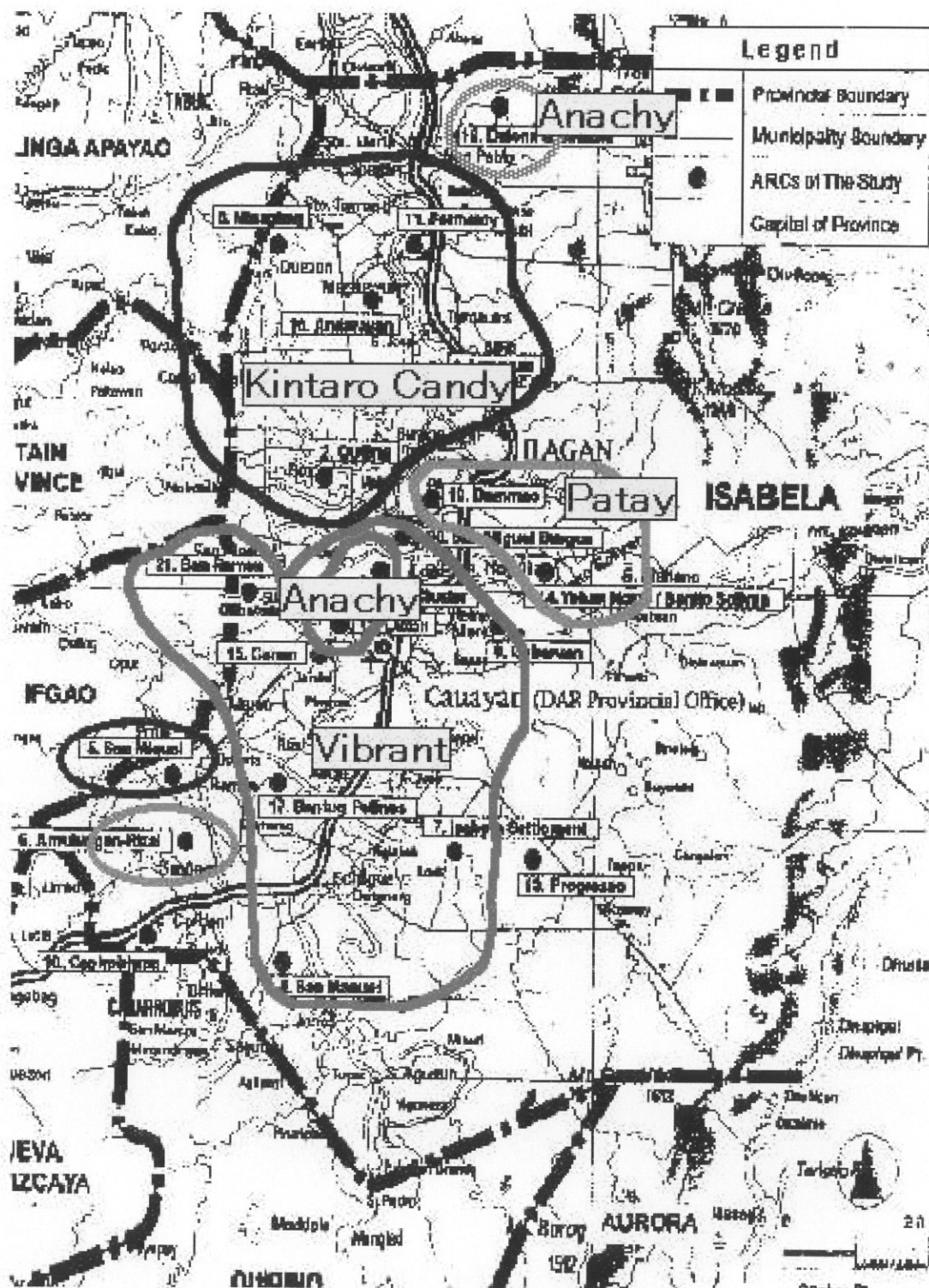


Figure 3-10-3 Geographical Distribution of MPCIs by Organizational Vitality

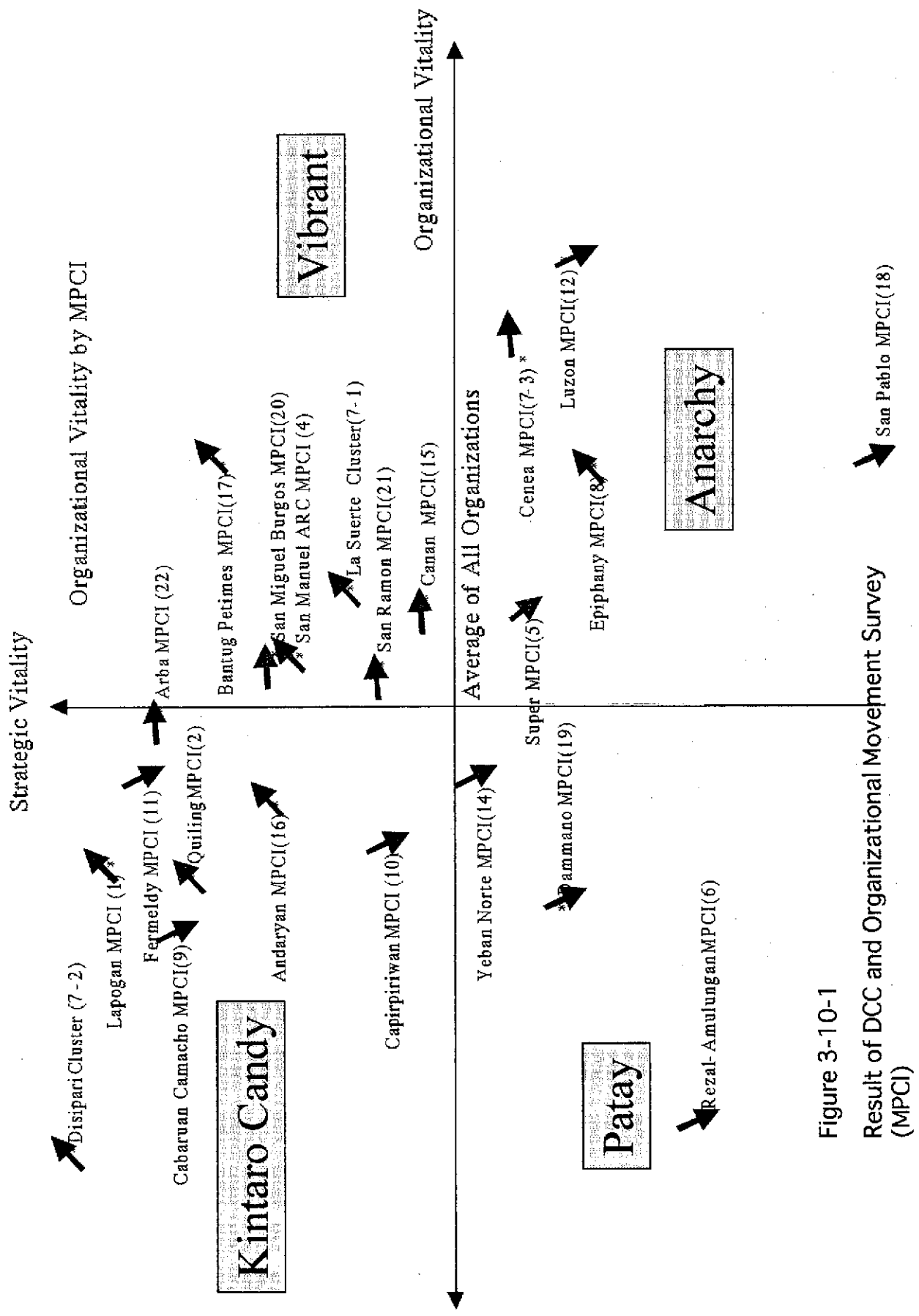


Figure 3-10-1

Result of DCC and Organizational Movement Survey (MPCI)

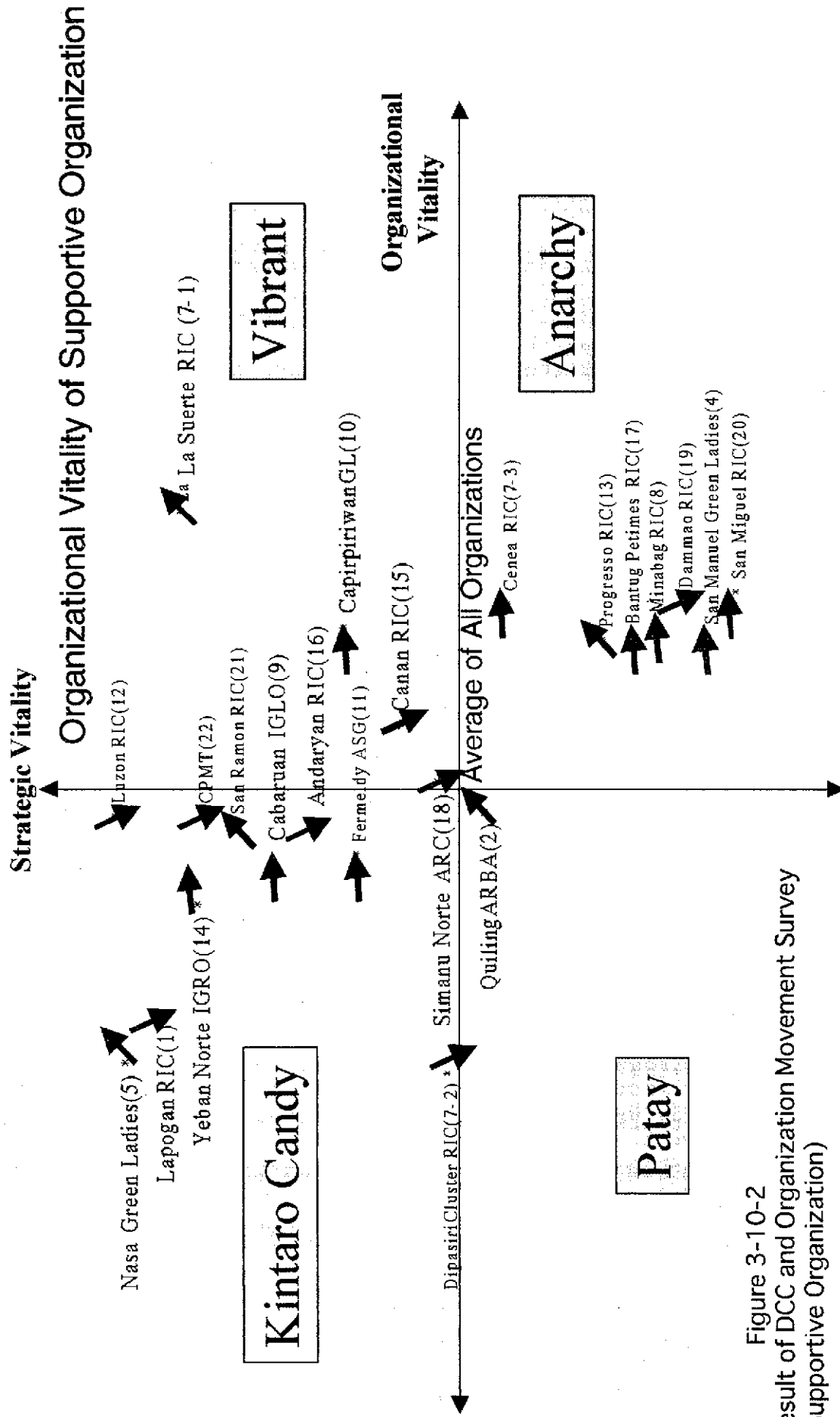


Figure 3-10-2
 Result of DCC and Organization Movement Survey
 (Supportive Organization)

Chapter4

Development Approach and Potentials

Chapter 4 Development Approach and Potentials

4.1 Issues and its Solutions

4.1.1 Agriculture

(1) Increased Yield of Rice

Rice production shall be increased because rice is important for farmers as staple food and because it brings farmers a stable profit if well managed. Also, the production is not enough at the national level. In order to increase the yield of rice, technical supports are planned on control measures on RTV disease, dissemination of hybrid rice, introduction of mungbean to the paddy and integrated pest management. As it becomes clear in the study on the present conditions of agriculture that irrigation increases yield of rice largely, irrigation system shall be constructed where the area holds enough water source and the balance meets economically. Crop diversification is not planned in the paddy. Introduction of mungbean improves soil fertility and moderates evil of monoculture.

(2) Crop Diversification

There are many farmers who lose in corn growing due to low yield. Continuation of corn growing degrades soil, and induces soil erosion at the slope since corn is grown on the bare ground. A technology planned to diffuse farmers on IPM and INM aims to increase yield of corn and reduce production cost. It is also planned to increase income of farmers by diversifying the present 20 % corn areas into higher valued crops as vegetables, flowers, fruit trees. Diversified crops shall be selected from the viewpoint of marketing, topography of ARCs and distance to the market. The crops selected shall be special to the area. Extension workers shall provide training and support to farmers on crop diversification. A plant nursery shall be established in manageable scale locally at the ARCs where perennial crops as fruit trees and useful trees are planned.

As a part of crop diversification, livestock raising shall be developed at the remote ARCs where farmers hold larger lands. Number of animals shall be increased more than the conventional animal raising. A farmer will start with five (5) heads of cattle, taking consideration of his borrowing capacity, increase it to ten (10) heads finally and 200 heads totally in an ARC or Cluster. Technical supports shall be rendered to farmers on pasture growing, vaccination and artificial insemination.

