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9. ABSTRACT

The purpose of this research is to assist the AID mission in the Philippines by offering a workable definition of the rural poor majority and also to assess the actual and potential social and economic impact of AID assisted projects on this group. The report discusses the findings and recommendations resulting from the research and observations of the research team. The main body of the report concerns data on the rural poor from documentary sources and from the field research. The case studies collected for this study reflect social differentiation in telling how the styles of life vary among the poor in rural Luzon. They also reflect some significant variations in the styles of life among the poor in the Bicol Region and those in northern Luzon. The studies also indicate the way that various factors, such as income, expenditures, nutrition, education, social activities, and geographic setting are interrelated in any given context. They reveal that remittances from grown children who have left home are an important source of income for elderly poor. Large families are a form of social security, and this affects family planning programs. The cases also illustrate the complexity of income and expenditures among the rural poor. In most cases the poor had so many different sources of income and they were so mixed between cash and noncash sources that people really did not know what their incomes were. It is essential that social soundness research be conducted at the very outset of any program planning so that the findings can be included in the early formulation of the programs. A continuing surveillance of programs for social soundness once they reach the implementation stage would also reduce the likelihood that unintended negative effects might occur once the programs were underway.

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THE RURAL POOR MAJORITY IN THE PHILIPPINES; THEIR PRESENT
AND FUTURE STATUS AS BENEFICIARIES OF AID PROGRAMS

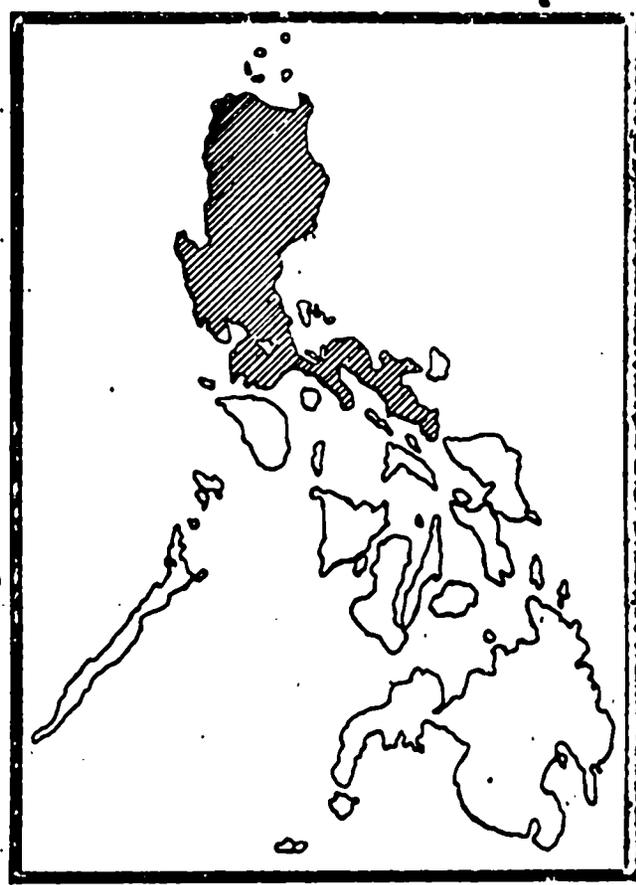
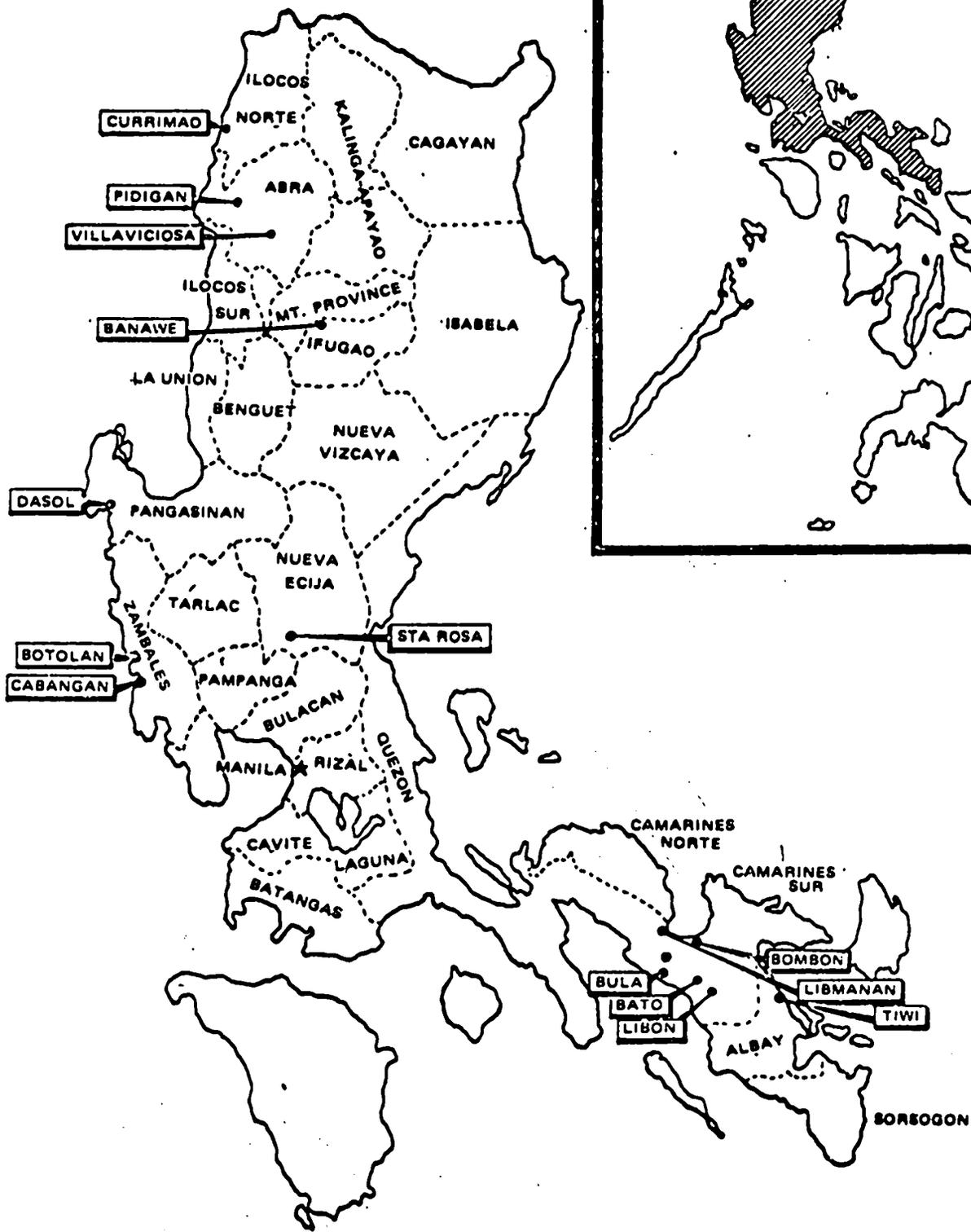
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I. PURPOSE AND METHODOLOGY OF THE STUDY

The stated purpose of this research was to assist the AID mission in the Philippines by offering a workable definition of the rural "poor majority" and also to assess the actual and potential social and economic impact of AID-assisted projects on this group.

The research team was composed of Gerald C. Hickey, and anthropologist, and Robert A. Flammang, an economist. The research team received three days of briefings at the AID offices in Washington, D. C. prior to departing for the Philippines in mid-June 1977 for a two-month period of research in Manila and in rural areas. Enroute to the Philippines, additional consultations were conducted with experts in Chicago, Los Angeles, and Honolulu.

An initial phase was spent in Manila focusing on documentary materials concerning the poor as defined by various government, AID, and private sources. On the basis of this investigation, it became clear that defining the rural poor majority required two approaches:

1. For the purposes of the AID mission, an absolute measure was required and we settled upon a figure based on expenditures for a family of six.
2. In order to understand the differentiation that exists among the rural poor (the quantitative approach tends to treat them as socially undifferentiated segments of the rural population) and to gain some insights into the condition of the rural poor by examining the milieus in which they live, it was necessary to gather actual cases of poverty in several rural areas.

To implement the second approach, field work was conducted in rural regions of Luzon (the Bicol River basin the south and province in the northwestern region). Cases were collected among the rural poor (See Table 1). Information was gathered on family composition and ages, all sources of income (including such things as food gathering and hunting on which there has been little reporting), family expenditures, education, health, social events (family celebrations, barrio festivals), and access to transportation. We also elicited information on their outstanding problems, needs and desires, and their opinions regarding some AID-assisted projects and government projects. There also were discussions with other informants, such as missionaries, Peace Corps volunteers, public officials and technicians concerning local socioeconomic and ecological conditions.

During our research in the Bicol region, we also visited various projects and local industries. Two water purification plants (Frankel filter units) constructed with AID support near Naga City, Camarines Sur Province were visited and data on them were collected from local residents. At Santo Domingo in Albay Province, we visited a handicraft

cooperatives, affiliated with the National Cottage Industry group. Also in Albay Province, we stopped to see a copra oil plant in Legaspi City, a small factory producing hand-made scissors, knives, and razors in Tobaco, a diesel electric plant in Tiwi, and a Geothermal Electric Power Plant in the same place. Notes also were taken on a blacksmith producing knives (including bolo knives) near Ocampo in Camarines Sur Province. The data from these visits are presented in Appendices B through F.

After formulating some tentative conclusions, we discussed them with various AID mission officials in Manila. These included staff members of the Mission Director's Office (including the Mission Director and Deputy Director), the Agricultural Development Division, the Human Resources Development Division, Capital Development, Provincial Development, the Program Office, the Regional Development Office, and the Project Officer of the Bicol River Basin Project.

On the basis of our over-all research, our observations, and our discussions, we have formulated a set of findings and some recommendations concerning the rural poor and how we think that future AID programs could benefit them. These findings and recommendations are summarized at the beginning of this report. The main body of the report concerns data on the rural poor from documentary sources and from our field research. Combined, these data tell us a great deal about the condition of the poor.

We would like to express our thanks to those who have helped make our research in the Philippines a productive endeavor. Those in the AID office in Washington who assisted were Vance (Lani) Elliott and Robert Meehan. In the AID Mission in Manila, Donald Dembowski, Mario Feranil, Maybelline (Bobsie) Vargas, and William Jansen lent assistance. During field work in the Bicol River Basin region, we received considerable assistance from Don F. Wadley and our interpreters, Marlon Ragraio and Jose Valiente as well as from our driver, David Tolidana. In northern Luzon, our research was aided greatly by Michael Bengé, our interpreters, Aurora Amayao, Erlinda Maxino and Lolita Tadeo as well as our driver Laureano Ifurung. In Ifugao Province, Erlinda Carlug was very helpful in providing information.

The map included in the report was prepared by Vic. G. San Jose, Chief Artist in the Communications Media Division of AID Manila.

We also would like to thank Frank Lynch S. J. for his assistance, data, and advice on field research, and in arranging meetings with Filipino social scientists. Finally, we would like to thank the rural poor families that provided us with our case information. We learned a great deal from them.

II. SUMMARY OF FINDINGS

General Finding Regarding the Poor as Beneficiaries of AID Programs - We found that there is a very definite potential for AID-sponsored programs to benefit the rural poor majority than they do at the present time. The realization of this potential rests to a great extent with the willingness of the AID Mission to determine through field research the real needs of the poor in satisfying the requirement to assess the social soundness and to design the programs from the outset with the goal of satisfying these needs. This is especially necessary when capital-intensive infrastructure projects are being planned. It is not commonly accepted that the old assumption that the benefits of such projects would automatically "trickle down" to the poor is often invalid. Some such projects do have the effect of benefiting the poor, but some do not (and indeed might have a negative effect). Social soundness research can help to distinguish between the two.

Subsumed under this general finding are a series of more explicit findings.

A. Regarding Definitions of Poverty. - Of all the definitions of poverty, we prefer the ones which stress absolute deprivation in the sense that people do not have enough food, shelter, and clothing to live in minimum decency. We, therefore, suggest that the rural poor majority be defined by beginning with their food needs on a family basis, adding a reasonable percentage to allow for non-food purchases, and converting into an equivalent money figure for total expenditures. This money figure should be adjusted to allow for regional differences in price levels and family sizes. For the rural Philippines as a whole, we would define the poor majority as any family of six whose total expenditures in 1975 fell below P 9115, or P9000 as an approximate figure. This works out very close to \$200 per capita expenditure per year. We prefer the expenditure figure to income figures because our field work convinced us that income figures are substantially underestimated and because expenditures are a better indicator of how well people live than income figures are. We recognize that any figure is arbitrary by its nature, but we believe that the suggested approach is less arbitrary than most. (For more on this subject, see Section 4A.)

B. Social Soundness and the Perceptions of the Poor - We found that two types of field research were well suited to determining the social soundness of programs aimed at benefiting the rural poor majority. One of these was the type of field survey that was conducted by Frank Lynch and his colleagues from the Social Survey Research Unit^{1/} concerned

^{1/} Lynch, S.J., Frank, Jeanne F. Ilo, and Jose V. Barrameda Jr., "Let My People Lead: Rationale and Outline of a People-Centered Assistance Program for the Bicol River Basin," Social Survey Research Unit, Institute of Philippine Culture, Ateneo de Manila University, Quezon City, 1976.

with the wants and desires of the rural poor in the Bicol River Basin Region. Another study in this category is the field survey done by the Social Research Associates (SRA) to achieve a quantitative description of the poor majority.^{1/} The second type of field research we favored was the case study approach, such as that used in the present research.

The survey by Lynch et al concerns the social soundness of AID-assisted projects in the Bicol River Basin in southern Luzon. This survey approach was based on the notion of letting "the people lead and the experts follow." As such, one of its goals was to determine through a field survey what the poor in the Bicol perceived as their outstanding needs (such things as water management, jobs, were primary). Lynch et al not only determined the needs as the poor see them, they also outlined a procedure wherein the poor and the experts would work together to devise feasible means for implementing the programs so that they will ultimately improve the quality of the poor people's lives (through four intermediate goals: increased household income, more equal distribution of income, improved nutrition, and increased and more meaningful participation in community decision-making).

Unfortunately, we found that little of the data from this survey was used in the social soundness assessment for the Bicol River Basin programs. Furthermore, the procedure suggested by Lynch et al clearly did not influence implementation of these programs.^{2/}

The SRA survey noted above also is useful in providing quantitative data concerning thresholds of poverty, geographic distribution of the poor, and some statistical information on nutrition, education, and some occupations of the poor (including farmers, farm laborers, fishermen, hunters, loggers, various types of manual workers, and workers involved in service jobs).

We found that while quantitative descriptions of the poor have certain uses, they also have the disadvantage of not imparting any information on the social differentiation that exists among the poor in any given category (e.g. nation, region, or occupation). Nothing is said about the varying styles of life within these categories. In any given region, for example, what are the different kinds of poverty? Is poverty the same for all tenant farmers? What difference is there between the very poor and those better off? Another failing in the statistics, we noted, is that they do not inform us how such things as income, occupation, education, nutrition, and other indicators are related to one another in any given milieu. To summarize, the quantitative data really do not reveal very much about the condition of the poor.

1/ Social Research Associates, "An Analytic Description of the Poor Majority: Project Report I-B," Manila, May 1977.

2/ Office of Regional Development, USAID/Philippines, "Bicol Integrated Rural Development Project 1977-1981, Food and Nutrition Category," Manila, October 1976, PP. 51, Annex C (2).

For that reason, we collected cases of rural poverty. Among the poor we interviewed were tenant farmers, farm laborers, fishermen, (laborers in fishing as well as boat owners), shop operators, transport workers, non-farm laborers, elderly poor, and the unemployed. In the sample there also were people from various ethnic groups, including several from upland minorities.

TABLE 1

List of Cases of Rural Poor Families

Bicol Region CasesNumber

1. Pedro (44 years). Tenant farmer with 1/2 hectare (paddy, two crops). Barangay San Antonio, Bomton Town, Camarines Sur Province.
2. Jose Sanchez (26 year). Tenant farmer with 1/2 hectare (paddy, two crops). Barangay St. Agustin, Libon town, Albay Province.
3. Chico (35 years). Tenant farmer with 3/4 hectare (Maize and Calabashes). Barangay Malinta San Pedro, Iriga town, Albay Province.
4. Carlos (55 years). Tenant farmer with 2 hectares (shifted from maize and peanuts to paddy). Barangay Cristo Rey, Iriga town, Albay Province.
5. Maria (50 years). Wife of tenant farmer with 1 1/2 hectares (Paddy). Barangay Mantlisai, Libmanan, Camarines Sur Province.
6. Miguel and Conchite (late 40's). A fisherman and his wife. Own a boat and fishing equipment. Barangay Cabusao, Libmanan town, Camarines Sur Province.
7. Lorenzo (62 years). A fisherman with boat and fishing equipment. Barangay Santa Lucgarda, Cabusao, Libmanan, Camarines Sur Province.
8. Jose (72 years). and Crispina (67 years). Elderly laborer in fishing. Barangay Santa Lucgarda, Cabusao, Libmanan, Camarines Sur Province.
9. Julio (34 years). Received 5 hectares under the Land Reform Program (paddy). Barangay San Ramon, Bula, Camarines Sur Province.
10. Ramon (33 years). Farm Laborer. Barangay Botxan, Tiwi, Albay Province.
11. Dolores (28 years). Wife of tricycle operator. Barangay St. Agustin, Libon, Albay Province.

Table 1 (Con't.)

12. Lucia (67 years). Wife of elderly laborer (non-farm).
Barangay Duena Pescada, Bato, Camarines Sur Province.
13. Juan Garcia (62 years). Laborer in Fishing. Barangay Cabusao,
Libmanan, Camarines Sur Province.
14. Tomas Land owner (3 hectares) working as laborer. Barangay
San Ramon, Bula, Camarines Sur Province.
15. Elena Wife of tenant farmer with less than 1 hectare.
Barangay Cristo Rey, Iriga, Camarines Sur.
16. Lita Runs Sari-Sari Store. Husband is teacher and owns
2 hectares. Barangay Cristo Rey, Iriga, Camarines Sur.
17. Jaime Widowed tenant farmer with under 1 hectare. Barangay
Mantlisai, Libmanan, Camarines Sur Province.
18. Pablo Owns 1/2 hectare and rents 1 1/4 hectares. Branagay
Mantlisai, Libmanan, Camarines Sur Province.
19. Jorge Marketer of nipa roof sections and deals in fish.
Cabusao, Libmanan, Camarines Sur.
20. Mauricio Tenant farmer with 1 1/2 hectares. Barangay St. Agustin,
Libon, Albay Province.

Northern Luzon

21. Magno (57 years). Tenant farmer with 2 1/2 hectares (paddy).
Barangay Sitio Tomangan, San Juan, Botolon, Zambales
Province.
22. Ramon D. (40 years). Tenant with 1/2 hectare (paddy), who also
makes fish baskets, fish traps, and winnowing baskets.
Barangay Cadmang, Cabangan, Zambales Province.
23. Romualdo (25 years). Farm laborer and grocery store clerk.
Sitio Eroc, Carael, Botolon, Zambales Province.
24. Igmidio (early 50's, member of the Ayta cultural minority).
Tenant with around 1 hectare (paddy). Barangay
Villar, Botolon, Zambales Province.
25. Arcadia (58 years). Shop owner and rice vendor. Barangay
Hermosa, Dasol, Pangasinan Province.

Table I (Con't.)