(3) Countermeasures Against Crop Damages

Damages by pests and diseases reduce yield of major crops. They shall be eliminated or reduced through instruction and training by RCPC and extension workers. RTV disease is the most serious rice pest and its protecting methods shall be thoroughly instructed to farmers. Since it is one of virus diseases, it is difficult to prevent the disease completely but farmers shall try to protect rice from the disease, including growing resistant varieties. IPM training increases yield and reduces cost of production. Technologies on sloping agriculture shall protect soil from erosion caused with bare cultivation of corn at the slope.

(4) Mechanized Farming

Farmers hope to mechanize farming in order to reduce labor. But it seems uneconomical to mechanize farming individually at 2 ha of farm on average. It is beyond farmer's capacity in ARCs to buy a hand tractor at 25,000 to 60,000 pesos, a thresher at 70,000 to 90,000 pesos or a 4-wheel tractor at more than 2 million pesos. Moreover, there are scarce opportunities to employ surplus labors from mechanization. It is more advantageous to hire necessary machines like a thresher as most of farmers are doing now. Therefore, mechanization is not included in this project.

(5) Extension of Farm Technologies

Agriculture related organizations supporting farmers are equipped with necessary technologies. These organizations will be tapped to disseminate technologies to the farmers. However, extension services are constrained by small budget. Therefore, this project shall prepare necessary budget for extension services. At the beginning, this project will assist extension workers of the local government units in technical training in order that they can instruct and advise farmers practically at the farms. Then they train farmers at a demonstration farm through a cropping season with researchers of the related organizations.

4.1.2 Agriculture and Rural Infrastructure

(1) Irrigation Facilities

NIA's National Irrigation System Management Office is responsible for operation and maintenance of NIS's main and lateral canals. However, rehabilitation works of the facilities are not sufficient and some of them require urgent attention. At these facilities, required quantities of irrigation water are not delivered at the required time. Due to malfunctioning of diversion facilities to control water to be diverted, problems occur in the form of excessive intake of water at upstream and insufficiency of water at downstream or non

availability of water at the growth period of paddy. The major reason for this situation is that the budget of NIA is insufficient due to low collection rate of water charge. Farmers are obligated to pay the water charge and they are ready for it, if they can receive the desired water at the required time for irrigation. But in reality, the delivery of water is delayed or insufficient water is delivered, thus the paying situation of the water charges by farmers is not improved yet. The irregularity of water distribution is the cause of non-delivery of proper irrigation water. To solve this problem, the study of intensification of maintenance and operation of MRIIS had been already conducted by JICA.

Farmers without irrigation facilities are presently growing paddy or corn by a rainfed condition, which is one of the reasons of low yield and low income. To break from this condition they hope to switch to irrigated paddy cultivation. It is possible to switch from rainfed paddy and corn cultivation to irrigated paddy, but the most important factor in introducing the irrigation facilities is the water resource. A groundwater development of sizeable scale would require assessment of available groundwater resources, which is still to be awaited. Therefore, the present study deals with the conversion to paddy cultivation by development of irrigation facilities, which does not include groundwater development. When the water sources are limited, non-existing or far away, which increases the construction cost the irrigation plans of such ARCs will not be established.

(2) Post Harvest Facilities

a) Drying facilities

For lack of drying facilities, farmers are forced to sell palay and corn without drying at lower prices. The prices of undried produces are about 2 pesos/kg lower than that of the dried produces. The measure to solve this problem is to increase the drying facilities.

b) Warehouses

Seeding and harvesting of crops are conducted almost in the same period due to the climatic condition. When there are no warehouse, the crops have to be sold immediately after harvest. The traders take advantage of this and pay lower prices for such crops, which does not contribute to the improvement of agricultural income. This condition will probably not change, even if agricultural production is improved through development of agricultural techniques. As countermeasures to this situation, it is necessary to train the farmers to conduct market price research on their own and decide the timing of selling as well as to plan construction of warehouses as a facility to store the agricultural produces.

(2) Farm to Market Roads

As the maintenance of the roads from Barangay to the market is insufficient,

transportation of crops to the market is difficult and requires higher expenditures when depending on labors or animals. The low road density in a farmland makes difficulty to transport a farm machine into the farmland, so labors and animal have to use to transport the machines with a higher cost. To improve this situation, it is necessary to improve the farm roads. At the time of farmland distribution under the CARP, the lands for farm roads are already prepared as a cadastal road.

4.1.3 Farmers' Organization

(1) Social Preparation (SP)

It is considered that the socio-cultural background of the "delay of organizational expansion" is attributed to the lack of comprehension, knowledge, and human resources. Also, ill access condition accounted for the physical background. Although the ethnic problem might be considered as one of the backgrounds, the Study did not tackle it.

To solve this problem, fulfillment of social preparation both in quantity and quality is necessary. Inside an ARC, there are some Barangays where DF has not been dispatched yet because the Barangay is remote. In this sense, dispatching DF, as well as consolidating access condition is immediately needed for such Barangay. Upgrading of qualitative level of DF is also necessary, on the other hand increasing opportunities of NGO's assignment is required to cope with the farmers who have a problem beyond DF's reach, and the farmers who has doubts towards the government's project.

(2) Consolidation of Rules

Having explained that the institutional background of "consciousness of easy-made MPCFI", and "existence of delinquents" are related to the failure of the government's policies which have been continuously lending money to weak valued cooperatives. Also, it can be recognized that the socio-cultural background of these problems have low moral affected by such defective policies.

It might be difficult to overcome the institutional background because this background is rooted to a series of historical changes that will last forever. However, it is possible in the implementation of SP to establish the rules, which stimulate farmers' traditional ideas and change them gradually.

(3) Introduction of Incentives and Penalty

The socio-cultural background explaining "wrecked rules of cooperatives" is attributed to "the way farmers think" which is brought about by the withholding of incentives of the coop officials and members. Also, traditional customs prevent them from establishing such rules in written form. Further, the systematic analysis of what factors influence the farmer's action was not made so far. Therefore, it is necessary to introduce suitable incentives to coop's by-laws and policies, after analyzing on what conditions farmer's actions can be accelerated. Also, on the other hand, it is necessary to introduce penalty system for cases where coop members do not follow the established rules. The penalty should include the proper system to make coop members improve and this should be followed or accepted by them.

(4) Necessity of Training

The socio-cultural background being accounted for "lack of accountability" and "short term history since unification" was the lack of basic knowledge and traditional customs¹ in the Study Area. Also, contract-free agreement with private trader is forming this background. Further, since the endemic characteristics like composition of tribes or lack of history on unification might relate to this background, the Study does not include this matter. Toward the farmer's activities influenced heavily by the rural custom that cannot help adopting the consolation of rules and providing training. Further, it takes longer time to overcome this problem, since the counterpart of farmers, say, private traders do not request for written contract at all.

(5) Training of Line Agencies

Having said that the socio-cultural background of "lack of negotiation opportunity and skill toward the public sectors" is attributed to "the way farmers think" is represented by the wait & see attitude. This background is also classified into lack of comprehension and knowledge in broader sense, and it includes institutional problems like i) unclear role allocation by the line agencies or ii) political interventions. To overcome this background, it is necessary at first to train the staff of line agencies. Through the change of consciousness of trainer and the promulgation of this consciousness to field level, it is expected that both the internal and external factors of the background can be focused.

¹Before DAR's land distribution, most of ARBs are either tenant or leaseholder. It is not until distributing land, that they could release the control from landowners. There has been no way for tenants or lease holders to seek for innovation of farming, because all farming activities, such as selection of crops, farm inputs, and time of planting has been determined by the will of land owner. For this reason, the farmers have no chance to learn entrepreneurship. The farmers become the coop members in order to obtain a loan easily and quickly. However, it is difficult for them to understand common sense; that is, once they obtained a loan, it should be paid, since they have been able to procure the necessary things from land owners without paying any cost.

(6) Final form that the Cooperative Should Seek for

The master plan will place the target on ideal evolution form of the farmers' organization as follows. A final form of each cooperative is subject to changes depending upon the maturity of organization at present.

- a) Organizational setup and social learning stage
 - Social Preparation
 - Establishment of rules and policies of the cooperative
 - Accumulation of social learning
- b) Growing stage to area-wide cooperative
 - Credit procurement in cooperation with adjacent cooperatives in the form of federation
 - Expansion of business lines of the cooperative
 - Project planning and negotiation for implementation
- c) Growth stage to independent federation
 - Social Preparation by itself
 - Establishment of credit line for rural poor
 - Organization of rural inhabitants and collective bargaining

(7) Development Strategy and Process

Depending upon the existing social power of farmers organization and initiating institution for development (the donor of the project), the type of development should be classified into three categories; these are i) Assistance, ii) Facilitation, and iii) Promotion. Further; each category has four developmental approaches, namely: a) resource supplementary approach, b) organizational approach, c) movement approach, and d) integrated approach. Integrated approach denotes some combination of a) to c) above.

Initiative of Development	Existing Organizational Power in the Study Area	
	Strong	Weak
Internal	• Assist • •	
Joint Venture • Facilitation	
External	Promotion •

Development strategy and process are proposed as follows:

- a) For conscientious and organizational setup of weak organizational entities, NGOs should be involved in three major aspects, namely infrastructure, organization, and rules

aspects. NGOs should provide Social Preparation (SP) to the command area. In order to strengthen the movement for organization, it is recommended to serve a small project as an entry-point. NGOs should put an importance in establishing rules for an efficient management as well as conducting training for a firm organizational setup.

- b) Private banking sector, government institutions and international assistance will be involved in the project from the second evolution stage and higher priority should be given to the infrastructure (resources) aspect. During this time, NGOs should continuously provide SP.

4.1.4 Rural Credit

(1) Two Directions

Having mentioned, the socio-cultural background of "resistance to payment" includes the unclearness of coop's relending policy attributed to the rural custom, the lack of comprehension and knowledge by farmers, and the reluctance of payment caused by "Kanya-Kanya" system. Institutional background consists of the failure of government's projects since the past, and the lack of preliminary appraisal and monitoring system caused by the shortage of capability of the financial institutions. Accordingly, the following two directions will be necessary to solve the problem.

- a) Strengthening of farmers' organization and organizing good payer's stratum

The direction to cope with the socio-cultural background includes the consolidation of coop's by-laws and policies through the strengthening of farmers' organization, and the implementation of a series of training² to keep these rules. Further, the protection of good payers is necessary, because the unfair payment system might deteriorate the good payers. It is considered that by organizing good paying coops and individuals profitably, not only a proper stimulation will be given to bad payers with affordable economic capacity, but also the conduit for good paying cooperative will be diversified. Further, if the rural custom (Kanya-Kanya system) allows delinquency, it is useful to introduce a new direction to accelerate the payment by making use of this rural system reversely. This idea will be detailed in the succeeding pages at chapter 4.2.3.

- b) Simplifying loan process and improving stringency

The solution toward the institutional background involves the rationalization of preliminary appraisal and monitoring system for the government institutions. Importance should be placed in fostering superior staff and realizing this without big cost through the mutual synergy of line agencies and NGOs.

(2) Micro Finance (MF)

Having explained that the socio-cultural background of "physical and mental

²This topic will be taken up at Farmers' Organization Development Scheme in the succeeding pages.

distance to the government financing system" is the bondage to private lenders caused by the high cooperative spirit. Also, in the institutional background, the lack of opportunity for credit in the government institutions as well as the shortage of accessible road has been pointed out. The direction to cope with these backgrounds, the increase of financial conduit through enhancing of MF scheme as well as the strengthening of farmers' organization are necessary. The MF undertaken by various institutions³ are successful as a whole. It generates the idea that if these institutions are in perfect harmony and are able to increase the financial conduit, the dependence to private lenders ideally goes down.

(3) Introduction of Competition Principle

It has stated that the socio-cultural background of "high interest" is the solid bondage with private lenders, and institutional background is the barrier formed by the network of private lenders to resist the new competitor entering into rural credit industry. To cope with these backgrounds, it is necessary to establish a new economic entity resistible to the cartel of private sector by introducing competition principle into the closed market. Toward farmers' dependence to private lenders, it can not help fostering independent consciousness by providing suitable training for a long term.

(4) Self-sustain by the Farmers

It is impossible to deal with the problem on "Government Policy without consistency". The best solution for this is that the farmer individually or through farmers' organization should overcome an economic problem and should intently free themselves from the control of the government policies. A part of ideas will be discussed in the Farmers' Organization Development Scheme in the succeeding pages.

(5) Step of Project Implementation

The restructuring of financial arrangement at limited area is impossible to realize and it normally involves the whole country. Therefore, higher priority should be placed on the projects with manifestation of immediate benefit⁴. Toward the projects that need longer gestation for benefit accrual, DAR's aggressive approach to the National Government is strongly expected.

³Refer to "3.5.1 Rural Credit" in the previous pages.

⁴Normally, it is considered that the projects whose level of approach is limited to narrower administrative boundaries can achieve benefit immediately. When the administrative boundaries gets wider or broader, the conative functions becomes more hierarchical and diversified. It is also obvious that broader administrative boundaries need much time to prevail developed systems.

Level of approach	Appearance of Benefit	
	Quick	Long Time
Study Area level	...Accessibility to Credit.....	
Broad-based level Correction of unfairness	
Nationwide level	Decrease loan interest.

Practically, quick accessibility to credit will be realized in short-term development, and then the alleviation of sense of unfairness to the existing credit system will be focused in medium term development. Since the decrease of interest rate is an ultimate target, which needs restructuring of existing arrangement, the implementation should be made in the stage of long term development.

4.1.5 Farm Economy

(1) Direction of Livelihood Project

To solve the problem on "unbalanced nutrition intake", it is necessary to recommend vegetable production. Vegetable production should be utilized not only for healthy nutrition intake, but also for minimizing family expenses and stabilizes family income through increasing off-farm income by selling surplus. Supposed that the debt from private lender will be reduced by the generated income, life standard will be improved.

Having said that the institutional background on "farm budget structure without durability" involves that there are no enough livelihood and agro-processing projects that can standardize cash income throughout the year. To improve this situation, the project which accrues cash income and contributes to cost saving is ideal. In this sense, the projects to be introduced should have marketable output and ideally, it should increase the product of farmer's necessity. The most important condition is that the output should stabilize the income by month.

(2) Direction for Providing Capital to Rural Women

Having said that the socio-cultural background on "farm budget structure without durability" is attributed to the temporary individualism without will for saving caused by the lack of comprehension and knowledge. It is necessary for the change of will to provide suitable training repeatedly for a long term, and for the customization of saving practice, it is essential to vitalize the female groups tackling this project at present. Thus, the establishment of livelihood projects for which female group can support family budget and

accelerate savings practice is needed. Through the provision of conducive capital, the project will accelerate the women's social participation and savings practice.

(3) Direction for Consolidating Infrastructure with Fairness and Care

The socio-cultural background of "seasonal lack of farm laborers" involves monoculture and price increase of hauling facilities being attributed to individualism of farmers. Partly, there is physical background like ill road system. These backgrounds lead to the necessity for consolidation of infrastructure as well as the importance of developing farmers' organization. On the other hand, it points out the necessity for the system that indemnifies the income of poor farm workers who can maintain their life solely because of poor infrastructure condition.

(4) Road: Convenient for Farmers, Not convenient for Private Traders

Having pointed out that the socio-cultural background of "bondage of trader" is farmers' consciousness and "Kanya-Kanya" system. The poor road system that prevents rivals from visiting a Barangay is a part of background. It generates the idea that the consolidation of road increases convenience not only for farmers but also for traders as well and has a risk to bear straw effect. Accordingly, the road development needs the direction to give convenience to the farmers but inconvenience to private traders. For this, it is necessary to apply road design standard flexibly. The development process that aims to change farmer's consciousness first followed by consolidation of infrastructure should root in the Study Area.

(5) Widening of Coop's Coverage and Establishing Vanguard

Having pointed out that the institutional background of "bondage of trader" is the existence of cartel that prevents rivals from visiting to Barangay. It is beyond the capability of individual farmers or cooperatives to demolish the cartel. Therefore, it is necessary to grow cooperative into broader level and let it compete with the cartel. To do so, some organizations that have an intention in the government side should be cast into it as the vanguard.

(6) Synergy of Line Agencies

To solve the problem on "unforeseeable market price", it is necessary for the government to manage properly internal and external matters of the country. Forming market networks by the farmers' organization is also needed at the same time. As for the said privatization of NFA, the

intensive discussion on the role at post privatization stage will be necessary. Especially, the government should take into consideration the system to reflect the public policy on agricultural development and to optimize the existing network and facilities for the ARC development.

4.1.6 Supporting Systems

(1) Institutional Capability of DARPO

- a) The DARPO is required strong capability to operate and maintain projects as the leading agency for the provincial CARP. The DARPO not only needs coordination in the DAR from the DARCO to DFs, but also with outside such as the related agencies. In addition, this master plan is proposing a structure that allowed aggressive participation of LGU, and therefore the role of the DARPO is expected to become more and more important. The DARPO, however, still lacks experience and knowledge of those roles required, and allocation of specialists is not carried out yet. To strengthen the DARPO's institutional capability, training of the DARPO officials is vital as a part of human resources development.
- b) Failure of the training to meet the needs of the participants, or lack of evaluations of the training programs were pointed out as the reasons why previous training were not effective. This master plan should improve the current situation by reflecting the needs of the participants in the programs, conducting regular evaluations of the training agencies, the impact survey of the training programs, and selecting appropriate participants for each training.
- c) By observing the DARPO regarding the way how each officer's task is followed-up as an organization, how DFs are backed-up, and how the activities of other agencies are monitored, many problems were discovered in the current institutional system. Strengthening the DARPO by placing specialists of institutional development and altering the consciousness of the officers are essential for the improvement. Monitoring the activities of the DARPO's and related agencies' officers will become effective if it is introduced as an incentive system. For the implementation of this plan, establishing of the PMO in the DARPO and creating a system, through which the operation and control of the CARP is handled, will be needed. Placing foreign specialists in the PMO could also lessen the problem of political intervention.
- d) The capability building of the DARPO officials by implementing training and placing training specialists is required, as an agency taking charge of community development. Particularly DFs are essential to community development, and therefore the employment and placement of proper DFs must be considered. Allocating training specialists in the PMO will enable for the DARPO to control all training comprehensively.
- e) Strengthening of DARPO's supporting capability will be implemented by external agencies or personals such as specialists in the short term. In the medium to long term, outsiders will fade out and insiders, i.e., the DAR staff become the core.
- f) During the implementation of the plan, the target of each activity must be set to strengthen the monitoring and evaluation. The area of lands distributed, the number of training conducted, the length of roads constructed - those quantities have been the major target until now; however, this needs to be altered. In consideration of the aim

for ARC development, changes in consciousness, farm productivity, income and so on must be focused hereafter. The PMO must be the core to set up annual targets of each project and manage the activities of related agencies.

(2) Specific ARC Development Strategies/Planning

ARC Development strategies and planning will be specifically drawn up in this plan, including realization of the MC5 strategies. To accurately react to the political or socio-economic changes during the implementation of projects, the DARPO must flexibly be able to review and modify the strategies and plans. In the short-term, the PMO must be responsible for it. As the capability building progresses, the DARPO becomes the core. An annual monitoring & evaluation of the project is also requested for the effective implementation.

Economical gap among ARBs must also be noted in the strategies. The objective of land reform was, ideally, the fair distribution of wealth. To be in accord with this objective, economic strata in a Barangay must be grasped, and the supporting plans for each should be incorporated. The beneficiaries of the development plans must be identified, and it should be confirmed that the benefits will be equally distributed and the negative impacts from the development are as small as possible.

(3) Alleviation of Political and Policy-Related Interventions

Immediate alleviation of political and policy-related interventions seems impossible; however reduction of negative effects might be achieved through continuous trainings to alter the consciousness of the farmers. The daily contacts with them too are expected to provide correct information. As mentioned above, placing foreign specialists in the PMO might also be effective to ameliorate the conditions.

(4) Coordination with Related Agencies

- a) To utilize the CARP-related budget distributed in each agency efficiently and effectively, drawing up activity and budget plans based on the target of the project as well as concentrating the budget control in one place is preferable. The current bureaucratic sectionalism makes this difficult, however, the DARPO at least needs to grasp the budgetary flows at the municipal level and take the leadership to control the budget of projects whenever possible. This is also one of the roles of the PMO to be included in the implementation structure of the development plan.
- b) Smooth coordination of the activities is essential to a project like the CARP that many agencies are closely related. Coordination mechanism will therefore be included in the implementation structure. At the municipal level, the MCIT should originally take that role, yet as mentioned, it is not functioning at the current situation. Due mainly to the capability and stance of the MARO as the chairman, the central government or LGU officers do not commit themselves to the CARP projects in many cases. A structure

needs to be arranged, making the municipal mayor chairman, so that LGU can actively participate. Consistency between ARCDP and BDP can also be achieved through this action.

- c) At the Barangay level, the BARC must originally be the coordinator, but in reality, activities are hardly observed. In this plan, the Barangay Council that currently takes charge of Barangay development and the members of it, the Barangay Officials, will be the coordinators of the CARP projects. In this way, development projects in Barangay would be more consistent.
- d) In the current situation, only DFs are taking frequent contacts with the farmers among the supporting agencies; thus the capability building and enhancing mobility of DFs must be emphasized. By doing so, the field-level management and coordination among agencies will be promoted. As the current supervisors of DFs, MAROs, do not necessary have strong leadership, the PMO will take the lead first and transmit this role gradually to MAROs.

(5) Lack of Cooperation among Related Agencies

Farmers' organization has low capability in pulling its members together and negotiating with external organizations. External agencies do not coordinate their activities either. Those are considered to be the reasons for the lack of cooperation of the related agencies towards farmers' organizations. To solve these problems, strengthening the farmers' organizations, and creating a system at the provincial, municipal, and Barangay levels to coordinate the activities and discuss the related issues among the related agencies are required.

(6) Problems in Extension Activities

It was previously pointed out that farmers generally possess "wait and see" attitude. To extend a new technology to the farmers, some aggressive farmers must take the initiative in practicing it. After those aggressive farmers have succeeded and shown impacts, other farmers start imitating. This process seems effective to alter the consciousness of the farmers and extend the technology to the community.

In Quiling MPCI, the number of the members abruptly increased this year. That was due to its success negotiating with NFA and selling rice in good prices. The cooperatives proved economical benefit of being members to the community, and thus others followed. In general, the extension of new technologies requires the following conditions:

- a) The farmers must be able to make use of the technologies.
- b) The technology must not require too much labor and time.
- c) It must not be costly.

d) Its effect should appear relatively in the short time as the increase of income.

(7) Lack of Improvement on Farmers' Consciousness

As already explained in the background, farmers possess a consciousness such as "The external aids such as governmental finance are granted". In addition, observing someone not paying back the debt, they tend to think "Everybody else is not paying back the debt so why should I be honest at fault? I will be the only one losing money!" Those deeply-rooted farmers' consciousness was grown hand in hand with the local culture, and therefore changing the consciousness leads to changing the culture. On the other hand, as changing the culture is beyond this plan, the focus of this plan could be to consider a system that can be expected to alter "the way farmers think". For example;

- a) Active participation of the farmers in recognizing the problems and making plans
- b) Training programs to improve the consciousness of the farmers, premising the implementation of the projects
- c) Strengthening the farmers' organizations and conducting or managing the work collectively

The empowerment of the farmers is also essential. Farmers must be confident in themselves that they are able to achieve something. Continuous aids of money and materials from the government will never improve the current situations. Consciousness reform with confidence will let them be aware "We can do it!" To achieve this objective, the support must be:

- a) In small-scale
- b) Be technologically easily achievable
- c) Benefit is clearly visible; outcome is the increase of income

(8) Direction of Solution for Backgrounds

Of the backgrounds described in 3.8, measures against socio-cultural and institutional backgrounds to be taken in the supporting system are summarized here.

- a) Measures against socio-cultural backgrounds
 - Lack of understanding and knowledge of the farmers
Necessary trainings will be conducted to Barangay officials, and after the trainings, meetings will be held for transmitting knowledge from the officials to farmers.
 - The way farmers think, individual actions of the farmers and customs
Social preparation training will be conducted to raise the consciousness of the farmers. The targets are Barangay officials, representatives of farmers' organizations and farmers with leadership. As "individualism", "materialism" and

“over-reciprocity” are the essential issues of the development, measures against them will be taken in each proposed development plan. A measure against “wait and see attitude” will be considered in the means for extension services.

- Lack of human resources

The capability building of the leaders will be promoted.

- Debt to the private lenders with psychologically-bound relationship

Approaching directly to the private lenders and attempting to wipe them out will not be the possible solution. Improving the consciousness of the farmers will be considered in social preparation training. In addition, farmers’ organizations will be strengthened, and a new financial system will be introduced to increase the access of farmers to loan.

b) Measures against institutional backgrounds

- Decentralization which lowers the motivation and expertise of extension workers

An incentive system will be introduced through which extension workers with high performances will be rewarded. Implementation of technical training for extension workers and linking research agencies to them for facilitating information exchange will be considered.

- Lack of understanding and knowledge of the related agencies

Necessary training will be conducted, or required knowledge will be transferred through the coordinating agencies.

- Failure of the policy

Suggestion to the government is only possible, yet this is beyond the scope of this development plan.

- Obscure roles, bureaucratic sectionalism and political intervention of the government

Setting up of a strong coordination office is a must.

- Rice cartel and the networks of private lenders

This plan does not intend to control them, but will attempt giving some kind of influence on them.

- Limited income generating activities

Income generating activities other than agriculture will be included in the development plan.

- Lack of funds of the related agencies and low market price

Measures against those will not be provided in this development plan. The government is responsible for those in macroeconomic point of view.

4.1.7 Summary of the Problems - the Most Important Issue

The most important issue among the problems identified is the fact that the incomes of ARBs, the CARP beneficiaries, remain low despite the achievement of land distribution.

This was confirmed through field surveys such as workshop¹ when the master plan and feasibility studies were conducted. The relations of the problems identified in each sector and “ARB’s low income” were analyzed and shown in the attached Problem Tree.