26. Lolita and Guillermo (31 years). Part-time tricycle driver and tenant with 1/2 hectare (dry rice, maize and tobacco).
27. Remedio (67 years). (Tingguian). Farmer with 1 hectare he owns (paddy, tobacco). Barangay Lumaba, Villaviciosa, Abra Province.
28. Florenzio (30 years). Tenant with 3/4 hectare (paddy). Barangay Jesus Alcos, Pidigan, Abra Province.
29. Erlinda (30ish, an Ifugao). Runs cooperative shop and cottage industry cooperative for women weavers. Barangay Anganad, Banawe, Ifugao Province.
30. Buyocon (50 years, Ifugao). Unemployed laborer (sick with TB). Barangay Anganad, Banawe, Ifugao Province.
31. Duduli (38 years, Ifugao woman). Weaver, laborer, and swidden farmer. Barangay Anganad, Banawe, Ifugao Province.
32. Apolinario (55 years). Tenant farmer with 1 1/2 hectares. Barangay San Mariano, Santa Rosa, Nueva Ecija Province.
33. A Group (Grandmother and two daughters) wives of tenant farmers-laborers, 1/2 hectare for three families. Barangay Sitio Tamangan, San Juan, Botolon, Zambales Province.
34. Peter (45 years). Unemployed conductor for a bus line (wife owns 1/3 hectare and runs a planing mill). Barangay Cadmang, Cabangan, Zambales Province.
35. Ferdinand (55 years). Laborer (farm) and raises vegetables on 1/2 hectare. Botolon, Zambales Province.

Among other things, the case studies collected for this study reflect social differentiation in telling us how the styles of life vary among the poor in rural Luzon. Cases of the very poor (represented in Cases #8, 12, 13, 30, 33 and 35) live on the brink of misery. If their incomes fell much lower they might face starvation. They devote almost all of their incomes to providing a meager daily fare and small nipa huts for shelter. Among them are the elderly and disabled with few, if any, kinfolk who can aid them, but with neighbors who do lend assistance. There is little likelihood that they will be able to rise from the level of poverty at which they now exist. Then there are the poor who are better off (such as Cases #4, 15, 16 and 32. They have more steady incomes, live in substantial houses and can afford occasional luxuries (such as purchasing meat and cigarettes or doing some travelling). (See Section 4B on Social Soundness and the Perceptions of the Poor, Section 4I on Occupational Structure and Sources of Income and Section 4J on Working Conditions.)

The cases in this study also reflect some significant variations in aspects of the styles of life among the poor in the Bicol Region and those in northern Luzon. All of the nine rice farmers interviewed in the Bicol cultivated new high-yielding varieties of paddy while only one of the nine rice farmers in northwestern Luzon grew this type of rice. All of the Bicol farmers interviewed used chemical fertilizers while those in the northwest complained that it was too expensive. In the Bicol there were cases of double-cropping while in northwestern Luzon, those interviewed only had one crop and none sold any paddy. The poor in the Ilocano areas of northern Luzon grow and consume more vegetables than do the poor in the Bicol.

In addition, the cases also inform us about the way the various factors, such as income, expenditures, nutrition, education, social activities, and geographic setting (including weather patterns) are interrelated in any given context (a glance at the cases in Appendix A will bear this out). Such information is important for gaining any insight into the condition of the rural poor and the varying milieus in which they live. The cases reveal, for example, that remittances from grown children who have left home are an important source of income for elderly poor. Having large families is a form of social security, something important to consider when formulating any family planning programs. The large family also appears to be the ideal social group, and kinfolk aid one another in a variety of ways, not the least of which is mutual assistance with farm tasks and lending money. The cases also bring out the importance of weather conditions for many of the rural poor and the varying effects weather has upon them. In the Bicol region, for example, typhoons are an annual problem, but while the farmers may lose their crops, the fishermen only lose days of work. This is an important consideration in the matter of rural credit (Dr. Chita Subido, an economist on the staff of the Central Bank in Manila is conducting case studies of rural credit to understand it in varying socioeconomic contexts).

Furthermore, understanding the relationship of these factors in the context of the cases gives a new perspective to information from quantitative surveys already done and help sharpen areas of inquiry in future surveys. The cases, for example, reveal the importance of social gatherings and physical ecology on nutrition. While surveys indicate that the rural poor purchase little, if any, meat, some of the interviewees in the cases described how they are apt to eat meat at various celebrations (family gatherings such as baptisms, weddings, and funerals or barangay festivals). In Case #21, Magno, a farmer in Zambales Province described how dogs were often slaughtered to provide meat for celebrations, and he added that cats, too, were eaten. Also, interviewees located in villages near rivers and woods told how they fished, hunted and gathered wild fruits and vegetables to supplement their diets. Such information provides new avenues of inquiry in any nutrition surveys.

The cases also illustrate graphically the complexity of income and expenditures among the rural poor, giving us a better idea of the multi-dimensions of occupations of this group, something not reflected in most surveys. Those statistically described as "farmers" often have other sources of cash or other income. Case #1, for example, deals with a tenant farmer whose major source of cash income is weaving baskets, but he also works as a laborer. Moreover, he, like many other tenant farmers, also is an employer, hiring workers to help with planting and harvesting. The farmer in Case #27 not only is a laborer and employer, but also sells shelled maize and firewood. The laborers in Cases #30 and 31 farm small swiddens and weave for profit.

In most of our cases, we found that the poor had so many different sources of income and they were so mixed between cash and noncash sources that people really did not know what their incomes were. They literally could not remember more than a few months back in any kind of detail. People grow for themselves and fish for themselves, they gather, they hire out as laborers, they make handicrafts, the children bring home money from hauling water or planting rice, they receive remittances for other family members or help for neighbors or kinfolk, and so forth. They "spend" on their own home-grown and -gathered products, on cigarettes and beer, on jeepney rides and cock fights, on salt and water and soft drinks. They all own their own houses. We do not believe that existing figures adequately account for this complexity. (see Section 4 B on Social Soundness and the Perceptions of the Poor, Section 4 I on Occupational Structure and Sources of Income, and Section 4 J on Working Conditions.)

We found too that the case-study approach supplemented very well surveys (such as that conducted by Lynch et al) concerned with determining the wants and desires of the rural poor. The cases also revealed some reactions to AID-assisted programs, particularly those in the Bicol. These findings are outline below.

(1) Water Control -- We found that the primary need of the rural poor farmers was water control, embracing both irrigation and drainage projects (Lynch et al found that in their Bicol River Basin survey, water management ranked first in the needs of the farmers). Poor water control was a major contributor to the instability of income and income stability (or economic insecurity) seems to be a greater concern to the rural poor than the lowness of their income. (In fact, it may be that those who say they want more income really want a cushion against economic insecurity.)

For the tobacco-growing farmers in northwestern Luzon, availability of water is vital to this crop, which is grown in the dry season. Wells provide the primary source of water for this crop, and farmers such as the one in Case #27 who lack the financial or technical wherewithall to have a well are deprived of the opportunity to have a tobacco cash crop.

(2) Value of Education - We found that education programs (both public and private) have reached all of the families interviewed in our field research. This would indicate a high place for education in the rural poor's scale of values. Education reaches into the poorest areas, and there appears to be a marked willingness to make sacrifices so that children can attend school as long as possible. (See Section 4 H on Education.)

(3) Electricity - Among some of the rural poor interviewed, we found an interest in having electricity if they felt that it might contribute to their income. In the Bicol region, Pedro (Case #1) makes baskets for steaming fish, and he expressed the view that if his house were well lit, he could work in the evening making more baskets. In Case #11, Dolores pointed out that if the local roads were better lit at night, her husband could work longer hours driving a tricycle transport. In northwestern Luzon, Apolinario (Case #32), a tenant farmer near Santa Rosa in Nueva Ecija Province noted that there was electricity along the main road, but he felt that it was not anything he needed now because it would not affect his farming in any way. He added that if he had chickens, electricity might be good to have (for incubators).

Several who had electricity were very content with it. Arcadia (Case #25) runs a small shop and rice vending business near Dasol in Pangasinan Province, and she pays P5.50 per month to have the light she needs for serving her customers. In Case #28, Lorenzo and his family paid P100 to have wiring put in their house and they paid P15 for the meter fee. They shell maize for consumption and sale, and Lorenzo said that having the electric light made it easier to work at night. He added that it was less expensive than kerosene, and it also was less "dirty."

(4) The Spread of AID-Supported Activities - We found that AID-supported activities could be broadly classified into two parts: those which are aimed at providing direct benefits to the poor, such as school feeding, population control, health and education; and those which are aimed at increasing the level of productivity of the poor, such as build-

ing irrigation systems, rural roads, flood control works, and the like. We believe that this two-pronged approach is a good one. The first type of activities has the greatest potential for benefiting the "poorest of the poor," those who generally cannot help themselves because they have the least contact with the rest of the economy. The second type has the greatest potential for helping those among the poor who are slightly better off and have the capability of responding more readily to outside help when it is proffered. Moreover, the second type, increasing the productivity of the poor, makes it possible to foresee the day when increases in real income for the better-off poor may allow them to carry more of the welfare burden of the poorest of the poor. (See Section 5, The Rural Poor Majority as Beneficiaries of AID-Supported Projects.)

(5) Poor Beneficiaries of AID-Assisted Projects - We interviewed some rural poor who were benefiting from AID-supported irrigation projects in the Bicol region. In Case #2, Jose Sanchez, a small tenant farmer cultivated a one-half hectare holding in an area where there was one such irrigation project. He reported that he and other farmers were very pleased with the project, which allowed them to cultivate two crops. Their worries concerning flooding were very much diminished. Case #4 reflects a situation where farmers in a barangay near Iriga City (Albay Province) were benefiting from a small-scale irrigation project organized by the Farm Systems Development Corporation. The farmer in this case had shifted his crops from maize and peanuts to paddy. We also encountered enthusiastic reactions to an AID-supported water purification plant at Milaor, close to Nagza City (Camarines Sur Province). There also were numerous benefits derived from AID-supported education programs in the rural areas. At the remote village of Lumaba, near Villaviciosa in Abra Province, we found a successful Food for Work program organized by the local priest and nuns with support from Catholic Relief Services. Students and children had received food for planting 1000 giant Ipil-Ipil trees the week before. (See Section 5 on The Rural Poor Majority as Beneficiaries of AID Projects for more information on all of these findings.)

(6) Negative Effects of AID-Assisted Projects - We found that there were some unintended negative effects from some AID-supported projects. In one case (#14), land levelling associated with an irrigation project was haphazardly done, ruining the land for cultivation for a number of years. In Case #18, dirt dredged up from an irrigation ditch was dumped on a tenant farmer's land, cutting his planting area by around 10 to 15 per cent. Julio, in Case #9, complained that dirt from a new road in the Bula area of Camarines Sur Province was dumped on his paddy fields and the road also prevented him from irrigating some of his fields. Case #4 revealed that farmers along a new road-canal project in Libmanan, Camarines Sur Province has lost their source of irrigation for at least one planting seas due to construction. (See Section 5 on The Rural Poor Majority as Beneficiaries of AID-Assisted Projects.)

Other information gathered during the field work concerned the following subjects:

C. Capital-Intensive Projects - We found that capital-intensive projects may often offer major benefits to the poor. While we basically favor small-scale, labor-intensive projects for the most part, we have seen that major flooding cannot be controlled by small individual dams and that electricity usually is supplied on a more efficient basis by large producing units than by small ones. There should be no knee-jerk response against large infrastructure projects per se; they should be judged on their own merits, for many of them may be of substantial benefit to the rural poor. At times, however, we found a bias for bigness in AID-Assisted projects which appeared unjustified; some farmers in Zambales told us, for example, that a simple suspension-type footbridge across a river was all they wanted so that their children would not have to swim to school during the rainy season. The Provincial Development Assistance Program (PDAP) people in the area, however, clearly have their minds on something much more elaborate and expensive.

We have been informed that the larger and more expensive bridges are designed to meet future province-wide needs as well as present local ones, and this may, indeed, justify such outlays. But it should be borne in mind that bridges built to take motor vehicles will directly benefit those who own motor vehicles more than it will the poor; the poor may indeed benefit indirectly if their produce can be gotten to market more quickly or cheaply via motor vehicle or animal-drawn cart, or if their access to what they buy is similarly improved. But it should not be assumed that this "trickle down" benefit will necessarily occur; as we point out later in Section 5, improved roads may either help or hurt the poor, depending on whether it encourages them to raise productivity in producing for a cash market or whether it merely opens the door to more complete exploitation of remote areas by the already well-to-do.

D. The Role of Women - We found that women play a very important role as breadwinners in many poor rural families. Wives and daughters contribute to the incomes of most rural poor families by working as farm laborers during the planting and harvesting seasons. We also found cases (such as #29, 30, and 31) where women had become the principal wage earners. The woman in Case #6, the wife of a fisherman, pointed out that she, like many of the other wives of fishermen, marketed the fish and shrimp that they caught. A woman in Case #13 is owner of two small fishing boats. These examples indicate that women play an important role in the San Miguel Bay fishing industry. (See Section 4 I on Occupational Structure and Sources of Income, and Section 4 N on the Role of Women.)

E. Deforestation - We found that deforestation in northern Luzon has created some anxiety among farmers and townspeople in that region. Denudation has affected the watershed negatively and sources of firewood have been depleted. Furthermore, heavily silted rivers have destroyed some farmland.

III. SUMMARY OF RECOMMENDATIONS

1. We recommend that in planning AID programs designed to benefit the rural poor, the social soundness of such programs be ascertained through field research to determine the wants and needs of the intended beneficiaries as well as to provide insights into the condition of their poverty. The results of this research should constitute a primary element in the formulation of these programs. We feel that it is important for experts from AID and the Philippine government to bear in mind the expressed needs of the poor in planning programs. It also is advisable that these experts also establish communication with the local poor who will be affected by the programs. The local poor would thereby be able to express their views concerning implementation of programs and also to communicate any negative reactions (such as those found in Cases #3, 9, 14, and 18 to implementation). When implementation of these programs has been attained, field research should be conducted in order to assess whether or not the rural poor are indeed the beneficiaries of these programs.

We feel that social soundness of AID programs for the rural poor can best be ascertained through two types of field research:

A. Surveys such as that conducted by the Social Survey Research Unit of the Ateneo de Manila University^{1/} are extremely useful in ascertaining the needs and desires of the poor (in this case, the research was done in the Bicol River basin). These surveys were conducted in the context of an approach that advocated understanding the major problems in an area as they, the poor, see them. (For details, see Section B on Social Soundness and the Perceptions of the Poor: Surveys and Case Studies.)

B. In order to understand the condition of poverty in the rural areas involved in the intended programs, it would be advisable to conduct research on cases of rural poor, such as were done for the present study (the cases are discussed in part B of the Summary of Findings, in Section 4 B, Social Soundness and the Perceptions of the Poor, and they are included in Appendix A). Such cases tell us about the differentiation that exists among the rural poor and they shed light on the way various aspects of their lives, such as income, expenditures, nutrition, education, social activities, and their physical surroundings are interrelated. As such, the cases give us valuable insights into the condition of the rural poor, and they also inform us about the outstanding wants and needs of the poor. Case studies do not take a great deal of time - the thirty-five cases in this study were collected in a period of seventeen days.

^{1/} Lynch et al., "Let My People Lead"

The type of AID-assisted program involved would determine the areas (or area) in which the cases would be collected and the primary emphasis of the inquiry. A program dealing with fishing, for example, would call for cases of those involved in this activity whether along coastal areas, inland lakes or waterways. The cases would focus on how fishing is functionally related to income, expenditures, marketing, rural credit, and other things such as the physical surroundings and weather. The problems facing fishermen would be included; in Case #6 and 13, for example, the intrusion of large commercial fishing trawlers in San Miguel Bay was emphasized as a problem for small fishermen. A program concerned with agromarkets would call for cases of rural marketing in localized socioeconomic settings. (It is interesting to note that currently, Dr. Chita Subido, an economist on the staff of the Central Bank in Manila is conducting case studies of rural credit so as to understand better how it functions in local situations from a social as well as an economic point of view.)

It is essential, however, that social soundness research be conducted at the very outset of any program planning so that the findings can be included in the early formulation of the programs. In the present procedure, the social soundness assessment is done in the late stages of the planning and it may or may not be included in the Project Paper. At this juncture, the social science analysis has little or no effect on the way in which the program is formulated or implemented. It becomes, in effect, a somewhat useless pro forma gesture.

The input of the social soundness research should be made at the Project Identification phase of the planning and included in the Project Identification Document. This would involve having the Social Analysis Advisor (an anthropologist in the Philippines AID Mission) located in the Director of the Mission's Office. This would enable him to review the project concepts with the Project Managers from the very beginning of the program formulation. He then can arrange the social soundness research in cooperation with the Project Manager. The Social Analyst would, at the same time, coordinate with the Program Office. This approach would avoid delays in formulating the programs and having them reviewed before final approval. The most important advantage of this procedure, however, is that it would increase greatly the likelihood of the programs benefiting the poor.

A continuing surveillance of programs for social soundness once they reach the implementation stage would also reduce the likelihood that unintended negative effects might spring up once the programs were underway. For example, it would be tragic, given the current oversupply of labor in the Philippines and the certainty of an even greater surplus in the years to come, if the net effect of AID-assisted programs was to encourage labor-saving mechanization in rural areas where underemployment and unemployment are already endemic. A growing

demand for labor - especially unskilled labor - is the surest way to ensure that the benefits of national development will spread to all groups in the country.

2. We recommend that regional planning concerning programs designed for the rural poor be given preference over national planning.

The needs of the rural poor are more easily determined through regional research. This is illustrated in the useful surveys conducted in the Bicol region. In our research, we found that regional variations between the Bicol and northwestern Luzon would affect some basic programs intended to benefit the rural poor. In the Bicol, for example, the new high-yielding varieties of rice were widely accepted by the farmers whereas this was not the case in northwestern Luzon. On the other hand, the value for growing and consuming vegetables among the Ilocanos (in northwestern Luzon) would make them more susceptible to kitchen garden programs than the Bicolanos, who do not share this value for eating vegetables.

Regional planning also has the advantage of permitting a focus on local projects, such as small-scale irrigation schemes, where the participation of the poor farmers who are intended as the beneficiaries is possible. At the level of the district, for example, the poor farmers can meet with local administrators and technicians involved in the projects.

3. We recommend that major attention be paid to the ecological soundness of AID-supported projects. By this we mean that projects which serve to increase dependence upon fast-declining supplies of imported petroleum should be sacrificed in favor of projects that use renewable local resources, which may be ecologically sustainable on a long-term basis. Planting giant ipil-ipil trees, for example, may be more defensible from a long-term standpoint than constructing a chemical fertilizer plant which uses petroleum as a major input. We would like to note, furthermore, that ecologically sound projects also tend to be small in scale and more accessible to the rural poor.

4. We recommend that AID continue and even expand its activities in the area of very explicit welfare programs -- the school feeding program and a feeding program for elderly poor. It appears that the school feeding program in public schools reaches the poor level of society. A feeding program also might be organized for the elderly poor, a segment of the population not touched by any existing government or AID programs. In addition to benefiting the rural poor majority, such feeding programs also could help in the effort to reduce family sizes. Given the importance of remittances from grown children as a

form of social security among the poor, healthier, better-fed children could render it unnecessary to have a large number of children to have some of them survive and care for the aged parents. By the same token, a program to feed the elderly poor might reduce the insecurity fears of younger parents and result in some reduction in family size. Such programs would have to be institutionalized eventually, and that means they will have to become the responsibility of the Philippine government.