In the agriculture sector, for example, the problems are linked as follows:

- Mono-culture Low Soil Fertility Low Farm Productivity Low Income
- Individual Purchase of Agricultural Materials Weak Price Bargaining Power
Purchasing Agriculture Materials at Traders Price High Cost of Production
Low Income
- Poor road conditions causes high hauling cost, which leads to high cost of production. Also, Poor Road Conditions Unable to Bring Threshers (Rainy Season) Delay in Harvest Low Quality of Product Low Price Low Income

Similarly, the links regarding farmers organizations are:

Cooperatives’ Default on Loan Slow Growth in the Number of Members
Joining MPCIs No Progress in Organizing Farmers Limited Access to
Public Financing High Interest Rate from Private Lenders Low Income

After the links of all the problems were analyzed, the following direct causes of low income of ARBs were identified:

- 1) Low farm productivity
- 2) High cost of production
- 3) Low price of farm products
- 4) High interest rate of the private lenders
- 5) Unstable household economy
- 6) Insufficient supporting system for ARBs

The solutions to those six (6) direct causes are derived from the directions for solutions explained. Solving the direct causes will result to the improvement of ARB income. The objectives and the main means for the solutions are listed as follows:

¹ When the workshop for the master plan study was held, the representatives from the DARPO, line agencies such as LBP, NIA and DPWH, LGU, NGOs participated. Workshop on the feasibility study was conducted in the target 5 ARCs, and Barangay people and representatives from the above mentioned agencies participated.

	Objectives	Main Means
1)	Improvement of farm productivity	Extension of appropriate agricultural technologies, Provision of irrigation facilities, Provision of post-harvest facilities
2)	Reduction of cost of production	Strengthening of farmers' organizations, Provision of farm-to-market roads
3)	Improvement of selling prices	Strengthening of farmers' organizations, Provision of farm-to-market roads, Provision of post-harvest facilities
4)	Improvement of access to financing and reduction of interest rates	Strengthening of farmers' organizations, Expansion of rural credit
5)	Improvement of stability of household economy	Strengthening of farmers' organizations, Extension of income generating opportunities related to agriculture
6)	Improvement of the supporting systems	Capability building of the related agencies

Based on the above objectives-means relationships, eight (8) approaches are proposed in this master plan. The “improvement of the supporting systems” includes the capability building of the related agencies as well as the social preparation as the measures against the backgrounds of the problems. According to the current situations, problems, and the needs of the beneficiaries of each ARC, development plans will be proposed respectively¹.

- 1) Agriculture Development (to extent appropriate agricultural technologies)
- 2) Farmers' Organization Development (to strengthen farmers' organizations)
- 3) Irrigation Development (to supply irrigation water)
- 4) Post-Harvest Development (to improve the rate of production recovery)
- 5) Road Development (to lower the hauling cost of farm products)
- 6) Rural Credit (to lower the interest rate of available credit)
- 7) Livelihood Development (to have alternative income generating activities)
- 8) Management Capability Building (to enhance the capacities of the ARBs as well as the related institutions)

¹ see Chapter 6.

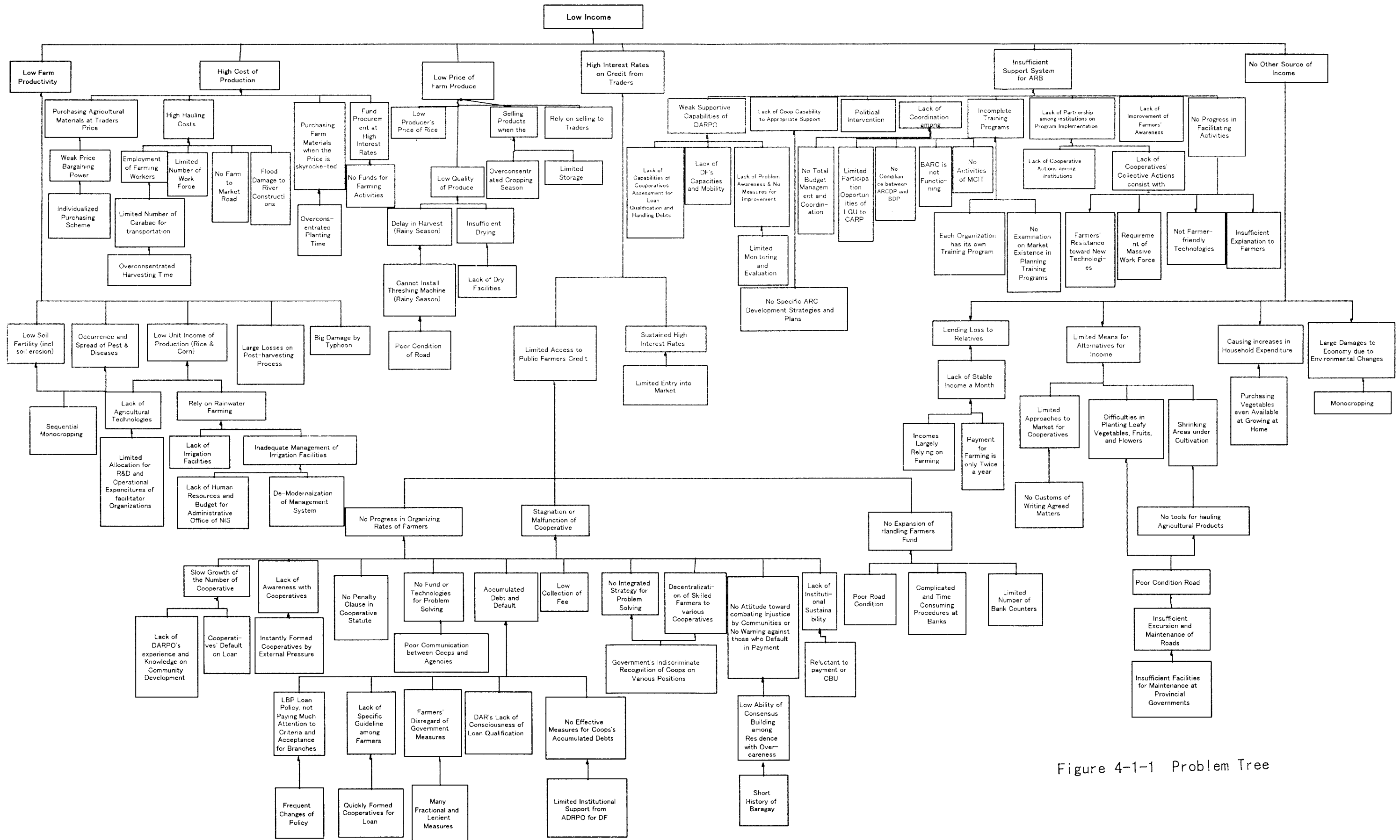


Figure 4-1-1 Problem Tree

4.2 Potentials of Development

4.2.1 Agriculture

(1) Potentials of Agriculture

Agriculture in the Study Area is constrained for further development due to many problems. However, the area has high potential in agriculture because of abundant annual rainfall of about 1,800 mm, moderate dry season of four (4) months, and high temperature good for tropical crops. Extension of agricultural technologies, however, is a key to put the potentials into practice.

(2) Potentials of Marketing Farm Products

Though the main market of farm products is within Isabela Province and neighboring provinces in Region 2, outside markets as Manila metropolis are also targeted as the market of rice, corn and banana. The farm products may be exported to foreign countries in the future through the Cagayan Special Economic Zone and Free Port located near the Study Area which are planned to start in 2002. Rice production does not satisfy the demand in the whole country and rice has been imported since 1994. National policy also demands more production of rice. Corn has been sold outside the region for animal feed and there will be no worry of selling it in the future, expecting to export it outside. Self-supplying rate of mungbean was only half, 50.2 % in the country during 1995 and 1997. The deficiency has been filled with import from abroad.

Vegetables are lacking in the whole Isabela Province and have been imported from other provinces. The demand will be more in the future as people take more vegetables according to the hike of living standard. Fruits are more than the demand based on statistics in the province. This is because banana is grown in big amount at the hills of the Isabela Settlement. The surplus is exported to big cities like Manila. The market is still large if better quality fruits are produced and season-off fruits like mango are brought to market. Flower growing is behind in the area as people just enjoy it at the home garden. But it has potentials since artificial flowers are presently used for funeral and indoor decoration. This will be changed into fresh flowers together with better living standard. Gmelina wood is used for furniture and it has potential as it matures in five (5) years. Mahogany wood is expensive and has potential though it takes more than 30 years before it is ready to cut. It is important to plant trees on the bare hills from the viewpoint of conserving environment.

Pork is largely consumed in Isabela Province and the demand is also high. Many

farmers hope to grow hogs because they grow quickly in a short time. Goat meat is expensive in the market because the supply does not meet the demand under a ban of dog meat. Tilapia is also expensive as Tilapia fishing and raising does not reach the demand and the Study Area is located far from the sea. The demand is expected to grow higher in the future.

(3) Irrigation Facilities

In the planning of the irrigation facilities development it is important that there exist arable lands suitable for agricultural development and the presence of suitable water source to be used for irrigation water development. The ARCs in the Study Area are divided into the following three (3) types:

- a) ARCs where irrigation facilities are completed either by NIS or CIS and thus there is no need of irrigation development.
- b) The irrigated area is located only in some parts of the Study Area under NIS. Also, there is a water resource for a communal irrigation project (CIP) and there is a possibility for an irrigation project. Or the ARCs has no irrigation facilities, but there is water resource for CIP, thus the irrigation project is possible.
- c) The ARCs without irrigation facilities and where there is no water resources or water resources are far away which would need much cost resulting any project no feasible.

The type b) has a water resource for irrigation and it is possible to establish an irrigation plan. As water resources, there are the Cagayan River and creeks. The Cagayan River as a water resource shall be lifted up. As no large-scale irrigation project is implemented at present, there is available much water resource from the River. Thus, there is a big possibility to introduce an irrigation project utilizing the Cagayan River as water source. Gappal Communal Pump Project (located at near Cauayan) financed by the CARP, lifts water from the Cagayan River, and irrigates 800 ha.

For irrigation development utilizing creeks as water sources, it is important to grasp the volume of the water sources. Judging from the amount of the annual precipitation, an irrigation project with a dam or a barrage, is possible.

The operation and maintenance of CIS is carried by IS established and supported by the NIA-PIO. The NIA-PIO starts social preparation for establishing an IA about half a year prior to the construction works, and trains the beneficial farmers concerning their obligations during and after the construction works. All IAs, which controls CIS in the Isabela province, are established with the support of the NIA-PIO. The operation and maintenance of the following projects is transferred to IA established recently.

Annaratan Irrigation Project	World Bank Aid
Sinabaan Irrigation Project	World Bank Aid

Gappal Pump Irrigation Project CARP Finance

(4) Post Harvest Facilities

To sell the crops after drying is the wish of the farmers and contributes to the increase of income of the farmers. The drying facilities used in the Study Area are the sun-solar dryer and mechanical dryers. The solar dryer is the popular way presently used by the farmers, and hence there will be no need for obtaining new techniques in introducing the method. Barangay is determining the turn of users of the existing solar dryers except those owned by the cooperatives. The solar dryers require considerable drying spaces for drying farm produces. There are Barangays, which already own public spaces or where the residents have willingness to offer the spaces during the public hearing. Therefore, it is possible to procure required areas for the facilities as need arise.

The warehouses becomes necessary in order to sell the crops at higher prices other than at harvesting time, thus securing high income of the farming households. The grains will be dried at the solar dryers or by a mechanical dryer. And farmers will bring them to the warehouses and will store them in the warehouse until the selling time. There are unused solar dryers and mechanical dryers at present. The reasons are either the poor activities of the cooperatives or the mechanical dryer cannot recover the operation cost due to low selling prices of crops. The problem will be solved in the following manner. If the cooperatives are strengthened through the Farmers' Organization Development Plan proposed in this report, they would learn and understand the mechanism of market economy, and they would have the capability to determine the timing of sale by themselves.

(5) Farm to Market Roads

By improving the farm to market roads, it is possible to timely transport the agricultural machine and/or tools into the farmlands at the harvesting time and to prevent decrease of the quality of the harvested crops, and save the transportation cost of the crops. The DAR already expropriated the right-of-ways for the proposed roads. There will be almost no restriction for improvement works.

4.2.2 Farmers' Organization(1) Enhancing of Social Preparation (SP)¹

¹As one of the processes for participatory approaches, an important role is placed on "social preparation". The social preparation aims to establish firm farmers organizations through the following activities; i)Objective

To enhance the SP both in terms of quantity and quality, making optimum use of NGOs who are providing SP in the Study Area will be necessary in addition to the implementation carried out by DF. Plan International and BIDANI are outstanding NGOs with fame in the Study Area, and they have been supporting several ARCs so far. Fermelyd MPC ("Kintaro Candy" in DCC) and Andarayan MPC ("Patay") are supported by Plan International, while San Manuel MPC ("Vibrant") and Dipacivi Palawan MPC ("Vibrant") are advised by BIDANI. It gives the idea that through the use of NGOs the quality of SP increases, because judging from the result of DCC, the cooperatives in which NGO provides SP show the higher organizational vitality than others.

(2) Consolidation of Rules

Usually, the consolidation of rules is undertaken in the implementation process of SP. It is necessary to incorporate suitable incentives taking into consideration the characteristics of the way farmers think. The result of DCC indicates that San Manuel MPC with "Vibrant" vitality is holding a detailed policy on 4 wheel tractor which was purchased in LBP loan and in which they are regulating the usage very strictly. They administer operator's policy as well. The penalty toward delinquents is cash at first violation, but if the members do not stop violating, they are ruled out from the cooperative. Similar penalty system is being adopted at vitalized cooperatives such as Epiphany MPC and CAS MPC (Andarayan ARC). Thus, the organizational vitality of cooperative is quite high if the existence of consolidated rules coincides with the availability of leaders who strictly let members obey it.

(3) Incentives and Penalties -- Perspectives and Potential Measures

a) Factors Driving Farmer Actions

As noted in the previous section, the instatement of a suitable scheme of incentives and penalties must be preceded by a study of the farmer behavior pattern and incentives. The results of a background survey indicate that factors governing farmer actions fall into three (3) categories in respect of the benefiting party, as described below. In other words, the essential types of farmer activity can be classified as follows in terms of the party incurring advantage (or disadvantage).

i) Essence of action in direct contribution to one's own advantage

While people basically act spontaneously in accordance with their own assertions and values, activity is stimulated by material incentives. The existence of unmotivated farmers, which has been cited as a factor curtailing the

analysis in the existing problems and constraints on production and livelihood by inhabitants themselves, ii) Understanding the relationship between such problem and constraints on social structure, iii) Acknowledgement of the necessity to self-support actions toward the problems and constraints through united inhabitants (this process is called "Conscientiousness"), and v) Establishment of an organization with the same intention or will by its inhabitants. Thus, SP process aims to form Bayanihan inside the farmers' organization.

diffusion of agricultural technology, should be viewed as a result of a choice made upon weighing the physical or mental energy which they must expend against the anticipated benefit. In various training programs, *Mirienda* and transportation costs are usually borne by the organizing party, and this is a good example of how action is encouraged by the extension of material incentives.

ii) Essence of action in contribution to another's advantage

In contribution to the advantage of a third party (different individual) intermediate to the farmer and authorities, material incentives and feelings of obligation may encourage action. CBU collectors tolerate non-payment by third parties because such incentives are not at work. Cooperatives with high collection rates furnish the collectors with material incentives (in the form of commissions for collection). Similarly, within the homes of the influential in *Barangays*, landless farmers who feel obligated for some favor often may be seen doing housework or carpentry free of charge.

iii) Essence of action in contribution to the public good

In contribution to the public good, the factors encouraging action are the person's own sense of values and the idea of repaying a debt². For example, the neglect of farmers to negotiate with governmental agencies over matters such as an inappropriate water management schedule may be viewed as caused by the failure to satisfy requirements for action on both sides. As long as a sense of solidarity³ (see Note 10) is maintained among neighbors, action may not be taken even if the whole village has an unsuitable schedule.

b) Incentive system

In light of the above, the following setups are thought to have potential as incentives for action by farmers.

i) Incentives for work of advantage to the farmer himself

In the case of work linked to the farmer's own benefit, incentive can lie in the subsequent positive rating of the action. In other words, the sense of values among individuals whose interpersonal relations have been confined to a limited circle of specified people may be changed by the satisfaction derived from recognition by many other people. The action in question can be further encouraged by the extension of material incentives (money or meals) to cover the costs of the work. The following come to mind as possibilities: 1) issuance of a certificate of participation in training programs that entitles the holder to a free meal and payment of transportation costs, 2) payment of *mirienda* for farmers who clean the waterway leading to their own paddy, and 3) payment of a certain rebate for farmers who pay their debts on time.

ii) Incentives for work of advantage to other people

Work contributing to the good of a third party (other people) intermediate to the self and the authorities can be encouraged through the instillment of a sense of

² This is exemplified by the *bayanihan* and *Barangay* supporting groups

³ In reference to the "*Ganya Ganya*" culture.

obligation or the provision of material incentives. However, because a scheme based on motivating action by a sense of personal obligation could not be expected to function indefinitely, the usual means is material incentives. Examples are: 1) the payment of commissions to persons collecting CBUs and debts, 2) payment of wages (with *mirianda*) to people hired for preparing fields or harvesting work (although this has become an established custom), and 3) payment of a salary in excess of that of the BOD members to certain other coop members (i.e., managers, typists, and tractor drivers) on the grounds that they are contributing to other members.

iii) Incentives for work for the public good

As noted above, a sense of obligation and positive rating of one's own behavior can drive action. Because a scheme based on motivation through obligation could not operate constantly, it would presumably be advisable to use positive rating of the individual's activity after the fact as the incentive. The following are potential steps to this end: 1) announcement of top CBU payers, 2) staging of a ceremony by the DAR to commend BODs for contribution to the successful launch (or revival) of cooperatives, and 3) designation of successful cooperatives as model ones which accept outside observers.

c) Penalty system

Penalties would consist mainly of limitations on the aforementioned three types of behavior incentives. As described in connection with the problems of farmer organizations, few of the existing organizations in the subject districts implement punishment and conscious-raising simultaneously and in parallel with each other, i.e., have composite arrangements for material penalties and correction of mistaken views. Schemes of this type could very well help to change ideas and make programs more effective. In instating them, it would be vital to avoid exposure of the errors of individuals to others as a general rule, considering the character of rural communities (although such exposure may be effective as a last resort).

A case in point is the handling of people who do not repay loans in the Lapogan ARC. Although penalties are imposed, community efforts for repayment on the part of the payer (i.e., consideration of the payer's situation) are given precedence to execution of the penalties. This can have the effect of reforming the payer and strengthening his sense of solidarity with the community⁴. The cooperative takes action to look after members in arrears of loan repayments, and shares a certain amount of the debt in correspondence with the payer's land (e.g., for a debt of 5,000 pesos, repayment is made from the profit accruing from the crops yielded by 0.5 ha of his farmland). The member's debt is consequently repaid through the application of provisions recognized as just and fair. As this implies, even farmers who have not paid their debts will comply with penalties when the three factors of virtue⁵ are involved.

(4) Training

Insufficient understanding and knowledge among cooperative members must be addressed by an improvement of training program quality and content. As revealed by the

⁴ This is known as the "Tutok Sako System."

⁵ To be described below, in the section on development concepts.

DCC survey, there is a significant gap between members who have received training and those who have not in respect of the degree of vitality. The training furnished by governmental institutions is functioning effectively, but is saddled with problems such as an insufficient apprehension of the needs of trainees and the lack of coordination among the implementing agencies, as noted in the section on problems with the supporting system. The required level of training varies with the cooperative, and training can have greater effect if adjusted to the right level for the cooperative in question. The following can be cited as training needs which remain unfilled due to a lack of instructors.

- a) Basic training concerning cooperative accounting and bookkeeping
- b) Training for transfer of technology related to handling of issues in individual businesses
- c) Training for market networking
- d) Training for the cultivation of negotiating capabilities
- e) Training for the cultivation of leadership capabilities

Training in cooperatives with a high level of vitality (such as the Epiphany MPCCI) offers many donors, such as CAVALCO and CDA. There is also a system of extended training whereby members who have finished a given program pass the knowledge on to other members.

(5) Training for Trainers

To endow agricultural cooperatives with negotiating capability requires priority on training for DFs, who are in direct contact with farmers. This will give DFs a better understanding of the position of farmers, and also afford prospects for transmission of knowledge to both the upper and lower levels. For example, if DFs are capable of negotiating, they could serve as a bridge at the stage of negotiation with governmental agencies and set forth the position of the cooperative. This kind of DF stance would evidence their concern for the interests of farmer groups and so strengthen bonds between the two.

There are various means of DF training, including use of the services of domestic experts and foreign consultants. Potential is thought to be particularly great in the following fields, where there is a great gap between the high level of demand on the farmer side and the current level of technical capabilities among DFs.

- a) Training for the cultivation of capabilities for negotiation with the market
- b) Training for debt management
- c) Training for finance control

- d) Training for transfer of technology related to the handling of issues in individual businesses

4.2.3 Rural Credit

(1) Project with Effects Emerging Over the Short Term

a) Microfinance (MF)

As has already been observed, there is clearly a need for an increase in the amount of MF in circulation. Increasing the number of locations where MF is available must do this. The study compared the relative merits of three types of facilities as candidates for expanded MF provision: 1) commercial facilities such as Sari Sari stores, 2) schools and other educational facilities, and 3) churches and other religious facilities.

Table 4-2-1 Relative Merits of Candidate Facilities

	Advantages	Disadvantages
NGOs (existing)	Performance of social preparations at the same time	Limited staff
Banks (existing)	Possession of know-how	Limited number, difficult to enter (daunting effect)
Commercial facilities (sarisari stores)	Found in all Barangay	Lack of safety and know-how
Educational facilities (elementary and middle schools)	Found in all Barangay	Difficulty of determining the locus of responsibility, lack of know-how
Religious facilities (churches)	Respect in the community, strong organization, record of achievement	Lack of know-how

As a result, it was decided that religious organizations would make the ideal choice as means of expanding MF availability. In addition, a study of corporate law in the Philippines reached the conclusion that it would not be illegal for a diocese to form a non-profit organization (NPO) to provide MF.

At present, the Isabella diocese consists of one bishop, 50 priests, and over 800 pastors. Each of the Barangay (800 villages) in the 37 municipalities has a religious organization known as a "cursillo". The St. Rose of Gamu CDCI constitutes a forerunning example (to be described in the succeeding pages) of an MF-related group that developed from this organizational structure. Dioceses still compare unfavorably with the existing groups in respect of know-how. However, if they absorb such know-how and instate appropriate systems of control, they should be fully capable of acting as MF suppliers. In fact, the head of the diocese is receptive to the idea and fairly positive-minded about implementing it. (refer to Table 4.2.1)

While the lack of know-how is the most important one, the following can also be cited as risks associated with the use of the diocese for this purpose.

- i) Because of the principle of separation of church and state, there could be a reluctance to have a diocese serve as an MF agency for cooperatives, RIC, IGRO, and other agricultural organizations instituted by the government.
 - ii) Because the name of the diocese itself could not be used, the concerned parties would have to organize an NPO and install it in the implementing agency.
 - iii) A certain preparatory period would be required before requesting the diocese to handle the details of MF operation, and the diocese would have to be given support in the initial phase.
- b) Use of the services of foreign advisors

Communities in the Philippines as a whole tend to be averse to having their shortcomings exposed to outsiders (and particularly foreigners), and to put great emphasis on their good points. A program keyed by this feature has already achieved success. In this project, the same idea could presumably be applied in the following areas. (refer to Table 4.2.2)

- i) Collection of debts
- ii) Training for credit management
- iii) Farmers Ownership Model Project (FOM)

(2) Project with Effects Emerging over the Medium Term - Good Payer Cooperatives

Good payer cooperatives (GPCs) could form over wide areas through fair organization of the good debt payers who may be found in subquality as well as quality cooperatives⁶. This task should begin with projects centered in the existing quality cooperatives. A cumulative CBU of at least one million pesos could be applied as a precondition, since the financial health of cooperatives with less could not be guaranteed.

The Epiphany and CAS MPCIs, for example, have essentially attained this level and already have a GPC status as far as governmental financial institutions are concerned. The former has a far-flung membership, and could be transformed into a leading unit merely with the incorporation of a slightly new scheme and standard. In addition, the former belongs to the same ARC as the Minagbag MPCIs (“Patay” in DCC survey), and the latter, the same one as the Andarayan MPCIs (also rated “Patay”). This suggests a sufficient need for the formation of a GPC. It may also be added that this direction would appear to be legitimate in legal terms, since there is nothing to prevent it in current law governing cooperative

⁶ As mentioned in the section on the problems of rural credit, even non-paying cooperatives have some members who are completely paid up. Conversely, even paid-up cooperatives have some members who are not paid up. Needless to say, the other members feel that the treatment of the latter is unfair.

organizations in the Philippines.

(3) Projects with Effects Emerging Over the Long Term - Formation of Competitors

Viewed from the long-term perspective of introducing the element of competition into the field of rural financing, the greatest potential belongs to privatization of the NFA, for which the government has high expectations. Although the post-privatization shape of the NFA has not yet been determined, the option of forming a semi-governmental, semi-private entity capable of competing with private-sector finance corporations is bound to surface once the details of the plan are worked out. This aspect is also treated in the section on the potential of the farm economy.

4.2.4 Farm Economy

(1) Potential Concerning Livelihood Projects

For farming families, it is not much trouble to cultivate green and yellow vegetables in the backyard. In reality, there are a few farms that grow and sell fruits and vegetables to the Barangay residents because they own only a small field, and reap more profit than larger farms growing only a single crop. The RIC in the San Ramon ARC has prepared a joint vegetable garden for cultivation by its members⁷. According to the BOD, the RIC operating costs are met by funds from sales of these vegetables.

According to statistics on the state level, there is already a fairly high incidence of conditions that may be partly attributed to a lack of vegetable intake, i.e., anemia (due to a lack of iron), nyctalopia (due to a lack of vitamin A and B complexes), and beriberi (also due to a lack of the same vitamin complexes). In addition, there has been a rapid rise in the number of people with high blood pressure and diabetes due to excessive intake of meat. These trends are behind the recent rise in the health consciousness of people in the Philippines. There is a deepening preference for safe and fresh vegetables in daily diets, and the demand for green and yellow vegetables, which are even now in short supply, is expected to expand substantially over the coming years.