5. We recommend that the Mission pay especially close attention to the question of property ownership in the projects and programs it supports. We are convinced that property ownership must become more equal if income is to become more equally distributed. The natural tendency in a country facing rapidly-rising population pressures is for labor to become cheaper while property becomes dearer; this in turn leads to greater and greater concentration of income and wealth. Programs aimed at spreading property ownership more broadly -- such as land reform -- have much intrinsic merit and can help eliminate absolute poverty if properly carried out.

IV. THE CONDITION OF THE RURAL POOR

A. Definitions of Poverty

Any definition of poverty must be arbitrary. Someone who is considered poor in one country may be considered rich in another. Some people prefer to define poverty in terms of absolutes -- falling below certain thresholds of nutrition, housing, or literacy, for example. Others prefer a relative standard, such as the bottom 40% of income receivers in a country, or the bottom 60%.

We believe that the standard which is most workable and meaningful for the purposes of the Agency for International Development and the Government of the Philippines is an absolute standard. We suggest this for very pragmatic reasons: relative poverty has always existed and always will. Any government or economic assistance agency which chooses to eradicate relative poverty will have an endless task on its hands. We do not believe it necessary, or desirable, to attempt to fill bottomless pits. Of course, the adoption of an absolute standard for measuring poverty does not preclude reducing the degree of income inequality in a country. If absolute poverty is reduced, it would be surprising if the share of income going to the poorest segments of society did not increase at the same time. Of course, it is possible for other segments to increase their well-being even faster than the poor do, but if the focus of development efforts is truly on the poorest groups, defined in some absolute way, it is not likely that inequality will be increased in the process.

The absolute standard which makes the most sense to us is based on minimum nutrition requirements. We suggest focusing on nutrition because it is so basic to human existence and because it is closely associated with adequacy in such areas as clothing, housing, health, and the like. It is also a non-monetary measure at root and is therefore, not so subject to misinterpretation because of inflation, exchange rate changes, shifts in expenditure patterns, and so forth. This is not to say that there are not difficulties associated with gathering information on nutrition and that the results of these surveys may not be misinterpreted. But at least nutrition can be measured by standards which mean the same in all countries, such as calories, grams of protein, and the like, and reported nutrition figures can be verified with weight and height checks.

It goes without saying that we are not talking about average nutrition levels in any sense. We believe that all people of all ages in all regional should exceed certain nutrition thresholds; ideally, those thresholds would be set by nutritionists familiar with the peoples and areas and diets in question. Until those thresholds are uniformly exceeded throughout the country, poverty cannot be said to be whipped in the Philippines.

We do not believe it necessary for measurement to be carried to highly refined levels before a working definition of poverty can be achieved, however. As we said, all definitions of poverty are arbitrary, by their nature. Moreover, poverty by any definition is so endemic in the Philippines that precise measurement is beside the point. Action to eradicate misery is much more important than precise statistics, if the horse is to be kept in front of the cart.

We believe that the nutrition minimums utilized by Maria Alcestis S. Abrera in "Philippine Poverty Thresholds"^{1/} are adequate for most purposes. The minimums, which were initially established by the Food and Nutrition Research Council, are as follows:

<u>Nutrients</u>	<u>Recommended Daily Intake</u>
Calories	2000
Protein	48.9 grams
Calcium	.56 grams
Iron	10 milligrams
Vitamin A	4064 International Units
Thiamine	1.03 milligrams
Riboflavin	1.03 milligrams
Niacin	13 milligrams
Ascorbic Acid	69 milligrams

It was assumed that these requirements would be met by spending 42.4% of the food budget on cereals, 34.2% on meat, poultry, eggs and milk, 6.6% on fruits and vegetables, and so on down the line, a pattern based on nationwide studies over a period of ten years. It should be noted that the standards include much more than merely calories and proteins; some nutritionists feel that elements like Vitamin A, iron, iodine, fluorine, and dense calories (fats) are generally less available than calories and proteins in the Philippines.

Of course, adequate nutrition is not enough to escape poverty. People also need to be clothed, housed, educated, given decent health care and so forth. So Abrera assumes that food captures about 60% of an adequate minimum income, a fairly typical figure for poorer parts of the Philippines, and derives a total income threshold based on the nutrition minimums. This is the approach we recommend. When the cost of achieving a nutritionally adequate diet is adjusted for regional cost-of-living differences and differences in regional family sizes, and when the resulting figure is increased by 2/3 to allow for the non-food portion of total expenditures, a reasonable poverty benchmark or threshold should result.

^{1/} In Mahar Mangahas (ed.), Measuring Philippine Development, The Development Academy of the Philippines, Manila, 1976, pp. 223-273.

Note that we have focused on minimum expenditure levels rather than minimum incomes. As Abrera points out, income data are probably not as reliable as expenditures data because many families tend to understate their incomes when surveys are made, perhaps on purpose; we might add that it is easy to overlook non-cash income because of the variety of sources it may take. The 1971 Survey of Households Bulletin of the Bureau of Census and Statistics covering family income and expenditures indicates that the major sources of non-cash income are the rental value of owner-occupied houses and home-produced and consumed farm products, including animals. (See Table 22 in the Bulletin.) We note, however, that the Bulletin reports only 1.2% of non-cash income for farm households as coming in the form of "gifts, support, assistance, and relief." Our informal interviews with poor farm households in various provinces have convinced us that sharing among families is a major source of income, especially during the dry season, and especially when account is taken of the way related families tend to group together in compounds or sitios. Similarly, the rent received in kind is reported as only 3.8% of non-cash income, which seems very low compared to the amounts which tenant farmers have told us they pay to neighboring landlords. Whatever the reasons, however, we simply cannot believe that the reported figures are all that accurate for income -- the chronic large gap between expenditures and incomes is simply too large for the country as a whole. It may be that the figures are fairly accurate and that much of the ensuing debt is later forgiven by landlords, family members, and creditors in general; if that is so, then "Forgiveness of bad debts" should be included as a source of income and figures should be developed for it.

In a related vein, we tend to mistrust the debt figures per family that have been reported. We suspect that when families are asked the amount of their total debts, they do not report their net debts (amounts owed to others minus amounts owed to them), but their gross debts (amounts owed to others, period). Yet most families have helped others during hard times at the same time that they have received help. Sharing is much more common than the data seem to indicate.

Expenditures figures, however, are probably much closer to being accurate. Expenditures come much closer to reflecting the actual state of well-being of a family, since they automatically take into account income, drawdowns of wealth, borrowings, receipts of gifts, forgiven debts, and even thefts, if that is an important income component in some areas. While expenditures figures may be harder to derive than income figures, we do not believe that this should be the determining factor in deciding what should be used. If enough information is not available, steps should be taken to get it. The task should shape the information, not the other way around.

Abrera derives a minimum adequate expenditure level for a rural family of 6 of P5,000 in 1971. This figure has been criticized as being too large -- for being a fairly comfortable figure rather than a minimum -- cost one, in other words. In a 1973 paper, for example, Edita Tan adjusted Abrera's figures downward by about 50% by assuming that people are willing to substitute less costly foods for more costly ones, provided they still yield the minimum nutrition requirements. Says Tan, the food basket "was much less diversified but it was probably closer to the basket consumed by the poor."^{1/} We believe, however, that most people should not have to be teetering on the edge of nutritional adequacy to be considered poor, and therefore, tend to favor Abrera's approach to Tan's. This choice is a very important one, because using Abrera's figures instead of Tan's very nearly doubles the levels of expenditure required to meet "nutrition minimums," and expands the size of the "poor majority" considerably.

Abrera quite properly adjusted her definition of poverty for cost-of-living differences between urban and rural area and for family size. For 1971, a rural household was considered poor if its total expenditure was less than the following thresholds for each family size:

<u>Family Size</u>	<u>Minimum Expenditure Level</u>
1	P 1324
2	1655
3	2508
4	3310
5	4162
6	5000
7	5868
8	6670
9	7522
10	8325

These amounts, if updated to 1975 levels by adjusting for inflation, would be:

<u>Family Size</u>	<u>Minimum Expenditure Level</u>
1	P 2414
2	3107
3	4572
4	6034
5	7587
6	9115
7	10697

^{1/} Edita A. Tan, "Income Distribution in the Philippines," Chapter 7 of J. Encarnacion and others, Philippine Economic Problems in Perspective, University of the Philippines Institute of Economic Development and Research, Quezon City, 1976, p. 245.

Family Size	Minimum Expenditure Level
8	12159
9	13713
10	15176

These are the thresholds that we suggest be used in defining the poor rural majority using 1975 data when it becomes available. At this point in time, we do not have access to such information, but it is doubtful if the poverty picture has changed much since 1971. Using data from that year, Abrera calculated the number of families which fell below her total thresholds for each family size and the percentage of poor families (or the "incidence of poverty") to total families of that size. For rural areas, this is the poverty picture:

<u>Family Size</u>	<u>Percentage Which are Poor</u>	<u>Number of Families</u>
Total	76.1	3,377,290
1	59.5	49,350
2	49.8	160,630
3	63.6	328,180
4	69.1	448,390
5	77.1	508,350
6	82.2	476,530
7	85.3	434,230
8	88.1	444,960
9	88.6	216,970
10	84.9	309,700

Source: Abrera, Appendix Table 5.4, p. 268

Overall, then, over three quarters of all rural families were considered poor in 1971, and there were nearly 3.4 million of these families. In contrast, only slightly over half of the urban families in the Philippines fell below their minimum expenditure thresholds in 1971, indicating that poverty is much more a rural than an urban problem in the country. Countrywide, about 69% of all families were poor by Abrera's standards, numbering almost 4.4 million out of a total population of 6.4 million families. The rural poor accounted for 77% of the total poor.

This, then, is the "poor majority" in the Philippines, defined in terms of total expenditures. There were 26.5 million people in this category in 1971, 20.3 million of them in rural areas. By 1975, population had increased in the neighborhood of 8% nationwide, and there is ample evidence that the incidence of absolute poverty has

not decreased. A Philippine Department of Agriculture bulletin issued in May 1975 indicates a gradual deterioration in the diet of the majority of Filipinos -- between 1970 and the end of 1974, per capita consumption of pork, beef and carabeef fell in the neighborhood of 50%, canned meat consumption dropped more than two thirds, poultry and egg usage dropped by about one third, dairy products by half, and seafood, fresh fruit, and fresh vegetables (other than cheap roots and tubers) by about a third. At the same time, the relative consumption of cereals, cheap roots and tubers increased. ^{1/} Mean family expenditures increased from P4479 in 1971 to P 6526 in 1975, an increase of 46%, while the cost of living nationwide was increasing 82.3%; mean expenditures in real terms, therefore, dropped about 20%. Mean income per family in constant pesos dropped between 13 and 14%, while median income stayed about the same. (These data are derived from the Family Income and Expenditures Bulletin for 1971 and from preliminary figures on Family Income Distribution in the Philippines, 1975, put out by the National Census and Statistics Office.). We believe that the income statistics are less significant than the expenditures figures and the change in diet patterns reported; in our judgment, then, absolute poverty was probably significantly greater in 1975 than it was in 1971.

B. Social Soundness and the Perceptions of the Poor; Surveys and Case Studies

It goes without saying that in order for any AID program to benefit the rural poor, such programs must be planned with the needs and desires of the target population in mind. This is pointed out very well in the report by Lynch et. al.^{2/} concerning the social soundness of AID-Assisted projects in the Bicol River Basin in southern Luzon. In essence, this report advocates an approach based on the idea of letting "the people lead and the experts follow." It is a compromise position between the method of designing assistance programs through reliance on professional opinion and the alternative of letting "the people concerned decide for themselves what should be done." As such, it has the advantage of bringing about cooperation between the experts and the people for whom the programs are intended.

The approach of Lynch and his group places emphasis on the need to understand the perceptions of the poor regarding the major problems in an area as they, the poor, see them. The programs, therefore, will be, as Lynch puts it, "for the poor." Although this concept is applied specifically to the Bicol River Basin Project, there is not reason why it cannot be applied to any assistance program in the Philippines (or, for that matter, to programs being planned for the poor in any country). The survey findings in the Lynch report contain very useful data concerning the wants and needs expressed by the rural poor. These perceptions should prove extremely valuable in planning programs to satisfy these needs.

^{1/} Department of Agriculture, "Summary of Eleven Economic Surveys of Food Consumption, May 1975. Data from Figures 1 through 7, pp 4-20.

^{2/} Lynch et. al., "Let My People Lead," pp. i-v.

Concerning the implementation of programs geared to the rural poor, the Lynch report outlines the manner in which the experts and the people work together in "fashioning the program outline." They would discuss together in "(a) a review of the problems they face; (b) the goals and projects that should solve them, each with its agreed-on indicators of accomplishment and designated function in the overall plan; (c) a justification on economic and technical ground, of the goals and projects that were selected; and (d) a justification on social-soundness grounds, of the outlined program and its components." Unfortunately, little of the survey data collected by Lynch et. al. and none of their recommended procedures for program implementation were used in the social soundness aspect of the Bicol River Basin Project. At this point, it is not clear how the various programs will affect the poor.

While all of the surveys done on the rural poor by the Philippine government, AID, and private agencies have provided useful information, they suffer the disadvantage of treating the poor in an undifferentiated manner. In terms of national thresholds of income, the poor are treated as a block. This also is true for the regional breakdowns and for the more explicit statistics concerning occupations, education, nutrition, and so forth. Nothing is said about the varying styles of life within these categories, nor is there any information imparted concerning how such things as income, occupation, education, nutrition, and so forth. Nothing is said about the varying styles of life within these categories, nor is there any information imparted concerning how such things as income, occupation, education, nutrition and other indicators are related to one another in any milieu.

Among other things, the case studies collected for this study reflect social differentiation in telling us how the styles of life vary among the poor in rural Luzon. Cases of the very poor (represented in Cases #8, 12, 13, 30, 33, and 35) live on the brink of misery. In Case #8, Jose, 72 years of age, worked on fishing boats, but now he is too old to endure the arduous labor of lifting nets of fish. He and his wife, Crispina, live in a simple bamboo and nipa palm house on the beach, their neighbors give them fish which they eat with rice, yam leaves, egg plant and bindweed. Juan Garcia in Case #13 is an elderly widower who also can no longer labor on fishing boats, and with two unemployed sons, he fends for himself, working drying out fish. Case #30 concerns Buyocon, a member of the Ifugao ethnic minority, who has tuberculosis and cannot work as a farm laborer. His wife supports them with a meager income from farm labor and weaving. She supplements their diet by cultivating yams in a mountainside swidden.

Then there are the poor who are better off (such as cases #4, 15, 16 and 32). They have relatively steady incomes, live in substantial houses, and can afford occasional luxuries. Carlos, in case #4 cultivated cash crops of maize and peanuts on his rented 2 hectares. In addition, his many coconut trees produce some 220 kilos of copra, sold for P 1.50 per kilo every three months. In 1977, Carlos shifted from

maize and peanuts to wet rice as the result of a small-scale irrigation project organized by the Farm Systems Development Corporation. He began growing 75-day rice, IR-36, and IR-1561, anticipating three crops annually. Carlos can afford to use chemical fertilizer and he owns his own carabao, plow, and harrow (so there was no need for new equipment when he shifted his cash crops). His sizeable house is constructed mostly of wood planks, and one son has a house on the farmstead. The family purchases vegetables, dried and fresh fish and some pork for family celebrations. One son is planning to study at the agricultural college in Pili. Between rural poor of the cases noted above and those like Carlos, there is a range of variation apparent in the cases found in Appendix A.

The cases in this study also reflect some significant variations in aspects of the styles of life among the poor in the Bicol region and those in northern Luzon. All of the nine rice farmers interviewed in the Bicol (Cases #1, 2, 4, 9, 14, 15, 17, 18, and 20) cultivated new high-yielding varieties of paddy while only one of the nine rice farmers in northwestern Luzon (Case #32) grew this kind of paddy. Farmers in the Bicol used more chemical fertilizer than those in northwestern Luzon. In the latter area there was no double cropping as there was in the Bicol. The poor in the Ilocano areas of northern Luzon grow and consume more vegetables than do the poor in the Bicol. In northern Luzon, the poor farmers in the more remote areas supplemented their diets (and incomes) fishing, hunting, and gathering food, activities not found among most of the farmers interviewed in the Bicol.

In addition, the cases also inform us about the way the various factors, such as income, expenditures, nutrition, education, social activities, and geographic setting (including weather patterns) are interrelated in any given context. Such information is important for gaining any insight into the condition of the rural poor and the varying milieus in which they live. Cases #1, 7, 8, and 24 illustrate that remittances from grown children who have left home are an important source of income for the elderly poor. This tells us that having large families is a form of social security, and it is a value that is important to consider when formulating any family planning programs. For the rural poor, the large family appears to be the ideal social group, and kinfolk aid one another in a variety of ways, not the least of which is mutual assistance with farm tasks and lending money. The cases also bring out the importance of weather conditions for many of the rural poor and the varying effects weather has upon them. In the Bicol region, for example, typhoons are an annual problem, but while the farmers may lose their crops, the fishermen only lose days of work. This is an important consideration in the matter of rural credit.

Understanding the relationship of these factors in the context of the cases gives a new perspective to information from quantitative surveys. Some cases, for example, reveal the importance of social gatherings and physical ecology on nutrition. While surveys indicate that the rural poor purchase little, if any, meat, some of the inter-

viewees in the cases described how they were apt to eat meat at various celebrations (family gatherings, such as baptisms, weddings, and funerals or barangay festivals). Also, interviewees located in villages near rivers and wooded areas told how they fished, hunted and gathered wild fruits and vegetables to supplement their diets (and incomes). Magno, in Case #21, revealed how in his part of Zambales Province, it was not uncommon to eat dogs (served at celebrations) and cats. Such information provides new avenues of inquiry in any nutrition survey.

The cases also illustrate graphically the complexity of income and expenditures among the rural poor, giving us a better idea of the multi-dimensions of occupations, something not reflected in most surveys. Those statistically described as "farmer" often have other sources of cash or other income. In Case #1, for example, Pedro is a tenant farmer, but his major source of cash income is weaving baskets. He also works as a laborer in his neighbors' fields. At the same time, he is an employer (as were most of the farmer's interviewed), hiring workers to help with the planting and harvesting. The farmer in Case #37 not only is a laborer and employer, but also sells shelled maize and firewood. The laborers in Cases #30 and 31 farm mountainside swiddens to provide yams for their families, and they also weave for profit. (This is discussed more at length in Section 4 I on Occupational Structure and Sources of Income, and Section 4 J on Working Conditions.)

A combination of the type of survey conducted by the Lynch group in the Bicol River Basin and the cases collected in this study provide the information concerning the wants and needs of the rural poor and the condition of their poverty would provide the basis for assessing the social soundness of AID programs being planned. It is essential, however, that this social soundness research be conducted at the very outset of any program planning so that the findings can be included when the aims of the programs are being conceptualized.

In the Philippines, there is a relatively large pool of social science research talent from which to draw in conducting both surveys and case studies. This talent already has been put to good use in previous research for the AID mission. At present there also is the advantage of having a Social Analysis Advisor on the staff of the AID mission, and this advisor could play the important role of organizing the needed research in conjunction with the AID Project Managers involved and the Program Office. He also could supervise the research and, with the cooperation of the Project Managers and the Program Office integrate the social soundness findings into the planning of the programs. The Social Analysis Advisor also could check the programs during implementation and organize additional social soundness research to assess the impact of the programs on the rural poor.