Tilapia culture is a promising source of agriculture-related income. According to the DTI, the volume of tilapia production within the state accounts for only 3 percent of the state's entire consumption, and therefore has great possibilities. However, culturing business

⁷ One of the Rural Improvement Clubs, with a membership of 172 women. The DCC study as well found that it had among the highest levels of activity of all female organizations. The DA is leading organizational efforts.

Table 4-2-2 Good Precedent

This table presents an outline of the St. Rose of Gamu Credit & Development Cooperative, Inc. as exemplifying a potential direction for plans for farmers' organization and rural credit. The Cooperative was established in Municipality of Gamu in 1987 and currently has about 900 members.

1. Collection system employing foreigners

In Philippine communities as a whole, there is a tendency to prevent exposure of shortcomings to outsiders (and particularly people from other countries) and to push good points fully to the fore instead. The St. Rose of Gamu CDCI makes effective use of this tendency in its scheme for collecting debts. The cooperative was founded by a Belgian priest in 1987, and went on to build up the CBU amount, which was then only 4,000 pesos, to 6 million pesos. The priest personally accompanied the collectors on calls to collect debts in arrears, and the retrieval rate was close to 100 percent until he left the diocese in 1993. Although the bishop initially proposed the establishment of the cooperative, he played only an advisory role and never took any official position in it.

2. Exclusion of political intervention

To exclude political interference, the cooperative was organized from a Catholic group and receives absolutely no assistance from agencies of the Philippine government. The only official aid it receives is from the Belgian local government as part of official development assistance (ODA).

3. Avoidance of centralized power

For a wide-area development of cooperatives, the Diocese of Ilagan Development Council was inaugurated in 1990 and set up a league-type federation with jurisdiction over said diocese, which spans 37 municipalities. The parent cooperative is the St. Rose of Gamu CDCI. At present, it has subordinate cooperatives in a total of 11 municipalities. Although the head of the parent cooperative usually also serves as head of the federation, the BODs of member cooperatives are not allowed to fill this post. The federation is currently headed by the manager of the parent cooperative.

4. Incentives for collectors

At an early stage after the founding, the debt collectors were positioned as key members of the administrative department and given incentives for collection work. At present, they receive a monthly wage of 4,000 pesos.

5. Sufficient extensibility for the cooperative and circulation of benefit

Normally, credit cooperatives are permitted to extend credit only to members. The inclusion of the word "development" in the name enabled a more varied activity. To heighten the circulation of benefit, the cooperative lobbied the Isabella diocese to allow the succeeding priest as well to play an advisory role. Even today, the priest in charge of the diocese advises the cooperative.

6. Monitoring system

Because there are members in 11 municipalities, a liaison officer stationed in each Barangay is in charge of checking qualifications and monitoring activities after the provision of funding. The main items for checking are the authenticity and truthfulness of documents submitted for application, the existence of collateral, and the risk of relocation after receipt of the loan. The liaison officer is also in charge of collecting repayments, and can receive incentive pay of 50 pesos per month (a hike to 100 pesos is currently under consideration).

7. Foresight in the preparation of guidelines

The guidelines prepared by the cooperative with the advice of the priest incorporate all of the points noted above.

entails an immense initial investment, and only a limited circle of farms could embark on it. There is currently much culture of tilapia for sale in the Canan ARC, but only a little production that is not for sale in other ARCs. As such, the field is still underdeveloped.

Above-mentioned commodities have stable demand throughout year and farm households are purchasing them in cash on day-to-day basis. Therefore, they will contribute to reduce family expense as well as generate cash income if the excess of product is sold to others. Further those are able to cultivate in-between season of rice and corn harvest, as well as vegetation period which is relatively slack for the farmers. It normalizes cash generation throughout year.

(2) Potential Related to Provision of Funds to Women

The provision of funds to women is a traditional technique in livelihood projects for various reasons. As compared to men, women tend to be more conservative as well as to have a higher savings propensity and stronger sense of responsibility about repayment. In addition, because they are in charge of the household finances, provision of funds to them makes for a more direct and effective link with an improvement in the standard of living.

As compared to cooperatives or other organizations led by men, social preparations for women's organizations can be made in a relatively short time. Furthermore, because the purposes of establishment are "clean & green," "savings," and other aims that have no direct connection with traders, for example, the projects for a better life can be instituted without interference from third parties. Therefore, they can be launched and produce effects in a shorter time.

However, the degree of DCC vitality is low as compared to men's organizations because of the lack of material incentives and the vulnerability to dissipation. Consequently, the establishment of an entry project enabling women to gain income from livelihood projects for the betterment of life should further improve the organizational culture. This is thought to be a major reason for the high degree of vitality in the aforementioned San Ramon RIC.

(3) Potential of Infrastructural Conditioning with Fairness and Compassion

The ARBs in the Study Area contains some poor who would incur disadvantage by the progress of infrastructural conditioning. The table below shows the results of a survey of needs in the San Manuel ARC obtained by the "Pseudo Question Survey". At first, the Barangay captain, council, and cooperative asserted that the Barangay was united in desires for road construction. Nevertheless, the Pseudo Question Survey produced the following

results.

Table 4.2.3 Degree of “Want”

	Farm to Market Road	Solar Dryer	Mechanical Dryer	Irrigation
Eagerly want	19	23	16	14
Moderately want	2	2	5	1
Want	2		1	7
Not so much want	2		1	2
Not necessary	0		2	1
TOTAL	25	25	25	25
No.of Samples:25				

- a) The road construction was not equally supported by all people in the Barangay; indeed, two of the residents did not want it very much. Both of these two respondents were farmers with annual income of less than 10,000 pesos, and were thought to have little voice in the village. Neither was a member of the cooperative.
- b) In contrast, none of the respondents denied the need for the solar dryer, which had been cited as a second priority by the Barangay captain.

From the above, it can be seen that facilities such as roads and irrigation facilities do not necessarily benefit all of the farmers. Farmers who earn money by carrying cargo or hauling water may have to be provided with some kind of compensation in the interest of fairness and consideration. The following can be cited as potential measures to this end.

- a) Priority hiring for construction and maintenance of the roads and irrigation facilities
- b) A small amount of funding for a limited time, with a focus on this segment
- c) Exemption from the beneficiary burden of fees collected for maintenance and charges for gasoline used in the construction

The implementation of such measures can impart a sense of fairness to people whose income will be contracted by the facilities, and so act to reinforce the cohesiveness of the Barangay.

(4) Potential of Roads (convenient for farmers, inconvenient for traders)

The concept of the straw effect is not easily understood by farmers themselves. They are apt to believe that the Barangay will prosper if it is connected to a road on the order of an expressway. As described above, roads may benefit the majority of the villagers, but not all of them.

Farmer dissatisfaction with the current state of roads derives from fundamental

matters such as impassibility in the rainy season and use only by carabao; it is not on the order of unsuitability for high-volume transport in a short time. As such, the immediate needs for road improvement or construction should be regarded as on the level of tricycles and jeepneys. To increase convenience of use by farmers while limiting access by the four-ton trucks owned by traders, roads could be made as narrow as possible without impeding the operation of tricycles and jeepneys.

A major risk in this area is that the authorities in charge of road improvement may be reluctant to adopt standards differing from those of the past. However, besides lowering the beneficiary burden of the construction cost and maintenance expenses, and contracting the time required for construction, the biggest advantage would be curtailment of the straw effect.

(5) Potential Related to Wide-area Farmer Organizations and the Creation of Leading Organizations

In the Study Area and its vicinity, there are some farmers' organizations with an expanding regional scale. These are best exemplified by the Andarayan and Epiphany MPCIs. These cooperatives are already carrying out a "selection of brokers" as a counter to the "spell cast by traders". Ultimately, the formation of a wide-area network around such leading cooperatives could gradually weaken the hold of cartels of private lenders charging high interest rates. (This prospect was discussed in detail in the previous section.)

(6) Potential of Evolution from NFA Privatization to Countermeasures for High Interest rates

The current NFA capabilities and the orientation of future privatization point to the emergence of a farmer market network and the evolution of the NFA into a trading firm operated jointly by CARP-related agencies after its privatization. The potential developments for the NFA include the post-harvest processing facilities desired by cooperatives, a market network, and privatization. If it can play a leading role in breaking the hold of cartels as mentioned above, it would eventually be a means of countering high interest rates.

The biggest risk in this connection is the uncertainty of coordination among the concerned agencies¹. The measures would definitely not be unworkable if the project can be

¹ Through various projects, the government has long provided support for improvement of farmer income in two aspects: an increase in production and reduction of production costs. As for sales, on the other hand, there are areas in which there can be no improvement without an introduction of know-how from private sector. Of these three elements, the contraction of production costs and increase in the value of produce shipments have been least amenable to the long-standing efforts of improvement by the government (as far as actual results are concerned).

skillfully meshed with the decision-making system in the Philippine government, which operates "from the top down." Instead of depending on advice from the government, efforts to counter high interest rates should be based on capital participation by the concerned governmental agencies in the privatized NFA, so that funds could be obtained at more reasonable rates than procuring from international institutions. The involvement of the national government would also enable preparation of the requisite legislation.

4.2.5 Supporting System

(1) Improvement of DARPO's Supporting Capacity

Improving the capability of the DARPO as well as the organizational structure is essential. One of the potentials is that the training agencies such as CAVALCO, which have shown achievements in strengthening institutions, and NGOs working for community development such as ISU and PLAN International, could be involved. Another potential is that "ARC Development Project (ARCDP)" supported by World Bank has the project office in the DARPO and have accumulated similar but advanced experiences. As this plan stresses the raising consciousness of farmers and officials at the first step and the step-by-step implementation, time can be afforded until the construction of the facilities actually begins. During the time afforded, employment of capable human resources or placement of specialists can be executed.

The ARCDP of the World Bank adopts "Farming System Development" approach established by FAO and makes use of it in the preparation of ARC Development Plan. The FSD approach consists of six (6) phases from "Barangay Workshop Consultation" to "Monitoring and Evaluation Related to the Implementation of the Project." The FSD Team consists of the DARPO officials, MARO, DF, Municipal officers such as Municipal Agriculturalist, MPDO, Municipal Engineer, leaders of the farmers, representatives of farmers' organizations and NGO, etc. The FAO local officers and DAR officers trained by them direct the FSD team to conduct the problem analysis and prepare the ARC Development Plan. In principles, it takes two months until the ARC Development Plan is drawn out. This approach surely is time-consuming and intensive. Yet this is effective in a way that stakeholders including the beneficiaries, can actively participate to the development process.

The DAR has experienced learning community development and means to motivate people through the FSD approach. To use those experienced human resources for this plan,

Needless to say, this is because of the existence of traders as non-public-sector intermediaries. Thus far, virtually no projects have focused on implications of this intermediation by traders. This, in turn, is a result of the complexity and sensitivity of the problem, which has led to rather frequent political intervention.

the FDS approach will be applied to the preparation of ARC Development Plan. Yet this plan does not have to spend six (6) phases nor two (2) months of the original, but teaching the FDS concepts to related persons or utilizing the FDS method in workshops with the beneficiaries will be sufficiently effective. In the feasibility study, an expert in the DAR conducted a five-day workshop in 2 ARCs as the modulator. As a result, consciousness of the farmers and officials of the DARPO toward development was raised and the effect of the FDS approach was confirmed.

(2) Coordination among the Related Agencies

The DARPO has already a proposal of “MAMB (Municipal Agrarian Reform Management Board)” as the coordinating agency at the municipal level, which is an organization in place of the current MCIT. The municipal mayor will be the chairman while MARO will be the vice chairman of the MAMB, in which the activities at the municipal level would be controlled and facilitated much effectively. “PAMB (Provincial Agrarian Reform Management Board)” will located at the provincial level to supervise the MAMBs established in each municipality. The governor of the province will be the chairman, and PAROII, the top official of the DARPO, will act as the vice chairman. The PAMB is also expected to serve as an organization replacing the ineffective PCIT. The supervision of the PAMB and MAMB will be facilitated through the establishment of the PMO.

To raise the mobility of DFs, motorcycles will be used. There already was a plan in the DARPO to support DFs to purchase motorcycle with no interest and utilize it for work. This master plan will also introduce the same system.