C. Nutrition

Since we have advocated the use of a minimum nutrition standard (converted into an expenditure equivalent) as a determinant of who is poor and who is not, it follows that those families we have identified as belonging to the rural poor majority suffer from some degree of malnutrition. Indeed, surveys of caloric and protein intake across the Philippines between 1958 and 1967 indicate actual average intakes of calories ranging from a low of 68% of the recommended amount in the Eastern Visayas region (1965) to 88% of the recommended amount in the Ilocos-Mountain Provinces region (1960). (See Table 2) Similarly, protein adequacy ranged from a low of 80% adequacy in the Eastern Visayas to 97% adequacy in the Ilocos-Mountain Provinces.^{1/} Furthermore, the distances many of the poor lie below nutritional adequacy is phenomenal -- in the Eastern Visayas, for example, only 35% of the population was above the 80% level of adequacy in caloric terms and 23% were below the 60% level.^{2/} Put another way, it has been estimated that 45% of all Filipinos suffer from first degree malnutrition, another 21% from second degree malnutrition, and almost 3% from third degree malnutrition.^{3/} Unfortunately, a large number of these are children, many of which may suffer from permanent brain damage traceable to childhood food shortages even if their diets improve later.

We encountered a very graphic case of apparent malnourishment coupled with illness in the province of Zambales (see Case #33). The 19-year-old wife of a 5-peso-per-day general farm laborer was trying to comfort a baby dying of leukemia. The child had already had several transfusions in a hospital in Olangapo and each time had improved for only a short period of time. The child was the woman's fourth and she was pregnant with her fifth. The baby's thin legs, arms, and neck made it appear that the family had given up on the idea of saving it and were favoring their other children with the available food. Their general attitude was one of resignation tempered with a residual of anger. Hunger is not just a statistic.

Another effect of malnutrition may be reduced literacy. Also in Case #33, we found a child not going to school because he had nothing to eat for lunch at school. Similarly, in Case #20, we found a young boy who eats his one yam for lunch at school in private because

1/ These data are presented in Vicente Paqueo, "Social Indicators for Health and Nutrition," in the book edited by Mangahas referred to earlier, Table 1/19, p. 81. It is presented here in Table 2.

2/ Paqueo, Table 2/20

3/ Paqueo, Table 2/21

Table 2
Average Daily Per Capita
Nutritional Intake

Region (Survey Year)	Actual Intake		Recommended Daily Allowance		Intake as Percent of Recommended	
	<u>Calories</u>	<u>Protein in grams</u>	<u>Calories</u>	<u>Protein in grams</u>	<u>Calories</u>	<u>Protein in grams</u>
1. Metro Manila (1958)	1,727	49.6	2,119	54.0	81.5	92.2
2. Ilocos (1960)	1,972	52.6	2,254	54.3	87.5	96.9
3. Cagayan (1962)	1,809	47.7	2,235	55.1	80.9	86.6
4. Southern Luzon (1962)	1,705	44.1	2,158	54.4	79.0	81.1
5. Western Visayas (1964)	1,661	48.2	2,211	54.7	75.1	88.1
6. Eastern Visayas (1965)	1,503	43.3	2,212	54.3	67.9	79.7
7. Northern Mindanao (1967)	1,743	48.9	2,144	54.9	81.3	89.1
8. Southern Mindanao (1966)	1,607	46.5	2,184	54.1	73.6	80.0

Source of Basic Data: V.B. Paqueo, "Social Indicators for Health and Nutrition," in M. Mangahas (editor), Measuring Philippine Development (Manila: DAP, 1976), p. 81.

he's afraid the other kids will tease him about his meager fare. He would like to quit school, but his father is very strongly in favor of education and will not hear of it. In some cases we were told of children who quit school early because they were needed at home to work in the fields and help ensure an adequate food supply.

As the Social Research Associates (SRA) study points out (p.26), nutritional adequacy is much more of a problem for lactating mothers, toddlers between the ages of one and three, pregnant women, and older children. In our field interviews, we found most young mothers breast-feeding their babies, probably because the very poor families were focusing on could not afford to buy milk or commercial preparations like Similac or Enfamil. This naturally puts an enormous strain on the mother's body, and lactating mothers are not normally mobile enough to engage in food gathering and food preparation for themselves to the same extent that they would if their children were older.

Adults appear to fare best in terms of nutritional adequacy, although an average of 81 percent of recommended levels is nothing to shout about.^{1/} Adults, of course, have to work in order to feed the others in the family and thus need a "work reserve" of calories, proteins, and other nutrients. They are also in a better position to gather food for themselves, whether it be fruit from trees in the area or fish from nearby streams. They also are more likely to know something about the nourishment they can get from different food sources, something a young child could hardly be expected to know.

We were struck by the regional variations in the types of food consumed in our field interviews, too. In the Bicol region, for example, there seems to be little interest in growing "kitchen gardens" to ensure a varied diet of vegetables, while in the Ilocos-Mountain Provinces region vegetables are quite common and are consumed in a variety of forms, especially in soups. Interestingly enough, nutritional survey data indicate that the Ilocos and Mountain Provinces also come closest to nutritional adequacy, while Southern Luzon and the neighboring Visayas, without the same dedication to vegetables, are among the country's lowest regions in nutritional averages (see Table 2). Ilocanos are also noted throughout the Philippines as real "go-getters," although the region's income levels are among the country's lowest (it would be interesting to know if their diet has anything to do with that trait).

We have been informed that one reason why more vegetables are not grown in the Philippines is that the dry season is so long that it wilts and kills the vegetables. While we recognize the great problem the country has in getting adequate water to meet its needs during the dry season, it is difficult to believe that small kitchen gardens could not be nourished with the amounts that are available and year-

^{1/} Social Research Associates, "An Analytical Description....," pg. 26

around food supplies thus made more stable. Perhaps this is one question which could stand more field research.

We have also been informed that very few poor people ever eat meat and that they rarely buy fish. This does not square with our observations on the island of Luzon, at any rate. Even the very poor get meat periodically at celebrations like weddings, birthdays, and community festivals, perhaps as often as two or three times a month. This hardly constitutes wealth, but it does make us wonder about the accuracy of some of the nutritional survey data, as well as some of the income and expenditures data. Moreover, most of the families that we talked with have fish in their diet at least part of the year. Rice farmers almost always have fish in their fields while they are flooded, dried fish are found in most households, and fish vendors, fishermen, fish drying operations, fish pens and the like are visible throughout much of Luzon. In restaurants throughout the area, moreover, fish are prominent on the menus, and we doubt that this would be the case if people did not consume fish almost as a matter of course.

We were also struck with the importance of food gathering to the very poor. In areas adjacent to mountains and forest, wild animals sometimes provide an additional source of food. In Case #21, Magno, a tenant farmer in Barangay Sitio Tomangan, San Juan, East of Botolan, Zambales, and close to the mountains, reports that he and his neighbors capture and eat dragon lizards, dogs, and cats. They also gather May beetles which are found on the bark of the casuarina trees (commonly known as Australian Pines) along the bank of the nearby river. The upland Ayta people (one of the Negrito groups) in the area gather the May beetles and sell them for P 7 per gallon. These beetles are boiled and dried, and are consumed later after toasting. Magno also described how he and his neighbors gathered wild yams. Black plums (duhat) and small chokecherries (ayayhip) were also gathered. Ramon D. in Case #22, also in Zambales, reported that he gathered wild guavas and cashew nuts from trees that grew in the forest. In addition to eating the cashews, Ramon noted that they could sell them at the rate of P5 per hundred (a mature, healthy tree will produce about 1000 cashew nuts per year). Ferdinand, a Negrito laborer and vegetable grower in Zambales (Case #35), was fairly typical of highland people who had migrated to lower lands in that he and his neighbors supplemented their incomes by fishing during the dry season with a bow and arrow from a nearby river. Their yield was sufficient for them to sell some of their catch in nearby towns.

Paqueo notes that the supply of available calories and proteins per day per person seems to be increasing, based on data running from 1953 to 1972. ^{1/} Protein supplies rose from 41.5 per person in 1953 to 52.9 per person in 1972, and calorie supplies climbed from 1691

^{1/} Paqueo, Table 2/18, p. 80

per person in 1953 to 2048 in 1972; the rise was fairly uniform, with some occasional backsliding. The Department of Agriculture bulletin referred to earlier, however, seems to indicate substantial slippage in nutrition adequacy since that time. Paqueo attributes a small drop in 1972 to "the adverse effects of typhoons and floods on food supply at that time."^{1/} We might add that world food prices have soared since that time, too, and that the more-than-quadrupling of oil prices has forced non-oil-producing Third World countries to press harder and harder to pay for these items with enlarged exports. In the Philippines, this has meant that more and more land which was formerly planted to rice or corn to meet primarily domestic food needs has been converted to the production of coconuts, bananas, pineapples, sugar, and other major export crops. This in turn has meant less food for domestic consumption, or at least a lower-grade diet for Filipinos at the lowest end of the income ladder. We might add that the negative effect of the export drive upon plantings of rice and corn has been intensified by the Agrarian Reform Law's exemption of non-rice-and-corn farms from the provisions of the law -- some land owners have switched from rice production to crops such as nipa and abaca in the Bicol, for example.

D. Health

The rural poor majority in the Philippines is much more likely to have a bad diet, to suffer from various temporarily or permanently debilitating diseases, and to die an early death themselves than is the Filipino population as a whole. Infant mortality for the country as a whole was 67.6 per thousand live births in 1973 -- not the highest in the world by any means, but far from the lowest. Table 3 shows the breakdown between urban and rural areas of the country's major regions. Not surprisingly, the rural death rate for infants was some 23½ higher than the urban death rate; the loss rate was highest in notably poor areas like Northern Mindanao and the Cagayan Valley/Batanes region, and was lowest in relatively rich areas like Metro Manila and Central Luzon. One surprising statistic is the relatively low rate of the Bicol region, both rural and urban; we suspect either very sturdy babies or weak statistics, because this is one of the poorest regions in the country.

Another indicator of general health conditions is life expectancy. Table 4 tells us that a baby born in 1973 in the Philippines had a life expectancy of 60.6 years, with the urban's 62.9 again exceeding the rural's 59.9 years. By regions, the unhealthiest place to live is in rural Cagayan Valley/Batanes and the healthiest is in the surprisingly healthy urban Bicol area.

The chief causes of permanent inability to work in the Philippines are tuberculosis, rheumatism, and asthma, with paralysis, heart disease, and cancer much further down the list. ^{2/} In our field work, we found

^{1/} Paqueo, op. cit. p. 65

^{2/} Paqueo, Table 2/11

Table 3

Infant Mortality Rate by Regions
Deaths Per Thousand Live Births
1973

<u>Region</u>	<u>Total</u>	<u>Urban</u>	<u>Rural</u>
1. Metro Manila	51.21	51.21	-
2. Ilocos/Mt. Province	67.45	66.69	71.20
3. Cagayan Valley/Batanes	88.03	83.79	88.38
4. Central Luzon	52.55	53.37	55.33
5. Southern Luzon	64.97	58.82	66.48
6. Bicol	53.78	46.46	55.22
7. Western Visayas	65.51	69.93	64.11
8. Eastern Visayas	72.53	58.28	77.38
9. Northern Mindanao	85.44	70.72	91.38
10. Southern Mindanao	74.22	77.94	75.35
Total	67.57	57.53	70.84

Source: See Table 2

Table 4

**Life Expectancy in Years at Birth by Regions
1973**

<u>Region</u>	<u>Total</u>	<u>Urban</u>	<u>Rural</u>
1. Metro Manila	64.34	64.34	-
2. Ilocos/Mt. Province	60.61	60.77	59.78
3. Cagayan Valley/Batanes	56.26	57.12	56.19
4. Central Luzon	64.02	73.84	63.36
5. Southern Luzon	61.17	62.55	60.82
6. Bicol	63.73	65.71	63.38
7. Western Visayas	61.05	60.06	61.37
8. Eastern Visayas	59.50	62.67	58.47
9. Northern Mindanao	56.80	59.90	55.49
10. Southern Mindanao	59.15	58.35	58.90
<u>— Total</u>	60.57	62.85	59.86

Source: See Table 2

substantial evidence of this in the Bicol, in Zambales, and north in the Mountain Provinces. For example, in Case #30, we found Buyocon, an unemployed laborer of about 50 living in Banawe, Ifugao Province depending entirely upon income his wife could bring in from her weaving activities. Because the family was poor, they could not afford to buy thread to weave materials in anticipation of later sales, and so the wife worked only after receiving an order. It appeared that the family's fortunes might be taking a turn for the better, however, because a cooperative credit and marketing group was being set up with government support which would enable them to regularize their production somewhat. Buyocon, however, even with medications supplied by a local clinic, could not hope for re-employment in the area because there was a shortage of non-manual job openings, leaving his wife to carry the economic load of supporting the family. Another case, somewhat similar, is #34 where in a 45-year-old Zambales conductor for a bus line, Peter, was laid off his job after twelve years of service because of a spot on his lung. The burden of support again fell primarily on his wife; fortunately, she owned 1/3 of a hectare of land on which they grew rice and some vegetables for their own use. She also operated a planing mill, sawing timbers into square shapes for use as beams in the construction of homes. Peter was able to assist in the operation by delivering the beams on a carabao-drawn cart, but in general the family depended on what Peter's wife could earn and on his 18-year-old daughter's salary as an agricultural technician.

The Development Academy of the Philippines did a pilot study in the province of Batangas to test out certain social indicators in 1974. In this particular province, they found that people below the poverty line were considerably more likely to suffer disability than those at or above the line. Moreover, disability was notably more prevalent in rural than in urban areas. ^{1/}

The chief causes of temporary inability to work in the Batangas survey were influenza, colds, and fevers in rural areas and influenza, colds, and heart disease in urban areas. Rheumatism was notably more common in rural areas than in urban areas, too, probably reflecting the fact that rural homes are less substantial and more open to the weather than most urban homes. The leading causes of death in the Philippines as a whole in 1971 were, not surprisingly, pneumonia, tuberculosis, heart disease, and ill-defined infant ailments. The first two, in particular, may be described as "diseases of the poor," usually stemming from overexposure to the elements. The fourth is also in this category, although the causes may be diverse.

^{1/} The results are reported by Paqueo, Table 2/13, p. 77

E. Housing

The rural poor typically live in bamboo-walled or wood-walled huts of one or two rooms with thatched roofs and wooden or bamboo floors. The house is built on piling two or three feet high. The space under the house may be used to shelter chickens or a pig, or for storage of such things as farm tools and firewood. There is usually a small cooking area under an attached lean-to. A family of 6, 7, or 8 may occupy this area, giving very high people-per room ratios that would horrify people who are thinking of shelter in an urban, congested area as a reference standard. While the home may indeed be crowded during rainstorms and sleeping space may be at a minimum, life is not necessarily as grim as statistics make it out to be. Rural families spend most of their time outdoors in the Philippines. Their "living area" includes much more than the house itself. They really occupy a farmstead, which usually includes a garden, a work area under a tree, a separate shelter for tools or even for cooking, and so forth. Very few have anything like a "dining room" in the conventional sense of the word -- most people simply squat or sit on the floor when they eat. As the family grows, a partition is sometimes inserted in the single room so that partial privacy may be had.

Furnishings are normally pretty sparse, too (See Table 5). Most homes have home-made stools, benches, pallets or hammocks. Very few have upright chairs, tables, or beds in the usual sense. Less than half have clocks or watches, and only 3% of rural families have any kind of motor vehicle, motorcycle, or jeepney. Only about 10% of rural dwellers have electricity, and almost half have no toilets of any kind. Over 40% of rural families use open wells, springs, streams or rain for their water supplies; only about 11% have water piped into their dwellings.

Some idea of the cost of a fairly typical rural home may be derived from Case #23. Romualdo, a grocery store clerk and part-time laborer, was in the process of constructing a house for his family (his wife and two infant daughters) on land owned by his father-in-law. The house was to be a one-room structure of the type just described. The itemized costs were:

a. Nine hard wood posts @ P10 each.....	P90
b. Bamboo - 30 logs @ P2 each.....	P60
c. Cogon roofing - 30 bundles @2.50 each.....	P75
d. Nails - 3 kgs. @P6 per kg.....	P18
Total	<u>P243 for materials</u>

Labor costs amount to about P10 per man-day; about 36 of these, for a total cost of around P600.

Romualdo did little or none of the construction himself.

Table 5 - Characteristics of households with respect to facilities and material possessions by urban and rural and by region 1973

	R e g i o n													
	Phil.	Urban	Rural	I	II	III	IV	V	VI	VII	VIII	IX	X	
				Manila	Ilocos	Cagayan	C. Luzon	S. Luzon	Bicol	WVis.	E. Vis.	NMin.	SMin.	
				- Per cent -										
<u>Lighting</u>														
a. Electricity	28.3	71.7	9.6	95.8	11.5	8.1	37.6	40.5	16.6	11.0	15.3	14.1	16.4	
b. Kerosene, petroleum oil, other	71.5	28.0	90.1	3.8	88.5	91.2	62.4	59.2	83.4	88.7	84.3	85.5	63.2	
c. no information	0.3	0.2	0.3	0.4	0.0	0.7	0.0	0.3	0.0	0.3	0.4	0.4	0.4	
<u>Water supply</u>														
a. Private waterworks pump or artesian well	39.1	57.8	31.4	83.4	47.4	33.5	58.6	44.6	30.5	24.8	20.0	20.6	30.3	
b. Private open well	10.1	4.2	21.2	0.9	11.3	38.8	13.0	7.3	27.6	39.8	15.0	12.6	12.6	
c. Public faucet, pump or artesian well	24.7	28.0	23.3	14.4	12.7	25.9	23.8	36.5	25.5	18.9	40.7	23.2	9.2	
d. Spring, river or stream	14.5	2.5	19.6	0.0	28.6	0.4	2.0	6.8	15.9	14.7	17.5	31.0	29.5	
e. Rain	1.7	1.3	1.8	0.1	0.0	0.0	0.0	0.1	0.1	0.6	2.2	4.8	6.5	
f. Purchase and other	-	6.5	2.4	0.7	0.0	1.4	2.4	4.6	0.2	1.2	9.8	2.5	11.2	
g. No information	-	0.2	0.2	0.5	0.0	0.0	0.2	0.1	0.2	0.1	0.3	0.3	0.3	
<u>3. Toilet facilities</u>														
a. Flush	17.2	39.3	7.7	51.9	11.9	2.4	15.4	24.4	17.2	5.7	17.9	9.0	5.3	
b. Antipolo	27.1	30.8	25.5	31.8	32.5	26.4	23.6	20.2	15.2	16.5	43.4	22.4	32.8	
c. Open pit	29.1	14.6	35.3	4.1	36.8	25.8	27.5	25.1	36.5	45.8	11.8	28.9	46.7	
d. Surface	11.5	3.8	14.8	0.9	4.2	12.0	9.4	18.2	15.6	22.3	12.4	4.8	8.9	
e. Pail, public, other	9.3	10.0	9.0	8.0	12.6	33.0	18.0	7.3	4.3	1.9	5.0	20.0	1.4	
f. None	5.5	1.4	7.3	0.1	2.0	0.4	5.5	4.7	11.0	7.0	9.3	3.0	5.9	
g. No information	0.3	0.1	0.3	0.2	0.0	0.0	0.2	0.1	0.2	0.8	0.2	1.1	0.0	
<u>4. Cooking fuel</u>														
a. Electricity	2.1	5.6	0.6	11.2	2.3	0.0	2.5	3.4	0.1	0.5	0.3	0.4	0.3	
b. Gas (piped or tanked)	16.7	41.5	6.1	55.6	10.8	4.4	22.7	29.9	9.6	5.8	7.5	3.3	7.6	
c. Kerosene, gasoline	7.5	15.0	4.2	27.0	4.4	6.4	10.2	6.8	6.0	4.7	8.8	5.0	2.3	
d. Wood, charcoal	72.6	37.0	87.9	5.4	82.1	89.2	63.8	59.5	83.9	84.1	86.5	91.0	89.8	
e. Other, none	1.0	0.7	1.1	0.4	0.1	0.0	0.8	0.2	0.4	4.8	1.8	0.2	0.0	
f. No information	0.1	0.2	0.1	0.3	0.3	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.0	

It is interesting to note that, even among tenant farmers who rent their land, people in those parts of the rural Philippines which we visited almost invariably own their own houses. This means that even the very poor own some property; true, the house may be modest and not very substantial by some standards, but it nevertheless represents a capital investment by a segment of society that is often thought to be unable to save at all. Even this group, then, can be said to enjoy a small amount of property income in the form of the shelter they receive from their own houses.

F. Clothing

Most of the rural poor wear tattered clothing, patched and wearing thin, when they work in the fields or around the farmsteads. They either go barefoot or wear cheap rubber sandals. But they usually have at least one set of good clothes for school, shopping, churchgoing, or special events. One of the more ironic sights in the Philippines is well-scrubbed and -dressed children coming out of very humble homes on their way to school. Families will make sacrifices so that their children will be properly presentable at school.

G. Family Size and Age Composition

In 1971, average rural family size in the Philippines was 5.66, while the average size of those families below the poverty line established by Abrera was 6.0. ^{1/} Poor families consistently seem to have more members. Moreover, these members tend to be younger, on average, than in better-off families--as the children get older they, too, become income-earners to add to family receipts or else split off to form households of their own, leaving their former home with fewer dependents to support.

These facts are supported by our own field observations. In family after poor family, there were three or four or six children still at home, still in school, still dependent upon parents. In Case #18, Pablo, a 60-year-old tenant farmer and small landowner, should have been reasonably well off because his children were grown, but one married daughter with two small children had come back to live with him and his wife; his wife was ill with visible sores and apparent rheumatism, and he had lost cultivable land because the constructors of a new irrigation canal had dumped spill on his rented land. Pablo was not well off by any measure. Similarly, in Case #35, Ferdinand, a laborer and vegetable gardener, had had seven children, three of whom were still at home, two of which had died in infancy, and one of which was married and pregnant and living in a neighboring hut. An older son, age 31, had married and was living further away. Obviously, the family had had difficulty in earlier years with the loss of two of their children; their oldest surviving son had only had a first grade

^{1/} Abrera, Table 5-10

education, no doubt because he was needed to help the family survive. The married daughter, in contrast, had been able to go as far as the fifth grade. The strain on the family eased as the children grew older.

H. Educational Attainment

About 17% of the heads of households which comprise the rural poor majority have no formal education at all; the average number of years of schooling of these people is four; only 6% have finished secondary schooling.^{1/} The incidence of poverty (the percentage of a given group which is poor) steadily decreases as the educational attainment of the household head increases.^{2/}

Our field work indicates that household heads realize the importance of education for both themselves and their children. Almost invariably, our respondents reacted with some degree of embarrassment when they were asked how far they had gone in school. Some had no schooling at all, especially among minority groups like the Negritos. But just as invariably, they reacted with great pride when their children had completed their high school training or gone on to college. Pablo, the poor tenant farmer and small landowner in Case #18, was proud that all six of his children had completed secondary school. Mauricio, a 52-year-old tenant farmer in Albay province (Case #20), was very proud that his oldest daughter had graduated from college in Manila in accounting, worked in Canada for two years, and was now working back in Manila; this girl, Mauricio told us with a big smile, had beaten the son of a local judge in competition for high school academic honors. She was now helping to finance the education of her younger brothers and sisters. Similarly, Igmidio of Case #24, a tenant farmer and member of the Ayta cultural minority in the upland area of Botolan, Zambales, expressed his view that education for his two daughters was something he worked very hard to realize. In order to continue sending his elder daughter, Erlinda, to school and then to the Agricultural College in Manila, he sold a valuable carabao. Erlinda graduated from the college, and she now is employed in the Sambales Provincial Agricultural Service in Botolan.

At the level of the family, education is seen (quite properly) as a family investment. We should note, however, that this "solution"

^{1/} AID/Philippines paper, "Profile of the Rural Poor," p. 1-2-4.

^{2/} For an indication of how important this factor is, see Table 6. The incidences reported are those using Edita Tan's poverty thresholds and are generally lower than those employed by Alcestis Abrera, but the general picture is very much the same. Note, however, that Table 6's figures are for all the poor in the Philippines, and not just the rural poor.

Table 6
Incidence of Poverty and Composition
by Education of Household Head
(Percent)
1971

<u>Education</u>	<u>Incidence</u>	<u>Composition of the Poor</u>
Elementary		
Grade 1-3	82.73	20.19
Grade 4-5	80.32	23.82
Grade 6-7	75.71	21.00
High School		
First Year	72.31	3.18
Second Year	63.57	3.85
Third Year	60.76	2.16
Fourth Year	49.37	6.20
College		
First Year	55.93	.74
Second Year	40.00	1.49
Third Year	34.25	.56
Fourth Year	20.44	1.68
Fifth Year	14.63	.14
Sixth Year and Higher	16.77	.16
No Grade Complete or reported	<u>85.79</u>	<u>14.83</u>
Total	69.92	100.00

Source: Philippines Bureau of Census and Statistics, Family Income and Expenditures Survey, 1971.

to poverty problems also creates more problems further down the road. It hastens urbanization, and adds to the housing and public services pressures in the cities. It swells the ranks of the "unemployed intellectuals," with all the political and social turmoil which that implies, and it tends to inflate government employment, bureaucracy in general, and the number of people who are forced to leave the country in search of employment abroad. This does not mean that educational outlays should be cut back -- quite the contrary. There is every evidence that this is the most progressive part of the Philippine government's outlays. But it does mean that, while continuing with its educational commitment, the government must be prepared to meet the other demands which this will inevitably give birth to. Nothing less than a systems approach will work.

I. Occupational Structure and Sources of Income

According to data published by the National Economics and Development Authority, most of the rural poor are farmers, farm laborers, fishermen, hunters, loggers, and related workers (See Table 7). Other manual workers and laborers also have a high incidence of poverty. Professional and administrative people are the least likely to be poor. Most poor rural families get the majority of their income from "entrepreneurial activities," which is another way of saying that they are working mostly for themselves as small farmers, fishermen, and so forth; wages and salaries are second in importance.

Most rural poor families do not depend on just one source of income. Typically, they will do some farming and gardening for their own use, but will also market some of their produce. They will do some fishing and often some gathering of food from forests in the area. They will also work for wages for part of the year, especially in the rice-growing areas where labor requirements are high during the planting and harvesting seasons. Many also make and market handicrafts -- we talked to basketmakers, weavers, carvers, pottery makers, toymakers, seamstresses, makers of fish traps and nipa mats for roofing, and so forth. Pedro, in Case #1, is a good example of this. Pedro farms one-half hectare which he rents from his godfather; the rice he grows is used mainly in the home. He also has a limited vegetable garden. He supplements this income by making circular open-weave baskets for steaming fish, which are sold in the Manila market. He buys bamboo from a supplier about 20 kilometers away, strips the bamboo logs into thin strips with a sharp knife, and weaves them into baskets with considerable skill. If he makes a full 15 baskets a day, he can make P18 total profit. In addition to these activities, Pedro and his family catch fish from their rice paddies during certain times of the year and hire out as laborers during the rice planting and harvesting seasons. It is doubtful if Pedro actually knows what his annual income is in money terms -- much of it is non-cash, and he has no compelling motive for keeping records. Moreover, his income (as most other incomes in rural areas of the Philippines) is highly variable from year to year and even season

(40)

Table 7

Incidence of Poverty and Composition
of the Poor Families by Income Sources
Urban and Rural
(Percent)

1971

<u>Sources of Income</u>	<u>Urban</u>		<u>Rural</u>	
	<u>Poverty Incidence</u>	<u>Composition of the Poor</u>	<u>Poverty Incidence</u>	<u>Composition of the Poor</u>
Wages and Salaries	42.59	61.28	66.14	28.31
Trading	46.80	10.82	70.16	3.91
Manufacturing	64.66	5.12	83.48	2.80
Transport	48.40	1.37	63.79	1.08
Other Enterprises	47.62	2.28	.79	.52
Practice of Profession or Trade	20.74	.68	35.56	.02
Farming, including livestock and poultry	76.19	7.29	85.46	52.24
Fishing, forestry and hunting	72.22	2.96	86.81	5.98
Other sources	47.00	8.20	74.03	5.00
Total	45.90	100.00	77.34	100.00
Number of families below threshold (000)		878 (20.38)		3430 (79.62)
Total Number of Families (000)		1913 (30.14)		4434 (69.86)

Source: Social Research Associates, "An Analytical Description of the Poor Majority," Project Report IB, Manila, May 1977, Table 7. Computed from data from the National Economics and Development Authority.

to season. Time and again we were told that "things are pretty good now, during the rainy season, but they were pretty difficult a couple of months ago," or words to that effect. These experiences strengthen our doubts about the validity of income statistics vis-a-vis expenditures statistics.

One major source of income which is increasingly important the further one goes down the income ladder is sharing among families. (Economists would call these "transfer payments," but "sharing" captures the spirit of it better.) Some of this sharing comes in the form of vegetables or fish or rice which are given by members of one nuclear family to members of another. Whatever its form, however, it is a major source of income for many poor families. Igmidio and his wife (Case #24) depend heavily on what their daughter Erlinda earns as an agricultural technician. Peter and his wife (Case #34) receive substantial help from one daughter who is also employed as an agricultural technician, as well as some from a daughter who married a well-off landlord in the area. Lorenzo, a fisherman near Cabusao, Camarines Sur (Case #7), received P200 per month from a son in Manila. Pedro (Case #1), a tenant farmer near Bombon, received money from two sons working as fishermen in Daet, Camarines Norte. Jose, another poor fisherman from Cabusao (Case #8), received help from his daughter who lived in Bombon and also received free fish and vegetables occasionally from his neighbors. Tomas, (Case #14), who lived near Bula, Camarines Sur, reported that his family occasionally received free vegetables from his wife's sister. Mauticio (Case #20) reported that he took no money from his daughter in Manila, but then noted that she was helping put her younger brothers and sisters through school. And so on it went.

Non-cash sources of income are also extremely important to the rural poor majority. In 1971, farm families with incomes below P500 reported that 72% of their incomes were from non-cash sources; as income levels rose, the percentage steadily fell to only 37% in the income range from P4000 to P4999 and 23% for those receiving P20,000 and over. ^{1/} This suggests one or both of two things: first, that subsistence production and gathering activities are much more important to the very poor than they are to those better off, and second, that the income of rural people who depend heavily on production for their own use may be substantially underestimated. We believe that these people are poor, but not to the extent indicated by official statistics. Entrance into the market economy does probably make things better for many rural families, but it is doubtful if the improvement is as great as is popularly imagined.

We encountered numerous examples of how non-cash and cash incomes intermix. For example, in Case #26, Buillermo and his family, residing in the vicinity of Currimao in Ilocos Norte province, raise goats, some of which they eat and some of which they sell. They also have some

^{1/} Bulletin, Table 21

chili pepper plants in their fields, and chilis are gathered to garnish meals and, from time to time, to sell. Lorenzo (Case #28) and his wife work as laborers in addition to farming the 3/4 hectare they rent. Their services are in demand during the paddy planting and harvesting periods, in particular. At planting, they can work three days a week, receiving P5 each per day. At the harvest, they are paid in kind, receiving 1/10 of what they harvest - one bundle of paddy for every ten gathered. Lorenzo and his wife also gather firewood during the dry season. They take his father's carabao to the nearby mountains (they pay him with firewood) where they can gather three bundles of wood a day. They go for firewood three days a week. In addition, they shell maize. They buy some of it from neighbors, and neighbors also give them maize to shell, letting them keep half for their efforts. They sell some of what they shell and also eat it mixed in with their rice. The wife's aunt was in the house helping with the shelling at the time we interviewed the family, for which she also received some of the shelled maize. They also raise goats for their neighbors, for which they receive half of the kids born.

Most of the rural poor majority raise rice, corn, and coconuts on very small farms, many of which are fragmented. The average rice farm in 1970 consisted of only 3 hectares; maize farms averaged only 2.5 hectares, and coconut farms 4.4 hectares. Only about half of the rice farms are irrigated.^{1/} One of the reasons why the rural poor must rely on multiple sources of income, of course, is the small size of their holdings. Tenanted rice and corn farms, which account for about half of all such farms, averaged only 1.8 hectares in 1970.

In 1972, 56% of the rice crop area was planted to the so-called high-yielding varieties of rice. ^{2/} Our field research indicates, however, that much of this planting may have gone for naught because farmers often cannot afford the fertilizer or get access to the water they need to make these varieties produce to their full potential. In fact, we were told by numerous farmers that the new varieties yielded about the same as the older ones. Mauricio, in Case #20, found that his yields with Masagana 99 varieties and fertilizer were lower by a substantial margin than the yields he was getting earlier with Miracle 8 and IR 26 without fertilizer. In his view, "there is something wrong with the fertilizer." He was bitter about having gone heavily into debt to grow better crops and then having his yields fall.

In Zambales and further north on the island of Luzon, farmers seemed less receptive to the new seeds and to the use of commercial fertilizer. Peter and his wife, part-time farmers in Zambales (Case #34), had seven carabaos and used their manure to fertilize their paddy. Magno, a farmer in the same general area of Zambales, planted the traditional ceremas variety of paddy. He expressed the view that the soil in the area was not suited to any of the IR varieties. He

^{1/} "Profile of the Rural Poor," p. 1-2.5

^{2/} Ibid.

also noted that IR varieties required chemical fertilizer, which he did not use because it was too costly. Ramon D., in Case #22, farmed a rented half hectare in Zambales and favored a traditional variety of paddy called binondok. He reported that the Masagana technicians had visited the area but none of the local farmers responded to their program. They feel that the soil is too poor for the IR varieties. Also, too many of their fields are subject to excessive flooding, and most of the farmers cannot afford the chemical fertilizer that the IR varieties need. Remedio (Case #27), in the remote barangay of Lumaba near the upland town of Villaviciosa in Abra province, continued to farm the traditional Tingguian rice, gankab. He had heard of the Masagana program but was not particularly interested in trying any of the new varieties. Florenzio (Case #28) in Abra province cultivated the traditional virgie variety of paddy. He was not familiar with the Masagana program.

These cases seem to confirm the observation that the new varieties must be supplied to farmers as part of a rather delicately balanced package if they are to pay off in full measure. Apparently, though, many farmers have been convinced to use the seed without being made fully aware of the importance of close water control and timely fertilizer application. When many of them say that fertilizer is "too costly," they seem to be saying that their yields do not rise enough with the application of the fertilizer to make the application pay. It is unfortunate that this is the case, because it may very well make farmers somewhat less receptive to future exhortations on the part of agricultural experts.

Rents for tenant farmers seem to vary considerably in the areas of Luzon which we covered in our research. Igmidio, a member of the Ayta cultural minority (Case #24), rents one hectare near Villar, Botolan, Zambales province. He uses no chemical fertilizer nor does he have any irrigation. His paddy crop is between 40 and 50 cavans. If he has a yield of 50 cavans, he pays the landlord 39 cavans. That ratio is maintained for lesser yields, i.e., Igmidio pays around 78 percent of his harvest in rent. Florenzio (Case #28), a tenant with 3/4 hectare who farms a traditional rice in Abra province, pays the landlord one-half of his harvest (he has one crop and realizes around 50 "bundles" of paddy). It is estimated that ten "bundles" equals 7 gantas (a ganta is 2.2 kgs.) or 15.4 kgs. In Case #33, several tenant farmer-laborers living in a compound near Botolan split their 30-cavan-per-hectare yields with their landlords 50-50. Pedro, the tenant-farmer and basketmaker of Case #1 near Bombon in Camarines Sur Province, paid one fourth of his crop to his landlord, who was also his godfather. Pablo, a combination owner and tenant farmer near Libmanan, Camarines Sur (Case #18), paid 17 cavans per rented hectare of rent from his first crop and one fourth of the yield from his second crop of paddy. Mauricio, a tenant farmer from near Libon, Albay (Case #20), paid 17 cavans per hectare for each crop and is liable for this amount even if a calamity destroys his crop, which may help explain his relatively high level of debt; Mauricio thought that

this fixed rent might work to his advantage, however, if more regular water supplies and less flooding made it possible for him to raise a third crop of paddy each year. Elena, the farm housewife of Case #15 near Iriga, Camarines Sur, reported that the land that she and her husband rented from his mother was rent-free. Likewise, Ferdinand, the Ayta laborer and vegetable grower in Case #35 who lived near Botolan, Zambales, reported that his landlord, apparently no relation, did not charge him rent; the land appeared fairly poor however.

As we mentioned earlier, income instability is a major problem for the rural poor majority. Partly this is due to price variation for items which are sold in cash markets; partly it is traceable to seasonal climatic variations. Nearly every poor household has some kind of "strategy" for survival during the dry season, especially if they are not able to harvest a second crop of paddy or maize. Many rely on root crops for basic sustenance; others depend more heavily on fishing; still others plant special drought-resistant crops. For example, Guillermo and his family in Case #26 cultivate dry rice and maize during the rainy season in separate fields. Then, in the dry season (which begins in December) they grow tobacco, which is their cash crop. Remedio (Case #27), a farmer with one hectare in the upland barangay of Lumaba near Villaviciosa in Abra province, farms traditional Tingguian rice during the rainy season; after this harvest, he plants maize in one-fourth of his hectare and most of the rest to peanuts, beans (including string beans and several other kinds), egg-plant, squash of various types, calabash, chili peppers, and taro.

Other households mix nonagricultural pursuits in the dry season with farming activities during the planting season for P5 per day; he also works on farms during transplanting and harvest seasons. The rest of the year he works as a clerk in a grocery store in Botolan which is owned by a Chinese. He works seven days a week, beginning at 7:00 a.m. and finishing at 6:00 p.m., for a salary of P70 per month; in addition, he is given breakfast (coffee, rice, dried fish, and eggs), and lunch (rice, meat, fish and soup) and is allowed to purchase in the store on credit. Guillermo of Case #26, besides cultivating dry rice and maize during the rainy season and tobacco during the dry season, is a part-time driver of a "tricycle," a three-wheeled conveyance which is basically a small motorcycle with a covered sidecar. He operates the tricycle on a commission basis, normally making around P5 per day but as high as P10 or P11 on busy days. Erlinda (Case #29) works part-time as a farm laborer during the rainy season and runs a cooperative store for local residents as her primary source of income.

One of the major sources of income instability is natural calamities, especially typhoons during the rainy season. The Bicol region, especially, seems to be in the major pathway of tropical storms of

various intensities. The heavy rains cause extensive flooding around Lake Bato and on down the river to San Miguel Bay, and strong winds often bring brackish waters from the bay many kilometers inland to a depth of several feet. Pedro, in Case #1, reported that water would be up to a foot deep on his rented land, and he lived approximately seven kilometers inland from the bay. Not only would the water ruin his crop, but it would leave the land increasingly salty each time. He reported that this sometimes occurred as often as two or three times a year. Even in the Province of Zambales, which is partially shielded from the worst effects of the most westward-bound typhoons by a mountain range, typhoons have played havoc, especially with the lives of the very poorest. Ferdinand, (Case #35), the Ayta farmer from near Botolan, reported that a typhoon in 1972 had taken his home, his garden, and all of his animals. Peter, the unemployed bus conductor and farmer of Case #34, reported that the same typhoon killed 20 of his chickens and 2 goats. Mauricio, the tenant farmer from Albay with the heavy debt load (Case #20), reported that water from Lake Bato floods as high as his knees when he is standing on the nearby surfaced highway; a local official reports that floods regularly ruin up to 1000 hectares in the immediate vicinity of Lake Bato, and that this land is mostly farmed by poor tenant families. "The richer farmers," he commented, "own land which is not so subject to flooding."