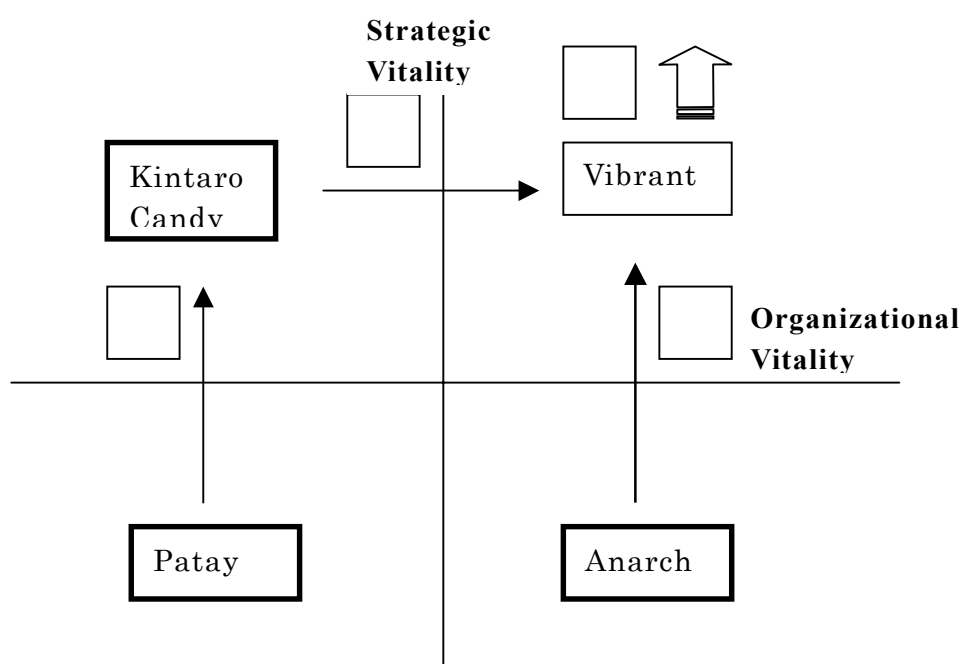
(3) Improvement of Farmers' Consciousness

Micro-Finance (MF) projects, in which social preparation training and project implementation are in pairs, are conducted in the Study Area. Many agencies are able to conduct trainings like such. The risk of MF is relatively low since it does not require much investment. It does not require collateral, and instead requires joint responsibility of farmer borrowers. The farmers are able to learn the importance of “mutual responsibility”. To assess whether farmers are eligible to get financed, they have to pass an oral test, and this opportunity would make them raise their consciousness. Many organizations such as CAVALCO, BIDANI, and some Barangay MPCIs are already implementing MF projects and have shown good repayment records.

4.3 Scenarios on Organizational Vitalization

4.3.1 Scenarios on Vitalization of Farmers' Organization

Scenarios on vitalization of farmers' organization in the Study Area is formulated taking into consideration the result of aforesaid "3.10 Diagnosis of Organizational Culture" and the potential of farmers' organizational development. These are as follows:



(1) "Patay" "Kintaro Candy" (Scenario)

- From the result of analysis at "3.10 Diagnosis of Organizational Culture", the following directions can be analyzed:

Scenario on "Kintaro Candy" "Patay"	Direction on "Patay" "Kintaro Candy"
<ul style="list-style-type: none"> • Failure of business • Sense of unfairness and profitless • Do not join, do not cooperate 	<ul style="list-style-type: none"> • Reorganization of cooperative • Restructure of coverage area • Reduction of trigger points that caused scenario

- Practically, after the implementation of SP, by-laws and policies of cooperative are rearranged. Toward the cooperatives with unpaid loan, rescheduling of loan repayment are undertaken, and then repayment is gradually realized keeping the sense of fairness under the strong leadership of coop officials.
- The reduction of trigger points is reflected in the following developments:
 - a. Foster high expectation on indemnity and production implementation of the project which affect the external problems, and improvement of existing system of the government.
 - b. Less power of leadership by coop officials Leadership training, and establishing rules.
 - c. Dispersed capability and desire of coop members Social preparation (SP)

(2) "Kintaro Candy" "Vibrant" (Scenario)

- From the result of analysis at "3.10 Diagnosis of Organizational Culture", the following directions can be analyzed:

Scenario on "Kintaro Candy" "Vibrant"	Direction on "Kintaro candy" "Vibrant"
<ul style="list-style-type: none"> • Success of business • Sense of fairness and profit • Enhancement of communications 	<ul style="list-style-type: none"> • Stability of income (irrigation facility, increase land holding area, increase income) • Success of coop business (establishment of a network with NFA, income generation from common resource, obtaining of loan) • Unification of will of coop members and sharing of common target • Maintenance of high level of leadership

- Practically, while applying SP continuously without losing high level of leadership and common target, the cooperative should tackle to new business under consolidated rules.
- The projects which will improve external environment are as follows:
 - d. Stability of income Irrigation projects, agricultural development such as collective production and crop diversification, introduction of high valued crops, livelihood project

- e. Establishment of project livelihood project as the entry point of coop business
- f. Success of project Technical assistance, marketing support, verification project which exhibits the procedure of success

(3) "Anarchy" "Vibrant" (Scenario)

- From the result of analysis at "3.10 Diagnosis of Organizational Culture", the following directions can be analyzed.

(1) Scenario on "Vibrant" "Anarchy"	Direction on "Anarchy" "Vibrant"
(2) Scenario on "Kintaro Candy" "Anarchy"	
Scenario (1)	Direction (1)
<ul style="list-style-type: none"> • The business is successful to some extent and the cooperative find fame for its success. • Limit of management capacity by increasing the coop member. • Decrease of "Strategic Vitality" by increasing members of scattered desires. 	<ul style="list-style-type: none"> • Sustainable expansion of business and success. • Continuous SP • Establishment of rules to regulate whole members (policies, personnel administration system)
Scenario (2)	Direction (2)
<ul style="list-style-type: none"> • The cooperative is established where the members' income level is high and has convenient information access. • The members have scattered desires, but no discussion, no cooperation is given. 	<ul style="list-style-type: none"> • Unification of members' will by SP, restructure of coop business • A series of training • Business support and promulgation of success stories

- Direction (1): It is necessary to rearrange the coop's by-laws and policies while continuously applying SP. In this stage, a higher level of by-laws and personnel administration system should be introduced in order that more members can participate to coop business and discuss about it smoothly without reducing "Strategic Vitality". It is necessary for this development not to change the way of administration, the rules of members should be formed in written format and gradually officials should unify the will and

target of the cooperative.

- To realize sustainable and circulative business development, application of business related training and technical assistance should be made based on the level of development.
- Direction (2): Through application of SP, the consistency of members' desire and target should be defined. It is also necessary for members to comprehend what is necessary for the cooperative through the implementation of a series of business related training. If necessary, restructuring of coop business, or pigeonholing of business development is needed taking into consideration the members' desire and qualification.
- Rescheduling of unpaid debt is necessary for the cooperatives in question. The officer in charge (external advisor is preferable) should take strong initiative and ask repayment from the borrowers in a fair manner.
- After the completion of repayment, aforesaid officer should draw from front line, and advise the coop members to strengthen the cooperative by the members' own initiatives.

(4) "Vibrant" "Area wide cooperative" (Scenario)

- Area wide cooperative indicates the federation formed by several independent cooperatives and it covers the broader administrative boundaries. While having independent businesses, the cooperative can have diversified financial sources and a variety of development know-hows for the big project, which will be implemented collectively.

Scenario on "Vibrant" "Area wide coop"	Direction on "Vibrant" "Area wide coop"
<ul style="list-style-type: none"> • Stability of coop business, repayment of loan without problem, healthy balance sheet • While increasing the number, the member is active in communication • Enhancement of communication with adjacent cooperatives, and both parties share the advantages. • Aiming for a big project, adjacent cooperatives synergize in order to procure finance collectively. • The project is managed collectively based on the clear allocation of role. 	<ul style="list-style-type: none"> • Support of coop business for self-sustenance. • SP for recognition of merits on synergizing each other. • Promulgation of development process on which precedents are based to adjacent cooperatives. • Organization of cooperatives for the implementation of collective project. • Collective bargaining of finance by forming an area wide federation. • Collective operation of the project and expansion of business line through increasing members' income level.

- Practically, after the application of SP, the recognition of benefit accrued through the collective bargaining by several independent cooperatives are necessary. For this, the promulgation of development process and benefit on which precedents are based is needed.
- Also a series of training that enable each cooperative to plan, negotiate and operate should be provided.

4.3.2 The Reflection to Operation and Maintenance Plan

Judging from empirical facts obtained from DCC, the cooperatives at "Vibrant" or "Kintaro Candy" field are able to operate and maintain the facilities, while those who are belonging to "Patay" or "Anarchy" field have a tendency to fail. This fact generates the idea that all farmers' organization should not be dealt with equally in terms of operation and maintenance of the project.

The movement of the organization analyzed from time series analysis is also an important factor. Even though being positioned to "Anarchy" or "Patay" field, there are some cooperatives which have been reorganized newly by the eager BODs. Most of these are pouring the effort to repay overdue loan. It is necessary to allow such movement in case of selecting of development plan.

Taking into consideration these analyses, "Organizing Module" that copes with the stage of organizational vitality is defined. By synchronizing organizing module with operation and maintenance schedule, sustainable and viable plan must be secured (refer to "6.8.2 Farmers' Organization Development Schedule").

Chapter5

Guidelines for ARC Development

Chapter 5 Guidelines for ARC Development

5.1 Major Issues and Objectives of Development

As stated in “Chapter 4 Directions and Potentials for Development”, the most important issue that has been considered in ARC Development is the low income of ARBs. More concretely, the incomes of the ARBs, the CARP beneficiaries, remain low despite the achievement of land distribution. In the 21 ARCs, it was identified that the low income of ARBs has directly been caused by the following problems:

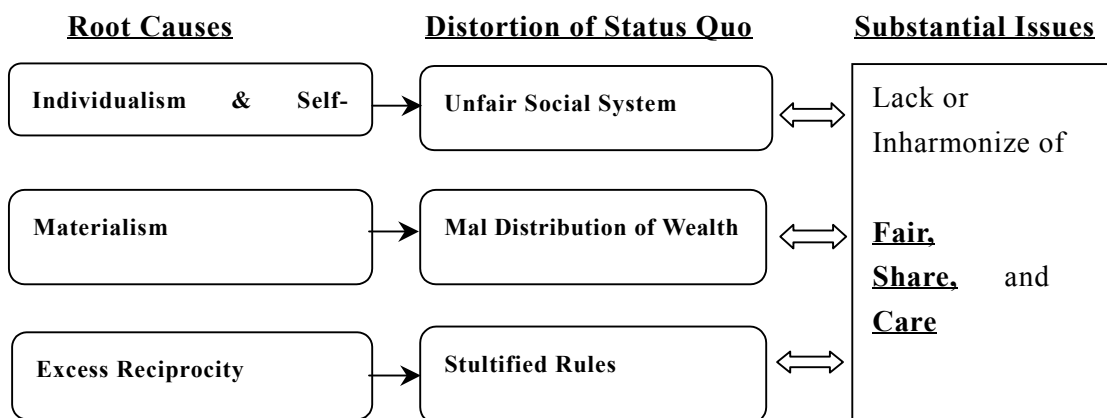
- 1) Low Farm Productivity
- 2) High cost of production
- 3) Low price of farm products
- 4) High interest rate of the private lenders
- 5) Unstable household economy
- 6) Insufficient supporting system for ARBs

Thus, the ARC Development shall aim for “the increase of ARB’s income” and the above six (6) problems must directly be addressed. Each ARC has the different problems with various degrees of seriousness, and therefore the development plans of each ARC will be drawn out individually. The development concepts and basic approaches mentioned below will be considered as the guidelines for ARC development.

5.2 Development Concept

(1) Three Essential Factors for Development

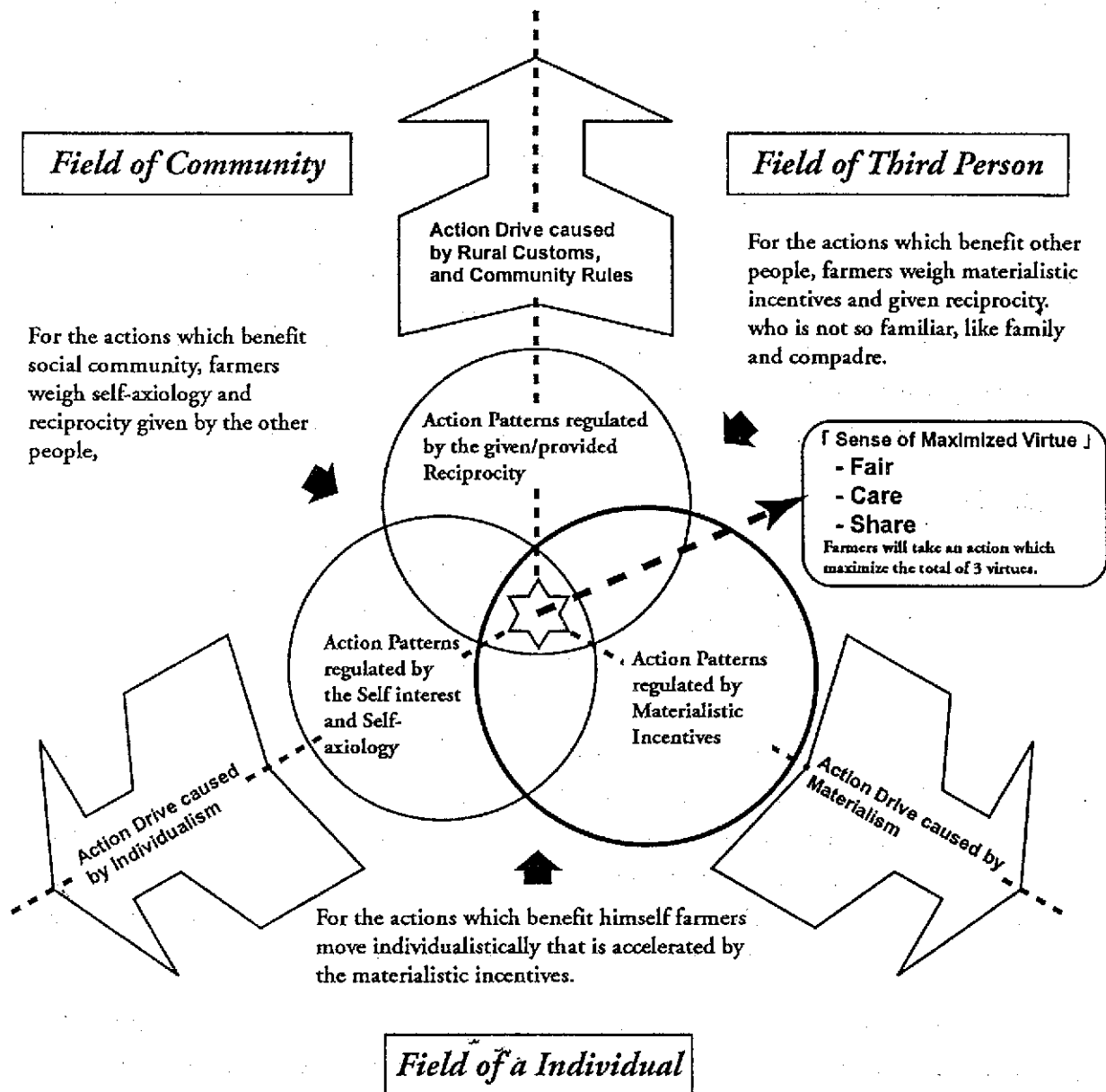
Based on the analysis on root problems stated in section 3.9 above, the following considerations were made.



Farmers' community, in general, maintain some sort of sense of virtue which consist of "Fair", "Care", and "Share". This virtue will be maximized when individualism, materialism, and rural custom are harmonized. If farmers have the sense of fair, care, and share, farmers can manage the common resource in a quite cooperative fashion and sustainability could be expected. The image is shown in the Figure 5.2.1 in the succeeding page.

Figure 5.2.1 Factors on Action Drive for Farmer Beneficiaries

[Sense of Virtue] = Maximization of the Total "Fair", "Care", and "Share"



In this case, looking at the "Field of a Individual" for example, it will be regulated by the power balance of "individualism" and neighboring "Materialism". The balance of "Materialism" and "Rural Custom" rules out "Field of Third Person". Further, "Field of Community" seems to be regulated by the power balance of "Individualism" and "Rural Custom".

The actions attributed to three types of distortions (shown as symbols of big arrows) make a smaller area of virtue, which is shown, in the center of the image picture. First distortion originated from “materialism”, second one is attributed to “individualism”, and third one is caused by “rural customs”. Accordingly, by adding opposite direction of power (that is project), it enables to enlarge the area of virtue. The power which maximizes the sense of virtue, is Fair, Share, and Care (refer to above-mentioned figure).

Putting an eye on the axis of “actions driven by individualism”, the right area between this axis and “actions driven by materialism” is considered as “area of oneself” because both axis influence directly to own farm budget and business. While the left area of both axis is named “area of public” and the opposite area between “actions driven by materialism” and “actions driven by rural customs” is deemed as “area of third party (other individual)” in the sense that the area intermediates oneself and public. Thus, in this case, it is perceived that “area of oneself” is regulated by one’s sense of value and material incentives. Similarly, the material incentives and the linkage with rural community govern “area of third party”, and one’s sense of value and linkage with rural community control “area of public”.

(2) Development Concept

Based on the above mentioned analysis, development concept is set as;

*Sustainable Development with Optimum Portfolio of
"Fair", "Care", and "Share"
for the Beneficiaries*

It is considered that the regulation of one distortion out of the three is not enough. For example, the control of "action toward Materialism" under alleviation-of-poverty project may take effect to accelerate the action of “ A Individual" and "Third Person", however it will not work directly as an action driven for the "Community". Thus it is important to focus on the three axis simultaneously, otherwise, the project will not satisfy farmer's sense of virtue, namely Fair, Care and Share. (refer to above-mentioned figure)

In order to secure the sustainability, this project will focus on the sense of farmers' virtue. Accordingly, each project component considers how it could maximize the sense of "Fair", "Care", and "Share".

5.3 Basic Approaches of Development

5.3.1 Approach to Increase of ARB's Income

The following eight (8) approaches were proposed in Chapter 4:

- 1) Agricultural Development (to extent appropriate agricultural technologies)
- 2) Farmers' Organization Development (to strengthen farmers' organizations)
- 3) Irrigation Development (to supply irrigation water)
- 4) Post-Harvest Development (to improve the rate of production recovery)
- 5) Road Development (to lower the hauling cost of farm products)
- 6) Rural Credit (to lower the interest rate of available credit)
- 7) Livelihood Development (to have alternative income generating activities)
- 8) Management Capability Building (to enhance the capacities of the ARBs as well as the related institutions)

Of the eight approaches, Agriculture Development and Farmers' Organization Development will be the core of the ARC Development Plan. Agricultural and rural infrastructures such as irrigation facilities, post-harvest facilities and farm-to-market roads will be planned and provided for the support to the extension of appropriate agricultural technologies, and eventually to increase agricultural productivity. The post-harvest facilities will also improve selling prices of farm products, and farm-to-market roads will contribute to reduce cost of production as well as improve selling prices of farm products. The extension of appropriate agricultural technologies and the provision of irrigation, post-harvest and farm-to-market road facilities are called "Agricultural Development Scheme."

"Strengthening of farmers' organizations", the windows of the external supporting services, is crucial for maximizing the outputs of the development projects. It will ensure the operation and maintenance of the facilities and the application of extended technologies and information to all the beneficiaries. This is also important for raising the sustainability of the projects. This approach is called "Farmers' Organization Development Scheme."

"Expansion of rural finance" will aim to improve the access of the farmers to rural finance, and decrease the interest rates of available loans. As a result, economic

conditions of the ARBs will gradually be enhanced. Expansion of rural finance will facilitate beneficiaries' agriculture and other economic activities, and also mitigate the risk for the poor to become poorer due to disasters or diseases. Since farmers' organizations will increase members with improved economical conditions through financing, particularly those motivated will be most developed, this could be a show case and be able to pull other farmers along them. This is expected also to contribute for improving consciousness of farmers' organizations and eventually vitalize them.

“Extension of income generating activities” will concentrate on the extension of applicable technologies on vegetable, stock and inland fishery to the beneficiaries, aiming primarily to reduce costs on food and improve the household income through the selling of excess products. The capability building plan will provide training to the beneficiaries and the staff of related agencies and NGOs, to ensure the implementation of all the proposed approaches. Social preparation program required for the consciousness improvement of beneficiaries and officials of related agencies is included in this plan. Extension of rural credit, expansion of income generating activities and management capability building plan are called “Development Support Scheme.”

5.3.2 Area-based ARC Classification

Although the final goal is “to raise income”, means to achieve the goal must differ ARC by ARC according to their area specifics and conditions. The related policies and the application to the master plan are explained below.

(1) Convergence Strategy for Sustainable Rural Development

“Convergence Strategy for Sustainable Rural Development” is a part of the development policies. Government agencies related to rural development are required to cooperate and complement each other to strengthen the activities in “convergence zones”. “Convergence zones” are the areas which investments and technologies are integrated by the related agencies that have to share their roles clearly, so that rural development will be implemented effectively and efficiently. The DAR, DA, DENR have formulated a “Convergence Strategy for Sustainable Rural Development”, in which three (3) agencies has identified nine (9) regions spanning 29 provinces as “convergence zones” and invest their resources in developing models for sustainable rural development.

In general, these zones consist of prime agricultural, fishery, forestry, or watershed areas with high poverty incidence and critical ecosystems, but are

strategically important to meet production, processing and marketing requirements for greater agricultural productivity. In those convergence areas, the three (3) agencies are expected to coordinate the following subjects at the national and local levels:

- i) Natural resource management systems
- ii) Integrated farming systems
- iii) Micro-finance delivery
- iv) Agro-industrial investment schemes
- v) Research and development
- vi) Extension and technology development
- vii) Capacity-building and organizational development communities

(2) DAR's Guideline for ARC Classification

ARC development will be located in both convergence zones and other outlying communities. In the "Memorandum Circular 5 (MC5)", the DAR has established the following three (3) classifications for clustering ARCs to effectively address specific concerns in each cluster:

a) Prime Agricultural Areas

The convergence zones will concentrate on the prime agricultural areas, where there are huge agricultural lands and large number of small farmers and farm workers. These areas have a potential of becoming the "production centers" for various crops by absorbing high technological inputs. High productivity and high income could be expected. In common, economic infrastructures such as irrigation and farm market roads exist.

b) Marginal Areas

Areas outside the convergence zones will be developed as self-reliant, self-sustaining, small-holder's agropolitan models. The ARCs are the marginal areas, with low soil fertility and low production, inadequate facilities, limited access to government services and farmers producing more for subsistence than for commerce.

c) In-Between Areas

The in-between areas are where ARCs have scale of production but do not meet market demand. The lands are not fully utilized and there are limited economic infrastructures. These areas would be developed to provide production support systems to the convergence zones and would serve as mid-processing or market centers for the marginal areas.

(3) Area-Based Development Strategies

In order for the policies and principles of the government related to ARC classification to be reflected to the plan, this master plan will divide ARCs into three (3) areas, which are the prime agricultural area, marginal area, and developing area. The applications of the development plans to each area should vary according to the characteristics and needs of the areas. Specifically, access to the political and economic centers of the area, agriculture productivity, and progress of the development, etc. will be taken into account. The characteristics and basic development strategies are as follows:

a) Prime Agriculture Area

In principle, the prime agricultural area is the rice-growing area and should already have the potential of attaining high agricultural productivity. Facilitated with high technological inputs, high income could be generated. At the same time, the scale of agriculture in the areas could be expanded with relatively easy access to markets as well as other production and/or processing areas or groups. As a result, more integrated agriculture such as integrated farm management, agro-processing, etc. could be realized in the long run. Produced rice could be shipped to cities beyond the Region II. As there should already exist adequate or nearly adequate economic infrastructures, investment would be more for capability building rather than physical infrastructures. The capability building would include extension services for various agriculture crops and activities, institutional development for responsible organizations and farmers' organizations, promotion of high-income generating activities other than agriculture, etc.

b) Marginal Area

The marginal area for the master plan should be defined as the area remote from production and market as well as political centers due mainly to poor road conditions and distances. As a result, the area hardly receives supports, which would significantly contribute to low production and low income of the area. Most of the farmers rely on subsistence-level agriculture. The development focus should therefore be more to increase their agricultural production to meet their subsistence continuously. In addition, it should be necessary to formulate various preventive measures for them from being further trapped by poverty. As infrastructures are severely limited in the areas, investment would be more for those infrastructures necessary for food production. The assistance of credit and livelihood development would be incorporated depending on the conditions of the areas.

c) Developing Area

The developing area for the master plan will be the area located between the prime agricultural and marginal areas. Rice production will be promoted whenever possible, and crop diversification from corn to commercial products such as vegetables, fruits, wood, flowers, etc. will be planned in other areas. The surplus of the produce will be shipped within the region. Since the development of

farmlands and agricultural infrastructures is scant, the potentials to develop them are higher than other areas. The development strategies would incorporate both infrastructure and capacity building in balance, aiming at the improvement of agricultural production. It would also be possible to promote off-farm income generating activities in some places, although it would be at the limited scale.

5.3.3 Social Preparation

Raising consciousness of the beneficiaries and the officials of the related agencies will firstly be addressed in the implementation of the development plan. Raising consciousness is an awareness raising and education through the provision of social preparation training. Other development plans will be implemented step-by-step after the raising of consciousness is achieved. As explained in Chapter 3, consciousness lies as the backgrounds of the outbreaks of many problems. In order for the supporting services to attain the expected outcomes, improving such consciousness is a must.

The DARPO has been implementing social preparation aiming for the improvement of consciousness as one of the basic policies of CARP's beneficiaries development. The degree of improvement of the consciousness of the beneficiaries, in reality, was so far not the focus of the attention, but the number of training that was provided was the main focus.

In this plan, the first step to improve consciousness is to make the beneficiaries be aware of the backgrounds of the problems and then to pull out their commitments for development. For example, construction of facilities such as farm-to-market roads is usually the main concern for farmers, but the prime focus of this plan will be given on their minds and capabilities; the beneficiaries should understand the reasons why those facilities become necessary, set up the appropriate Barangay structures that enable the operation and maintenance of the facilities, and show their will to make an effort for it.

When the support services are provided after such consciousness improvement is achieved, the beneficiaries will be able to absorb, utilize, and maintain facilities and services. That eventually will lead to their self-reliance.

“Sense of ownership” toward facilities and services will also be raised through this process. The beneficiaries will come to understand that development projects are not only the public properties provided by the government, but also the valuables, which belong to them and they themselves, must be responsible for.

To prepare a step-by-step implementation schedule of the projects, the proposed development plans will be classified into some groups according to the beneficiaries of each plan, kinds of social preparation needed, and kinds of farmers' organization responsible for the operation and maintenance.¹ Social preparation trainings will basically be conducted through the existing farmers' organizations in communities. The proposed plans will be implemented after the improvement of consciousness and the capability of the relevant organization(s). The implementation schedules for each ARC will therefore differ.

The implementation schedules for each ARC will be divided into three (3) stages to make sure the goals of each stage to be achieved. The following time spans are set:

Short Term Development:	Achievement within five (5) years
Medium Term Development:	Achievement within ten (10) years
Long Term Development:	Achievement within 20 years

¹ The details of the implementation schedule are shown in 6.8.