Our field work also led us along bays and rivers where fishing was an important economic activity, both commercially and for home use. The money incomes reported by some of our fishermen sounded more impressive than those of the landless farm laborers, yet they did not appear to be materially better off -- probably because they have less non-cash income in most cases. Like farmers, they have to worry about the weather, but even when the weather is good, the catches can vary considerably. For example, Miguel, a boat owner and fisherman from Cabusao, Camarines Sur (Case #6), reported that his catch varied from two kilos of fish per day (which barely paid for the fuel used by his boat) all the way up to one hundred kilos on the best days; he and his wife cited the case of a "lucky" fisherman who recently had made P920 in one day.

In general, those fishermen who own their own boats seem to be the best off. Miguel, for example, employed two helpers on his boat; he took 50% of the daily catch and the other two split the other 50%. Lorenzo (Case #7), also from Cabusao, was a co-owner of a boat with his brother; he reported that their average fish catch ranged from 30 to 50 kilos per day, and that these fish could be sold for around P7 per kg. In addition to this, Lorenzo had a son working in Manila who sent his parents P200 per month out of his P700 salary; even with this comparatively grand income, Lorenzo and his wife said that they seldom purchased any meat.

Those who work as fishing laborers do not seem to live even that well. Juan Garcia (Case #13), also of Cabusao, was a 62-year-old widower who worked as a fisherman or fish dryer (turning small fish over on racks in the sun so they will dry more quickly) and supported two-teen-aged sons who were not working; Juan made from 10 to 20 pesos per day on average and felt he could have been living better if large trawlers had not trespassed into the relatively shallow waters of San Miguel Bay and cut into the small fishermen's catches. Another hired fishing hand was Jose (Case #8), from the same area, a man of 72 years who still went out from time to time on the boats and who worked as a coolie hauling the fish from other people's boats to the drying areas; he and his 67-year-old wife were spending only P14 per week on rice. They did receive remittances from their daughter in nearby Bombon and people did give them free fish and some free vegetables from time to time. Jose's wife reported that they had just enough money to live on and noted that the government made loans to people, but not to people like them because they were old.

Most of the fishermen we interviewed in the San Miguel Bay area complained about competition from the larger fishing trawlers which sweep the area. One lady who owned two boats told us that these trawlers have from 30 to 40 men working on each one and that they can fish at night. Miguel said that these trawlers can fish more rapidly than smaller boats can and that they cover a much larger area. They also knocked down the fish traps set out by small fishermen and had completely cleaned out the catch in some parts of the bay, forcing some of the small fishermen out of business.

Many of the tenant farmers and landless farm laborers that we talked to also engaged in fishing, at least part of the year. Most of the poor utilize fish -- either caught themselves or purchased -- as a major source of protein. In Zambales, we found several poor Ayta families who fished with bows and arrows in nearby streams whenever they could find the time, and the fish they were able to get were invaluable supplements to their basically tuber diet during the dry season.

We were struck by the fact that there seem to be few AID-assisted fishing projects at a time when protein supplies seem to be dwindling and large fishing trawlers seem intent upon denuding the seas (just as loggers have denuded the forests of the Philippines). Small commercial fishermen are involved in labor-intensive activities which could yield considerably better incomes as well as larger food supplies for the country as a whole, and small-scale fishing would seem to deserve greater emphasis than it has received to date. Those who believe that large fishing trawlers are more efficient should consider the fact that their output is usually destined for the Manila market or for export, which does little for the rural poor majority. The small fisherman, in contrast, uses methods which employ more people, spread income

more evenly, market locally, and are less likely to ravage an entire fishing area of its catch.

J. Working Conditions

Some people who alleged that the rural poor majority in the Philippines do not work very hard. Others have argued that they work very hard, estimating work weeks of over 100 hours for both men and women. Our observation is that the answer depends on what kind of farming, fishing, gathering or other activities the poor engage in. Poor rice farmers tend to experience periods of intense work activity during seed bed preparation, planting, and harvesting seasons, but often have time on their hands at other times of the year. Those families which are near mountains, forests, rivers and creeks tend to have more alternatives for continuous employment as gatherers the year round; likewise, those which have access to irrigation facilities are able to work pretty continuously. In those cases where there appeared to be some idleness, we believe that part of the reason may have been dietary deficiencies and part may have been the absence of employment opportunities at certain times of the year. In general, however, we cannot classify the rural poor as shirkers. They often have long distances to walk to get to their work places, or to get to water sources, or to dispose of wastes; children spend long days in school; simple tasks like washing clothes and doing dishes take more effort in the rural Philippines than they do in most urban centers.

Perhaps a couple of examples can convey a better picture. Case #26 concerns a young farmer named Guillermo, 31 years of age, who lives in northwestern Luzon. He works part-time as a tricycle driver, earning a percentage of the day's fares. He also farms one-half hectare on which he grows dry rice and maize during the rainy season. His important cash crop, however, is tobacco, which is planted in the dry season, beginning in December. The fields are plowed, using a carabao, and the planting is done by the family (Guillermo has an extended family household composed of his own family, his mother, and his brother and his family). They have a well as a source of water, and they hand-carry water to the plants every other day. They also employ 5 kilos of chemical fertilizer, and mix pesticides with water and spray it on the plants. In May they begin harvesting (taking the lower leaves off first as they mature); leaves are dried in local kilns, some of which are owned by the farmers themselves.

Remedio (Case #27) in the upland barangay of Lumaba, near Villaviciosa in Abra province, also farms tobacco during the dry season on his one-hectare farm. He owns two carabaos and a plow and uses them to prepare the soil. He plows once and harrows once. He does not use chemical fertilizer, noting that "the carabao fertilize the field" when they are working. Irrigation of the tobacco plants is done by hand; when the plants are new they are watered three times a day, and then once a month after that. To do the initial watering, he hires ten people to help (paying P5 per person per day). In three months, the first leaves are harvested. Harvesting, of course, is also a labor-intensive activity.

K. Expenditure Patterns

Expenditure patterns are often good indicators of where poverty is most severe. The percentage of expenditures which goes for food is especially instructive -- normally, the percentage is highest among the poorest and drops off as incomes and expenditures rise. For the Philippines as a whole, 57% of expenditures went for food, beverages, and tobacco in 1975, according to preliminary census figures. Urban areas spent about 51% of their total outlays and rural areas about 61% of theirs on food and related items. By regions, the highest relative expenditure on food was in the Eastern Visayas, at 64%. Among rural families in the Eastern Visayas, food accounted for 66% of all expenditures.

Typically, the poorest regions skimp on items like personal care, household furnishings, recreation, medical care, transportation, education and personal effects. Relatively large amounts go for things like food, household operations, fuel, light, and water, and special family occasions. This was true, for example, of rural households in both the Eastern Visayas and Northern Mindanao in 1975. In the richer regions of Central Luzon and Southern Mindanao, however, rural families spent relatively less on food, and more on clothing, housing, personal care, medical care, and education. Outlays for recreation, transportation, and communication are also more important in the richer areas.

L. Location

The Social Research Associates study notes that the incidence of poverty is greatest in the Eastern Visayas, the Cagayan Valley/Batanes region, and in the Iloco/Mountain Provinces region (Table 8). The incidence of poverty is the percentage of the total population of an area which is considered poor; it is possible, for example, for an area to have a high percentage of its people poor, but for the actual numbers to be rather small. This is true, for example, of the Cagayan Valley/Batanes region, which has almost 59% of its people poor (using a definition of the National Economic and Development Authority), but whose numbers account for only about 5% of the country's total number of poor people. The Eastern Visayas, on the other hand, not only have the highest incidence of poverty at 64%, but account for 22% of the country's total poor. The incidence figures help to characterize a region in an overall sense as rich or poor compared with other parts of the country, but it is the total numbers which really tell those interested in eradicating poverty where their attention is most needed.

Table 9 points out which provinces have the highest incidence of poverty in an overall sense, as well as which ones have the highest indices of urban and rural poverty. These include Ilocos Sur, Ilocos Norte, Mountain Province, Abra, and Ifugao in Ilocos region; Cagayan-Batanes, Nueva Vizcaya and Isabela in the Cagayan Valley region; Masbate and Sorsogon in Bicol; Leyte and Western Samar in the Eastern

Table 8
Incidence of Poverty and Composition
of the Poor by Region
(Percent)
1971

<u>Region</u>	<u>Poverty Incidence</u>	<u>Composition of the Poor</u>
1. Metro Manila	17.88	3.30
2. Ilocos Mt. Province	56.36	6.84
3. Cagayan Valley Batanes	58.71	5.37
4. Central Luzon	35.94	10.77
5. Southern Luzon & Islands	41.29	12.60
6. Bicol	53.19	9.26
7. Western Visayas	38.21	8.98
8. Eastern Visayas	64.43	22.14
9. Northern Mindanao	52.39	9.58
10. Southern Mindanao	38.59	11.16
Total	44.90	100.00

Source: See table 7

**Table 9 - Ranking of Provinces According to Proportion of Families
With Income of P3,000 or less to Household Population: Total, Urban, Rural: 1971**

nk	Total		Urban		Rural	
	Provinces	Proportion	Provinces	Proportion	Provinces	Proportion
	Rizal	14.35	Camarines Sur	0	Rizal	16.33
	Manila & Suburbs	22.32	Marinduque	6.55	Nueva Ecija	24.43
	Zambales	23.94	Zambales	7.69	Bataan	33.78
	Nueva Ecija	25.73	Mindoro Oriental	9.32	Mindoro Occidental	35.62
	Kalinga-Apayao	35.03	Davao Oriental	12.50	Kalinga-Apayao	36.2
	Mindoro Occidental	36.05	Rizal	13.67	Zambales	41.3
	Bataan	37.01	Negros Oriental	14.81	La Union	41.8
	Pampanga	59.63	Catanduanes	15.00	Sulu	43.8
	Bulacan	40.53	Cotabato	15.13	Davao Oriental	47.1
	Davao Oriental	41.05	Mt. Province	15.25	Tarlac	48.34
	Sulu	42.33	Batangas	16.67	Laguna	48.45
	La Union	44.47	Palawan	17.40	Pampanga	48.60
	Lanao del Sur	46.68	Kalinga-Apayao	18.76	Lanao del Sur	49.07
	Lanao del Norte	47.42	Lanao Del Norte	18.90	Lanao del Norte	50.00
	Palawan	48.61	Pampanga	20.83	Cavite	53.3
	Cavite	50.62	Manila and Suburbs	22.32	Benguet	54.17
	Agusan del Norte	50.85	Davao del Norte	22.58	Palawan	55.78
	Tarlac	51.27	Bulacan	23.53	Bulacan	56.17

(51)

Table 9 (cont'd)

Rank	Total		Urban		Rural	
	Provinces	Proportion	Provinces	Proportion	Provinces	Proportion
1	Laguna	52.53	Sula	23.82	Negros Occidental	57.39
2	Cotabato	52.55	Masbate	25.00	Cotabato	58.43
3	Benguet	53.07	Bukidnon	25.00	South Cotabato	59.65
4	Davao del Norte	54.47	Davao del Sur	25.02	Iloilo	60.28
5	Davao del Sur	57.26	Neuva Ecija	30.78	Davao del Norte	61.92
6	Negros Occidental	57.39	Camarines Norte	33.35	Agusan del Sur	66.82
7	South Cotabato	57.46	Zamboanga del Sur	34.61	Misamis Oriental	68.47
8	Iloilo	61.18	Agusan del Norte	35.31	Capiz	69.00
9	Camarines Norte	61.74	Romblon	37.46	Batangas	69.30
10	Batangas	62.23	Mindoro Occidental	37.48	Zamboanga del Sur	70.00
11	Agusan del Sur	64.83	Lanao del Sur	37.49	Bohol	70.80
12	Mindoro Oriental	64.82	Quezon	39.13	Camarines Norte	66.30
13	Zamboanga del Sur	65.11	Isabela	41.67	Albay	72.60
14	Misamis Oriental	65.93	Nueva Viscaya	44.13	Davao del Sur	72.70
15	Capiz	66.30	Cavite	47.83	Camarines Sur	74.42
16	Marinduque	68.51	Pangasinan	48.48	Northern Samar	76.00
17	Negros Oriental	68.62	Zamboanga del Norte	50.00	Mindoro Oriental	76.36
18	Quezon	68.79	Benguet	50.00	Southern Leyte	76.67
19	Bohol	68.80	Capiz	50.00	Marinduque	76.02
20	Eastern Samar	71.42	Eastern Samar	50.00	Negros Oriental	77.01

Table 9 (cont'd)

Rank	Total		Urban		Rural	
	Provinces	Proportion	Provinces	Proportion	Provinces	Proportion
39	Albay	71.89	Ifugao	50.12	Romblon	77.55
40	Catanduanes	72.10	Surigao del Sur	50.75	Eastern Samar	78.06
41	Camarines Sur	72.17	South Cotabato	52.17	Ilocos Sur	78.26
42	Northern Samar	72.20	Bohol	53.35	Quezon	79.32
43	Cebu	72.31	Cebu	53.95	Surigao del Sur	79.69
44	Surigao del Sur	72.57	Bataan	55.54	Cebu	80.97
45	Romblon	72.92	Northern Samar	55.87	Misamis Occidental	82.14
46	Southern Leyte	74.-7	Agusan del Norte	56.25	Ilocos Norte	82.76
47	Cagayan-Batanes	75.73	Misamis Oriental	56.53	Cagayan-Batanes	82.91
48	Bukidnon	76.65	Laguna	56.82	Bukidnon	83.59
49	Nueva Viscaya	76.83	Negros Occidental	57.39	Mt. Province	83.63
50	Ilocos Sur	77.09	Abra	59.06	Catanduanes	84.00
51	Pangasinan	78.11	Misamis Occidental	59.26	Leyte	84.28
52	Misamis Occidental	79.00	Sorsogon	60.00	Pangasinan	85.03
53	Leyte	81.13	La Union	62.50	Nueva Viscaya	85.89
54	Ilocos Norte	81.60	Iloilo	63.74	Western Samar	86.30
55	Mt. Province	82.25	Southern Leyte	63.66	Isabela	88.37
56	Isabela	82.73	Antique	64.71	Ifugao	88.53
57	Masbate	83.29	Albay	66.66	Sorsogon	90.32
58	Abra	84.95	Tarlac	66.67	Abra	90.62

Table 9 (cont'd)

Provinces	Total		Urban		Rural	
	Provinces	Proportion	Provinces	Proportion	Provinces	Proportion
Western Samar		84.97	Leyte	68.76	Masbate	92.77
Ifugao		85.39	Ilocos Sur	71.43	Aklan	94.92
Zamboang del Norte		89.68	Cagayan-Batanes	72.00	Zamboanga del Norte	95.59
Sorsogon		90.83	Aklan	72.00	Antique	97.83
Aklan		92.77	Western Samar	74.99	Surigao del Norte	No frequency
Antique		93.55	Ilocos Norte	77.78	Agusan del Norte	No frequency
Surigao del Norte		96.92	Surigao del Norte	85.29		

SOURCE: Social Research Associates, "An Analytical Description of the Poor Majority," Project Report IB, Manila, May 1977, Table 12.

Visayas; Aklan and Antique in the Western Visayas; and Bukidnon, Misamis Occidental and Surigao del Norte in the Northern Mindanao region.

M. Deforestation

Travelling through the Bicol region, one is struck by the vast coconut forests that have replaced the original cover. In northwestern Luzon, however, extensive hilly and mountainous territories have been completely denuded. Some sources in Mountain and Ifugao provinces reported that the local farmers complained that the disappearance of the surrounding forests has affected the watersheds, resulting in diminished rainfall. This, in turn, had a negative effect on the quality and size of their crops. In several other places, villagers pointed out that rice lands were lost because of the heavy silting of rivers where deforestation had taken place and erosion had increased.

Discussion with local residents revealed various opinions concerning the cause of this phenomenon. Some attributed it to a combination of population increase and the practice of swidden farming (the kaingineros) while others blamed it on the need for firewood. Most, however, felt that it was due to excessive logging. In Case #24, Igmidio, a member of the Ayta cultural minority in Zambales Province lamented that so much of his natal area had been deforested. His ethnic group practices swidden farming, but many lowlanders have moved into the area and there has been an increase in logging and gathering of firewood. An informant in Villaviciosa, Abra Province attributed the denuding of the area to illegal logging, permitted because of "payoffs." The Catholic bishop in the dioceses of Villaviciosa has launched a reforestation program (along with an irrigation program), and a local priest described how the students had planted 1000 giant ipil-ipil trees the week before. In payment, they received food provided by the Food for Work Program organized by the Catholic Relief Service (and sponsored by AID).

N. The Role of Women

The cases reveal that women play a very important role as breadwinners in rural families. Wives and daughters contribute to the incomes of most rural poor families by working as farm laborers during the planting and harvesting seasons. Women also had become the principal wage earners in some cases. Erlinda, in Case #29, was supporting her parents by working as a farm laborer, and she also was running a cooperative for the local poor families so that they could purchase needed items at lower prices. Erlinda also had obtained applications for loans from the Self-Employment Assistance Program to obtain credit for weavers so they could purchase thread for weaving garments and blankets to sell. Two of the applicants, Cases #30 and 31, concern impoverished Ifugao families. Duduli, in Case #30 supports her tubucular husband by working as a laborer, and the small loan she will receive will enable her to sell some cloth. She also farms a mountainside swidden to provide yams for home consumption.

In Case #6, the wife of a fisherman pointed out that she, like many of the other wives of fishermen near San Miguel Bay, marketed the catch. A woman in Case #13 is the owner of two small fishing boats. These examples indicate that women play an important role in the San Miguel Bay fishing industry. In the handicraft cooperative we visited at Santo Domingo, Albay Province, we were told that the 150 members included 90 relatively young girls who do sewing in their homes with electric sewing machines which they buy from the cooperative. Travelling through Ilocos Sur, Abra, and Ilocos Norte Provinces, we came upon numerous women weaving bedspreads. The looms were set up under the houses (which are built in high piling), and all of the women were vending their cloth.

In case #27, it is noted that two nuns from the country parish in Barangay Lumaba, near Villaviciosa in the remote hills of Abra Province who maintain a small dispensary near the church. They also manage the Food for Work Program, an AID-supported program administered by the Catholic Relief Services. One of the nuns also makes periodic trips back into the mountains to visit farmsteads that need medical care.

V. THE RURAL POOR MAJORITY AS BENEFICIARIES OF AID-ASSISTED PROJECTS

The rural poor families that we interviewed were located mainly in the Bicol region and in the provinces of Zambales, Ifugao, Abra, Ilocos Norte, and Nueva Ecija. The Agency for International Development is assisting projects at various locations around the Bicol region and supports various projects in the province of Zambales under the Provincial Development Assistance Program (PDAP). We attempted to glean as much information as we could from our respondents regarding both existing and proposed projects.

The most visible benefit of past AID activity was the very large number of schools we saw with RP-US commemorations on them. The rural poor prize education very highly, as we noted earlier, and there is little question that most of them feel themselves to have benefited from whatever schooling they and their children have been able to receive. The local schoolhouse is commonly seen as the most available avenue out of poverty by most of the poor. Igmidio (Case #24) and his wife were very much dependent upon their daughter Erlinda's earnings from the Zambales Provincial Agricultural Service. Peter (Case #34) and his wife benefited from their daughter's income as an agricultural technician. Mauricio (Case #20) bragged that he did not accept any money from his accountant-daughter in Manila, but she was helping to educate her younger sisters and brothers. Without such assistance from their educated children, these poor families would have been in an almost hopeless situation.

We also found substantial benefits from AID-assisted irrigation projects in the Bicol region. Jose Sanchez, a small tenant farmer (Case #2) from near Liban, Albay province, farmed one-half hectare which was watered from such a project. He reported that the farmers in the vicinity are very pleased with it. Not only were they able to get two crops of paddy from their land, but a flooding problem had been resolved, thanks to the better drainage. Similarly, we received considerable positive feedback from farmers in the Cristo Rey barrio near Iriga City who recently began getting irrigation water from an AID-assisted project. Twenty families in the area have been organized into an irrigation cooperative; Masagana 99 technicians had come in and taught the farmers how to plant and care for the crops, how and when to apply fertilizer, and so on. One tenant farmer (Case #4) reported that he had switched from raising maize and peanuts to raising paddy; innovation of this magnitude is rare among such farmers, and this can be taken as evidence of the strength of his feelings with respect to the value of the project to him. Similarly, Elena and Lita in Cases 15 and 16, who also lived in the Cristo Rey barrio, both reported that the irrigation would make it possible for them to plant three rice crops each year instead of two; these women were young housewives, and were among the most optimistic respondents we interviewed. We saw the irrigation canal at Cristo Rey; it seemed well maintained and was protected by a sign stating that "any person or animal which obstructs the flow of water is subject to a \$50 fine." In all, we felt that the local farmers felt very involved in the project, identified strongly with it, and would make substantial sacrifices to ensure its success.

We also found examples of AID-assisted irrigation projects which prompted negative reactions, however. These reactions did not stem from the design of

the projects so much as the way in which they were being executed. Tomas, in Case #14, was a landowner-farmer who had received three hectares of land under the land reform program but was not able to farm them because of the haphazard way in which his land was levelled -- so he was reduced to working as a farm laborer for other farmers in the area. Apparently bulldozers simply scraped the topsoil off the high places and dumped it into the low places, leaving only subsoil exposed to the air for farming. Pablo, in Case #18, lost land to an irrigation ditch and road project and also was much irritated that the contractors had dumped fill on his land in March and left it there, costing him perhaps 15% of his total farmable area; he thought that irrigation and the road would eventually benefit him, but to date he had been hurt, not helped, by development activities in his area. Maria, in Case #5, the wife of a tenant farmer near Libmanan, Camarines Sur, reported that they were forced to rely on rainfall to water their paddy this year because the stream they previously used as a water source had been filled in as digging began to construct a nearby road and canal project. No one in the vicinity had been informed of the exact schedule of the construction project, and this caused some hard feelings in the area. The family had also lost about five meters of land to the project across one side of their rented property when the road construction began. She did say, however, that some farmers are very happy with the road because it makes markets more accessible. Julio, in Case #9, had received some land from the Department of Agrarian Reform near Bula in Camarines Sur; however, he was having problems making his scheduled payments for the land because his yields had been low. This he attributed to flooding which washed away his seedlings and caused rotting of the plants that have to stand in the brackish water for any substantial period. The Bicol River Basin Development Program representatives had promised to fill in the low-lying land and put in drainage facilities in the area, but to date nothing had been done. Julio was upset that a new road had cut part of his land off from his irrigation pump; a conduit under the road had only been partially completed, so he had to force a hollowed-out coconut log under the road to allow some of the water get through. He expected that it would silt up before too long, however.

Water control -- getting enough when it was needed and getting rid of it when there was too much -- was a common concern of all the farming and some of the fishing families that we interviewed. Irregularity of water supply seemed to be a major cause of income instability, and the poor appear in general to be much more concerned about income stability than income level, as we mentioned earlier; it is obvious that the closer a family lives to the margin of subsistence, the greater their concern about instability of income will be. Julio, the farmer whose problems we just discussed, is a good example of this. Another example is Mauricio (Case #20), a tenant farmer whose home is located just south of Lake Bato in Albay province, in the middle of a rice paddy. We interviewed him because it appeared that he would be a potential beneficiary of the proposed diversion canal from the lake to the Ragay Gulf which is aimed at reducing flooding from the lake. The lake, we were told by a local official, may rise as much as seven meters in a typical year and may flood as much as 100 hectares which support considerably over 100 poor rice farming families in the area. Mauricio confirmed that he does indeed suffer considerably from flooding and felt that farm tenants like himself would be the primary beneficiaries if flooding could be reduced by the canal since most of them in that area pay fixed rents (he paid 17 cavans per hectare to the landlord per harvest whether the harvest was a success or not). His debt level, by the way, had risen so much

that he was planning to sell his only carabao to help pay part of it off, and he felt that things were getting worse for him every year, not better.

We also found problems of water control in the rather narrow strip of flat land west of the mountains which run north and south through the province of Zambales. Numerous streams run through this strip to the South China Sea, and progressive denudation of the mountain slopes has increased the rate of runoff during the rainy season and left little water to come down during the dry season. The net result is so much water that many of the bridges on the major highway wash out during the rainy seasons each year, while during the dry season water is extremely scarce for such activities as watering kitchen vegetable gardens or catching fish. While we were there we found that some of the people we had planned to interview were not available because the water was too high in area streams; we tried, and failed, to reach an area quite close to a major town in a four-wheel-drive vehicle. The water was simply too deep. Some of our respondents later waded in chest-deep water into town to talk with us. One interviewee, Peter (Case #34) of near Cambangan, Zambales, reported that roads and bridges regularly wash out in the area, forcing people to ford streams with their goods packed high on their heads. Sometimes people drown in the process, and sometimes they only lose their goods. Peter also noted that the children had to swim to get to school down the road from his house. All they needed, he said, was a simple suspension-type footbridge at that particular point; while we were looking at the site, however, a procession of local government officials roared out in their jeeps and cars to also get a first-hand look. Local discussion said that they were planning a big bridge that would carry cars and trucks. Apparently they had not discussed this with the local poor; this is just one example of what appeared to be the planning of development from the top down instead of from the bottom up. If the poor are really meant to be the primary beneficiaries of projects like this, why aren't they (and not just the local barangay officials, who tend to be richer and often have different ideas of what the community needs) consulted about what they perceive their needs to be? The wife of the tenant farmer we interviewed near Libmanan (Maria, in Case #5) probably would not have been so upset, nor would her neighbors had been, if officials in charge of the canal and road project had informed local people of what construction would entail in the way of costs for them; possibly the stream's water flow could have been continued in some way while construction got underway. The local people might have had some ideas of their own about possible solutions. They often know local conditions better than anyone else.

In any case, we felt that the part of the Provincial Development Assistance Project (PDAP) in the province of Zambales which is destined for bridge and road construction and maintenance probably has the potential to be quite beneficial to the rural poor of the area and, in fact, probably is of substantial benefit to most of them. This is particularly true of those among the poor who depend upon cash markets for the sale of their produce. Some families, like the very, very poor Negro family which is our Case #35, are so close to subsistence that the presence or absence of roads probably makes very little difference to them. They did not live on a road, but about one kilometer away from one; they grew vegetables, but sold them only to local people in the town about three kilometers away. They had no streams to cross to get to work or to get to town. When we asked them if they noticed any difference in their life styles when bridges were out or roads were impassable, they looked at us rather peculiarly (as though we were a bit crazy to ask such a question) and said "no." We conclude, therefore, that the very remote poor who do not as a matter of course sell to or buy from

a cash market are not affected by the presence of roads some distance away; penetration roads may either help or hurt them, depending on whether it encourages them to specialize further in producing for a cash market and to realize real gains in the process, or whether it merely allows a new crew of loggers to denude still more of the Philippines and thus force the poor still further back into remote areas.

The importance of strong local participation in AID-assisted projects is underlined very well in the cases of two Frankel-type water purification plants near Naga City, Camarines Sur. The first, near Milaor, just south of Naga, is a roaring success. There is a constant stream of people coming to use it. Some come from as far as 6 or 7 kilometers away. The local people marvel at how this plant can extract the filthy, stinking water from the watercourse next to it and convert it into clear, sweet-tasting drinking water. The barangay chief was a young dynamo of a person who was clearly just as poor as the other clients of the project; he showed us how the barangay financed the operations of the plant with a P1.5 assessment per month. There were a few families in arrears, but some had paid as far ahead as December. People came out of their homes to tell us what they thought of their water system, and it was uniformly favorable. They said they no longer have to haul water so far, or buy it from vendors along the highway. They don't have to worry about getting sick from drinking the water. Their lives are better than what they used to be.

A twin water purification plant was constructed just north of Naga City in Magarao. It is standing unused, rusting. Children were swimming in a nearby creek that looked just about as dirty as the one at Milaor, but they told us that they did not get their drinking water from the creek. No, they said, they bought their water from a nearby owner of a private well (who had a nice house and car) for P2 a month. The children said that there was not always enough money to buy gas for the engine powering the unit; while it was shut down, apparently, the spark plug rusted and the local people couldn't get it started again. At any rate, there was no great urge on anybody's part to fix it as long as the private well water was available. No one came out to talk with us as we inspected the unit except the children. With no apparent local support, the project appears to be a failure, benefiting no one except the firms and workers which built it. We conclude again that the grass-roots rural poor can make or break an AID-supported project intended for their benefit, depending on how much they feel themselves to be a part of the project.

We might note in passing that there is a New Society-constructed market building (a structure intended to house small stalls for marketing various products) standing unused right next to the Frankel unit at Magarao. It is a nice building, with a concrete floor, a metal roof, and the names of all of all the local politicians and the date (1975) imbedded into the concrete. The children told us that it had never been used. Instead, people go into Naga City, which only costs 25 centavos by jeepney. The main beneficiaries of the project appeared, also, to be those involved directly in the construction and a couple of carabao who used the building for shade on occasion.

We did receive very good feedback from people on projects supported by the National Electrification Administration, which has in turn been supported

by AID. For example, we interviewed the manager of a handicraft facility in the town of Santo Domingo, Albay province. It is a cooperative of 150 members, 90 of them girls, financed by loans supplied by the NEA. The girls, we were told, borrowed P700 from the coop to buy sewing machines and paid back P13.50 per month for five years, at which point the machines would be theirs. The girls, mostly young were given three weeks of training by a National Cottage Industry group, and were able to average about P15 per day by sewing up items like purses, handbags, and the like from abaca for sale in Manila and abroad. (P15 per day is about three times as much as most rural women are able to earn, even from heavy work in the rice fields.) The girls produce mainly to order; during the off season, they work up new designs for the next rush season. The work is done in the members' homes; the central building is used for checking the quality of the work brought in, storing it, and getting it ready for shipment. The cooperative buys all the materials while the members supply the machines and the labor; the coop also owns about ten sewing machines of its own which it keeps in reserve for meeting rush orders. The coop also does abaca dyeing on the premises for those members who want to do more exotic work. This operation, we feel, was quite successful and represents a type of industry which can provide a demand for the human services that are so plentiful in the rural and poor Philippines. It supplies training as well as employment; it provides a market for things like abaca and sewing machines, and not incidentally, uses some of the electricity supplied by NEA-backed electrical cooperatives.

We have been told that AID feels strongly that private business firms should carry the majority of the burden of economic development, and we agree. We did visit what we considered to be an ideal type of agri-business-related "factory" in the town of Tabaco, Albay. This factory was really more of a sizeable machine shop, open to the air on all sides, but roofed over. The primary output of the plant was bolo knives for use by local farmers, but it also made every other type of knife imaginable, along with scissors and straight-edged shaving razors, some of which it sold locally and some of which it exported to more distant towns and even abroad (we bought some of its output). The workers made these items out of strap iron which had been taken from the leaf springs of junked cars. The iron was heated at a forge, hammered into an L shape, chiselled in half, hammered flat on both sides on an anvil and given a point on one edge, and drilled with holes to accept the rivets for the handle, all by hand. Pieces destined to become scissors had holes pounded in one end to form the handle; these were then shaped, ground, and polished on a grindstone, bolted together, coated with a light oil, and boxed. The plant appeared to employ about thirty people, most of them men; some boys and women operated a sales outlet at the front. We were impressed with the operation because it was not highly automated, because it used the most plentiful resource, labor, in relatively efficient ways, it produced an output locally needed which would add to the quality of life of those who bought it as well as those who produced it, and it represented a technology which was neither primitive nor modern, but something intermediate, something not so out of touch with local life styles and skills that it became an alien economic enclave. AID did not assist this operation directly, but the plant did use electricity to power its forge fans, turn its grindstones, and supply lighting in dark areas, and it may indicate the kind of thing that can be expected from support for rural electrification projects. We might add that

we also visited a bolo knife "manufacturing" operation near Iriga City where there was no electricity; the forge fan was turned by hand, so it took longer to heat the iron and output per person was clearly lower than where the juice was available.

Of course, output per person employed is not necessarily what development ought to maximize; it needs to maximize output overall, with minimum wastage of human resources. Perhaps, from an overall standpoint, the hand-powered forge would use more of the Philippines' most abundant resource and actually produce bolos at lower overall cost. This would appear to be an area where further research could really be useful -- in this example, for instance, it would be interesting to know how many poor people would be employed and how much income they would be receiving if production occurred as it did in Tabaco compared to the method employed near Iriga City. The results may surprise us.

We also had the chance to visit a pilot geothermal plant near Tiwi, Albay. The National Power Corporation is engaged in constructing a major electrical-generating plant on the site, using superheated steam drawn from eighteen wells. The steam is run through a series of separators to free it of contaminants and then used to power a central turbine which in turn generates the electricity. The resulting hot water is dumped into the Gulf of Lagonoy at present. Besides electricity, the pilot plant yields 1000 kilos of salt per day, and potassium chloride (a fertilizer) is another byproduct. The dehumidified hot air can also be used to dry grain and to process food; ammonia is another byproduct which can be used as fertilizer and as a refrigerant in air-conditioning systems. This plant is clearly a capital-intensive project, which is one reason we visited it. We wondered; would something this capital-intensive have much potential for benefiting the rural poor? True, it will not directly employ very many people when it is complete. But here, we believe, there is some chance for "trickle down" to work. Those tied in to electrical lines can certainly be benefited in a variety of ways (especially if electrical rates are geared to income levels, so that small users pay less); farmers can certainly benefit if the cost of fertilizer can be brought down by the added supplies of ammonia and potassium chloride; grain drying could mean fewer crop losses, which would again mean more food, and, hopefully, lower food costs. Food processing with heat from the plant may reduce the need for charcoal in poor homes; thus, in turn, giving some forests a chance to grow back and reduce the water control problems so many poor farmers seem to have. True, the overall effects of the Tiwi plant in each of these areas may be small. Ever so, we are not convinced that every capital-intensive project should be condemned just because it is capital-intensive in the first instance. A seawall along San Miguel Bay would be capital-intensive, too, but it would eventually allow much land which now produces little because of the so-often flooding with salty water to be brought into fuller production; it would cut crop losses from outright flooding; it would save some homes that are now lost to wind-driven waves and probably even save a few lives for the poor people who live along San Miguel Bay.

In this connection, we would like to urge that projects supported by AID be carefully evaluated, not only in terms of their initial capital requirements, but in terms of their ultimate effects upon the poor and their ability to pull themselves up to more satisfactory levels of living. For

example, the proposed Bayanihan Barrio School Project may look much like a capital-intensive project at first glance, since it does require cement blocks and mortar. But we believe it is really better classified as a labor-intensive project, since numerous people are involved in producing the cement, hauling the sand, manufacturing the cement blocks, laying the blocks, putting on the roof, and so on. Moreover, the existence of such a building can lay the foundation for numerous labor-intensive educational or social activities. It caters to the Philippine hunger for education among the very poor; it provides an opportunity for people with common interests to do something about it; it may be a socially acceptable institution for changing certain attitudes regarding, say, the optimum number of children or something of that sort.

In general, it appears to us that the projects which have the greatest prospect for benefiting the "poorest of the poor," the families with least economic contact with the rest of the economy, are the nutrition, health, population, and education projects. These fall into the "welfare" category more than into the "improve the productive environment" category because this group is hard to reach on any other basis. Even in countries as rich as the United States, there are people -- the mentally retarded, the very old, the sick, the physically handicapped, and so forth -- who are difficult, and expensive, to reach. In the Philippines, the task is doubly hard because less is known about this group than in the U. S., it appears to be a larger group in relation to the total population, and the country's resources are more limited. Nonetheless, we see no reason why AID should not continue, and even expand, its activities in the "welfare" project area. It appears, for example, that school feeding programs in public schools touch groups which would mainly be poor; with healthier, better-fed children, parents should eventually begin to feel that it is no longer so necessary to have such a large number of children in order to have enough to survive to care for the parents in their old age. If feeding programs could be extended to the elderly poor, it may also help reduce the insecurity fears of younger parents and induce some reduction in family size. In a very real sense, then, "welfare" projects may be very effective long-term investments related to development for countries like the Philippines.

We suggest, therefore, that the Agency continue with both its "welfare" projects and its "improve the productive environment" projects in order to touch both the "poorest of the poor" and those poor who are slightly better off. As the better-off segments of the poor improve their lot, of course, they represent an extension of the country's overall tax base, and it becomes increasingly possible for Filipinos themselves to carry more and more of the inevitable welfare burden. Too much emphasis on "welfare" projects alone may not do enough to build a self-supporting economic structure, and too much emphasis on "improve the productive environment" projects might doom the poorest of the poor to growing absolute poverty and even bleaker lives. We do not know what the proper balance between such projects is; each country, no doubt, is different. Good social soundness research should be helpful in indicating the direction of movement, and the earlier in a project life cycle it is carried out, the better.

APPENDIX A

Cases of Rural Poor in Luzon

A. Cases from the Bicol Region

Case #1, Pedro - Pedro, a tenant farmer born in 1932, lives on the edge of Bombon, a village in the vicinity of Naga City, Camarines Sur Province. He is the third of five sons and his parents are deceased. He attended school in Pili up to the sixth grade, and, having studied English between the ages of 7 and 12, he speaks it quite well. Pedro and his wife have seven children, four boys and three girls ranging in age from 6 to 22. Two of the boys, aged 19 and 22, work as laborers on commercial fishing boats at Daet in Camarines Norte Province. These sons are not married, and in keeping with Filipino custom, each sends monthly remittances of P 20 (each earns P 200 per month) to the family. The other children are in school.

The farmstead on which Pedro's two-room bamboo-wood plant house (built on piling with thatched roof) stands is about 500 square meters in size. There is a latrine behind the house, and a swampy plot near the house contains some taro plants, sugar cane and potola (a type of squash). Two coconut trees stand close to the house and there is a large shade tree in front of the house, providing a work and play area.

Pedro rents 1/2 hectare from his godfather. He explained that when he married, his father arranged for a wealthy older cousin living in Bombon to become Pedro's godfather (such alliances are common in the Bicol region). Pedro went to work as a house painter in the Green Hills section of Manila for two years, but he kept the farm, and sent his wife money to hire workers to plant and harvest. In past years, Pedro has cultivated 3-month and 5-month varieties of paddy, but since the Masagana 99 Program reached this area, he has been planting some of the new varieties. This year, for example, he is growing IR-36. He does not irrigate, relying on rainfall which in this area is erratic because of the frequent typhoons that bring too much water. These storms also cause flooding from San Miguel Bay which is seven kilometers from the farm, damaging his soil with brackish water. To prepare the fields his wife and children help, working about one week. In addition, Pedro hires several laborers, most of them men from the village, paying them P 6 per day. Female laborers receive P 5 per day. A man with a plow and caribou is paid P 12 per day. Pedro pointed out that in 1975, a laborer and rototiller could be rented for P 60 per day, but due to the increase in gas prices, in 1977 it costs P 75 per day. A hectare requires two days of labor. Pedro himself works around six days each planting season as a laborer for neighbors, as do his wife and older children. The family and hired laborers also work intensively for several days at harvest time.

With a normal rainfall, Pedro gets two crops of paddy per year, each crop amounting to around 40 cavans (a cavan has 50 kilos). In a year of unusual rainfall, he can realize a third crop. One-fourth of the total harvest is paid to the landlord for rent, and Pedro noted that since his landlord is his godfather, he rent is lower than it normally would be. Pedro normally would keep 60 cavans for himself (in Naga City, rice of average value was selling for P 2.10 per kilo, so Pedro's 60 cavans would

be worth around P 6300 per year or P 900 per person in family). With two crops Pedro and his family consume all of the rice. Some of the paddy from a third crop, however, can be sold.

Pedro explained that land in his area has been surveyed for irrigation purposes, but he does not know when it is scheduled to begin. He expressed the view that he would very much like to have irrigation, which would allow him to plant a third crop every year.

Pedro has no farm animals. He had 15 chickens but they were struck by some kind of ailment and all died.

Pedro makes circular open-weave bamboo baskets that are used for steaming fish. He purchases the bamboo in Bula, further south; a large bamboo log costs P 4.50 and a small one P 3. A large log can enable him to make 15 baskets a day (he noted that if he did not take a noon siesta, he could make more). The production of the baskets is done in the work area under the large tree in front of the house. Pedro shaves the bamboo strips from the log (sitting on a low stool and using a sharp knife). The stubs from the bamboo logs are dried and use for fuel. This work is done in the dry season, but it also is done during the period when the paddy is planted, (when his fields do not require intense attention). Pedro pointed out that if he had electricity, he could produce more baskets in his house at night. He added, however, that electricity would require him to have a better house (he seemed to think they went together). There is electricity in Bombon, but its use appears to be restricted to those who live along the main road.

Pedro has a special relationship with his godfather. He noted that the older man does not work any of his land but rents all of it. Pedro invites him to all of his family celebrations. He also goes to the godfather when he must borrow money.

The family catches some fish (a kind of fresh-water mudfish) that they catch, dry and consume. Vendors come along the road each selling vegetables, fruit and fish and occasionally pork and beef. Each day, Pedro's family buys a kilo of fresh fish. They also purchase yams (camote), papaya and other locally available fruit. They make a kind of ersatz coffee by burning rice kernels, then making a brew from them. Occasionally they buy fish sauce (patis), normally garnishing their rice with marine salt.

Case #2, Jose Sanchez - Jose Sanchez, his wife, and two small children live along the road in Barangay St. Augustin, Liban, Albay Province. Their dwelling is a very small bamboo and thatch structure that soon would be moved to a farmstead site near Jose's fields. Jose rents 1/2 hectare from the parish priest in Liban. He is farming IR - 26 and he noted that he tries various kinds of high-yield rice. To prepare his field, he hires a laborer and carabao and plow for P 12 per day for two days of work. He also needs a total of 12 laborers for preparing and harvesting, and he pays each P 12 per day. To rent a tractor-tiller and operator costs P 150 per day. Jose

normally has two crops annually, realizing between 30-34 cavans. He uses chemical fertilizer for which he pays P 170 for two bags. The rent for the 1/2 hectare is 6 sacks of paddy per harvest (a sack contains between 37 and 40 kilos and sells for P 40 on the local market).

A USAID-assisted drainage project has been completed in this area, and the farmers are very pleased with it. Previously there had been considerable flooding, but that has been rectified.

Case #3, Chico - The road south from Ocampo begins to rise to higher elevations before ascending Mount Iriga. Along the road in Barangay Malinta, San Pedro, Iriga, Camarines Sur Province, there is a small wood and thatched house set in a field of calabashes. It belongs to Chico, a man of 35 years of age. Sitting in his small kitchen, he explained that he had come from Albay Province and had no kinfolk in this area. He had heard that the large Hacienda Santa Maria was being subdivided, so he came to lease some land he could farm. He and his wife have ten children, some of who are married. One son lives in Manila, but neither he nor any of the others send any remittances.

Chico's principal crop is "miracle" calabashes that were developed at the University of Los Banos, and most of his 3/4 hectare is planted with them. He has a carabao and plow which he uses to prepare his fields, and he does not hire any laborers. He uses no fertilizer. With no irrigation available, he relies on rainfall. When his farm was visited in July 1977, the calabash plants were beginning to flower and some were bearing fruit (Chico insisted on presenting several to us). For the harvest (in August), he will hire four laborers, paying them P 5 per day. The crop will be around 1000 calabashes, and Chico will transport them to the Iriga market, paying P 30 per load of 1000. From time to time, buyers also visit the farm to make purchases. Chico rents from the Philippines National Bank branch in Iriga, and he pays them 10 per cent of his crop.

Maize is a secondary crop that is planted after the calabashes have been harvested. Chico gets around 20 sacks of shell maize in a good harvest, and 10 sacks in a poor harvest. He sells maize at the rate of 90 centavos per kilo. In June he also had broadcast some rice seeds on a small plot, but as the seedlings appeared, a storm damaged the crop and Chico only harvested 3 cans of rice.

Chico has a small banana grove, and every three months, the trees bear fruit. The family consume some, and some bananas are sold for 90 centavos a kilo. He also has some calamansi (a small citrus that resembles a lemon) trees that are still young. Chico expressed a desire to get a loan and purchase more calamansi trees, but he added that he had no idea how to approach a loan agency.

In addition to his carabao, Chico has some 20 chickens and a pregnant sow that is expected to deliver seven piglets.

Case #4, Carlos - Carlos' farm is located in Barangay Cristo-Rey, Iriga City, Camarines Sur Province, a somewhat remote place where the road from Ocampo begins an ascent to Mount Iriga. The area here is flat and filled with small farms - coconut groves. The farm is next to the road on which some houses and small shops have been built. Carlos' house, located back from the road, is a structure built mostly of wood with thatched roof. Carlos, a man of 55 years, has lived on the farm since 1946, when his father developed it on land rented from a well-to-do absentee landlord, a medical doctor who lived in Manila. This doctor had purchased the 267 hectare hacienda on which the farm (and the Barangay of Cristo-Rey) is located. The doctor died 13 years ago, and his son, the administrator of the estate, has been trying to have the tenants removed from the land, but they have protested, and the whole matter has been in litigation.

Carlos' farm consists of 2 hectares, which, until 1977 had been cultivated in maize and peanuts. Maize is a common crop in this area, and since there was no irrigation available, Carlos relied on rainfall. If the rains were ample, he could get two maize crops. The maize was dried and then shelled and put in sacks (a sack equals four cans or 60 kilos). At nearby San Ramon, sacks of maize sell for around P 40 each. Normally, Carlos would have a yield of 200 cans (or 50 sacks worth P 200). Maize is consumed, although it is not a common food. It also is used as animal feed.

Peanuts also were cultivated on Carlos' farm. They were pulled from the plants and sold by the sack - an unweighed sack at the market sells for P 20. The coconut trees on the farm produce around 900 coconuts every three months. Copra is removed and sold to buyers who come to the farm. The 900 coconuts produce some 220 kilos of copra which is sold for P 1.50 per kilo. The kitchen garden near the house produces taro, eggplant, calabashes, bananas (some of which are sold if there is an abundance), and jack fruit.

In the past year, an irrigation project sponsored by the Farm Systems Development Corporation (FSDC) has brought changes to the farm of Carlos and some of his neighbors. Described as an "experiment," the FSDC implemented a small-scale irrigation project to benefit 20 families in the barangay. A small canal was dug to bring water into the village and channels brought water to each farm. Carlos and the other beneficiaries were brought in on the planning of the system, and it was agreed that they would "take over" the system when it was completed. They agreed to maintain it -- each family receiving benefits will pay three sacks of paddy per hectare per harvest. (Where the channel to Carlos's farm passed under the road there was a sign warning that any adult, child, or animal that blocked the flow of water would be fined P 40.) While this project was being implemented, Masagana 99 technicians came to the barangay to instruct the farmers in the cultivation of paddy (they were growing maize and peanuts). With the new system functioning, Carlos began farming 75-day, IR-36, and IR-1561 paddy. He needed no new equipment because he already owned a plow, harrow, and carabao. He began buying chemical fertilizer, paying P 87 for a 59-kilo sack. Carlos

described how he and other farmers were very pleased with this project, and he hoped to have three crops of paddy annually.

Carlos' rent previous had been paying 60 to 200 cans -- or around 30 per cent of his maize harvest in rent. Since the tenancy is in litigation, it is not clear what percentage of the paddy harvests will be paid to the landlord.

Carlos' household consists of himself, his wife, and three sons. One married son lives on the farmstead in his own thatched house, and he does much of the work on the farm. Another son worked for the Americans and he wants to receive training in the Agricultural School at Pili. Carlos noted that the family purchases some cabbage, beans, fresh and dried fish and occasionally some pork for a family celebration.

Case #5, Maria - Maria, a woman of 50 years of age, is the wife of a tenant farmer, and they live in Barangay Mantlisai, Libmanan, Camarines Sur Province. A stout lady in a faded flowered dress, Maria is the mother of 10 children. A married son lives with them and helps with the farming. She was interviewed in a wood and thatch shack located among the paddy fields close to a road and canal construction project alive with earth movers, bulldozers, and other equipment. The shack was used during the planting season to store the farm equipment and provide a place for the workers to rest and have lunch (there was a wooden bed and a brazier on which a pot of rice was being kept warm).

Maria explained that they began to rent the farm in 1965. All of their 1 1/2 hectares are planted to paddy. As they made some profit, they purchased a plow and carabao, and later they purchased a gasoline-powered water pump to take water from a nearby stream for irrigating their fields.

For preparing their fields, transplanting of seedlings, and harvesting, they hire laborers - teams of five for transplanting and harvesting. Each worker is paid P 3 per day and Maria provides them with lunch (rice, soup, and some vegetables). Usually, they harvest 60 cavans of paddy, 19 1/2 of which are paid to the landlord (she felt that this was too high).

She was angry about a new road and irrigation-drainage canal (part of the Integrated Area Development I projects of the Bicol River Basin program) that was in the process of being implemented next to their farm. She said that they (and other farmers in the area) had not been informed about the project. One day, the bulldozers and other equipment appeared and began digging. Fill from the new canal was dumped in farmers' fields. She estimates that she and her husband lost 5 meters of paddy fields along the new road. Worst of all, the earthmovers filled in the existing stream, their sole source of irrigation water, depriving them and other farmers of any irrigation for this year. They all must now rely on rainfall, and she expressed the view that this undoubtedly would mean smaller yields for them.

Her kitchen garden produces banabas, taro, calabashes, and egg plant. They also have some coconut trees. There were some mango trees, but the road construction destroyed them. Maria estimates that she spends up to P 50 per week for food purchases for her family. This is mostly for fresh and dried fish. They seldom eat meat. Breakfast is boiled rice and coffee, lunch is boiled rice, vegetables and fish, and this is the usual fare at dinner.

Maria completed the first grade and her husband the sixth. The boy living at home with his family completed second year high school. She was holding a sick son, covered with skin pustules. She noted that he was a fussy eater, only wanting boiled rice and refusing to eat bananas or any other fruits and vegetables. She took him to a local doctor who for P 10 gave him a shot, but it had no effect.

Maria described how in the vicinity there are poor people who either sustain themselves or supplement their meager incomes by gathering wild fruits (bananas and papayas for the most part) and wild taro which they often sell in the local markets. She noted that one of these is a woman who lives nearby who is married to an herb doctor who has very little income.

Case #6, Miguel and Conchita - Barangay Cabusao, Litmanan, Camarines Sur Province is a fishing community located on the shore of San Miguel Bay. Close to the center of the town is a small settlement of fisherman. Behind a row of overturned outrigger boats there were racks with drying nylon fish nets and long bamboo tables on which fish were drying in the sun. Miguel and his wife Conchita (both in their late 40's) had just completed the task of placing their freshly caught fish on the drying-tables. We were invited into their house which was constructed of wood and cinder block. The living room, facing away from the bay, was elevated and had a polished wood floor. We sat in a covered work area in front of the kitchen. Miguel's wife, who spoke English well, did most of the talking.

Miguel owns an outrigger 12 meters in length equipped with a 14-horsepower motor. His father had been a fisherman as had the father of Conchita. Both have many kinfolk in the vicinity. They explained that Miguel's boat was one of the larger ones (most of their neighbors had boats 8 meters in length). From April to September, small fish (called dilis) that resemble minnows run in San Miguel bay. From September to May they catch very small shrimp (called balao). The fish are immediately dried in the sun. Should there be rainy and cloudy weather, there is a good chance that they might rot before drying.

Fishing is a daily activity that usually begins around 7:00 A.M. and the boats return around 5:00 P.M. They leave the shore with no particularly goal in mind, determining where there are schools of fish in the bay as they go. They remain in San Miguel Bay and never venture into the open sea. Fishing is done by casting nets. In addition, most of the fishermen arrange

fish traps of bamboo offshore within view of their houses. The catches vary considerably. There are extremely bad days when they return with only two kilos of fish, hardly worth the cost of the gasoline (normally they use seven gallons a day at the rate of P 7.20 per gallon). On the best days, they may net 100 kilos of fish or shrimp. Miguel cited the case of one "lucky" fisherman from the village who recently made P 920 on the catch from one day of work.

Often, buyers come to the village to purchase fish as they are caught. Usually, however, they transport their dried fish to Naga City. Good quality small fish (dilis) bring from P 4 to P 6 per kilo while the larger fish sell for P 7 per kilo. The small shrimp (balao) are salted or sometimes pounded into a round cake that is covered with flour and is either cooked or dried in the sun. Small shrimp are sold for P 20 per can (there are 25 kilos per this type of can) but sometimes the price plunges to P 9 per can. Conchita explained all of this because, she added, that she, like most of the fishermen's wives, did the marketing of the catch.

Miguel has two helpers. They are given 50 per cent of the catch to split between themselves. Some fishermen rent their boats from well-to-do fishermen and from entrepreneurs.

Conchita produced their loan book that they obtained from the Philippine Development Bank. She complained that they were paying 14 per cent annual interest on their five-year loan, which she felt was excessive. She and Miguel pointed out that their fishing was jeopardized by the increased incursion of commercial fishing trawlers in San Miguel Bay. These trawlers have been coming into the bay for a long time, but now they were increasing. They are owned by Filipino and Chinese entrepreneurs, and they can fish more swiftly over a wide area. They clean out some of the catch in parts of the bay and sometimes knock down the fish traps set out by Miguel and his neighbors.

Miguel and Conchita have nine children. The eldest, a girl of 24, works as a waitress in Manila and she sends remittances to her parents. Conchita purchases rice in the Cabusao market along with some fruits and vegetables. They rarely buy any meat. Fish, rice, and some vegetables (taro and calabash) are the usual fare.

Case #7, Lorenzo - On the beach in Santa Lucgarda, a barangay near Cabusao on San Miguel Bay in Camarines Sur Province, there were three men cutting bamboo poles, fashioning them into fish traps. The owner of the bamboo was Lorenzo, a man of 62 years, with a weathered face and gray hair. He had purchased the bamboo for P 1.50 per log and the whole load cost him P 1000-1200. He and his helpers were making fish traps that they would set in the shallow water offshore so that the tidal action would force fish into them. Such traps last about one year. Lorenzo pays the two workers two centavos for each log they cut.

Lorenzo owns a boat, a long dugout type without an outrigger. It is cut from one piece of mountain hardwood and cost him P 400. He explained that it will hold more than one ton of fish or 20 people. He and his brother paddle out into the bay each morning, looking for schools of fish. The brother owns one-half of the boat, so they share the catch. They usually catch between 30 to 50 kilos of fish a day. The small fish (dilis) sell for P 7.50 per kilo and the small shrimp (balao) for P 7 per kilo. Occasionally, buyers come to the village to purchase fish, but most of the time, he takes the catch to the Libmanan market to see it fresh. Unlike some of the other fishermen interviewed, Lorenzo has no trouble with the big trawlers, claiming that they go out further into the bay than he does (he does not have a motor) or to the open sea.

Lorenzo and his wife had two children, a boy and girl. The son, a high school graduate, is 30 years of age and works for the Shell Oil Company in Manila. He earns P 700 per month and sends his parents P 200. He is single and twice a year he visits his parents. Lorenzo's younger brother, (who shares ownership of the boat) lives nearby on the beach with his family.

Lorenzo's wife purchases 1 kilo of rice for the family (parents and daughter). He grows some yams, papaya and taro (gabi). They seldom purchase any meat.

Case #8, Jose and Crispina - Along the beach of Santa Lucgarda near Cabusao in northern Camarines Sur Province, there are rows of houses of people engaged in fishing in San Miguel Bay. One small bamboo and thatched house built on low piling is occupied by an elderly couple, Jose, who is 72 years of age, and his wife, Crispina, age 67. They have lived in the house for three years and pay P 1 per month rent for the lot. They have one daughter who is married and has ten children. She lives in Bombon, a village not very far away. One grandson lives with Jose and Crispina while he is attending grade school (4th grade).

Jose had worked as a hired hand on fishing boats, but now that he is elderly, this work is too arduous for him, so he only works very infrequently. He helps carry the catch from fishing boats, charging P1.50 per load. He also buys some fish from returning fishermen and sells them to households in Santa Lucgarda. Crispina often goes to visit her daughter on weekends, and the daughter gives her small sums of money with which to buy food. Crispina (quoting Bicolano proverbs to illustrate her points) noted that they have just enough money on which to live. They spend P 15 per week to buy rice and neighbors give them fish. Crispina also obtains the leaves of yams (camote), some eggplants, and bindweed (kangkong) from neighbors to eat with the rice and fish. They are unable to arrange any kitchen garden because the area is subject to flooding in stormy weather. Their only other expense is 50 centavos a week they contribute to the construction of their new parish church (Catholic). Crispina emphasized that they did not owe any money. She noted that the government does not

make loans to people like her because they are old. In any event, she would not want a loan because she would prefer not being in debt.

Case #9, Julio - Along a newly constructed road in San Ramon barangay, Bula, Camarines Sur Province, the farmstead of Julio (age 34) stands amidst the paddy fields. The house (of two rooms) is of wood, mostly bamboo, with a thatched roof and it cost P 600 to build (the nipa roof will last three years if there is no bad typhoon). Julio has a wife, three sons and three daughters (the children range from four to ten). One girl is in the sixth grade, and she entered the farmstead wearing a new dress of yellow material with a flowered design. Julio was born in Nabua in Barangay San Ramon but he had lived in this location for twenty years (his mother has a farm down the road). His parents moved here, built a house and rented one hectare. Julio has four sisters, all married and scattered (one of them lives in Bula). His three brothers all are farmers. Most of their other kin are in Nabua, but his wife is from San Ramon and has many relatives in the vicinity. In 1951, Julio came here and leased five hectares from a property owner named Lirag. He paid 60 cavans of every harvest for rent. Between 1951 and 1968, the government had been buying land and offering the tenants title to be cleared in 20 years. The Department of Agrarian Reform (DAR) make an arrangement for yearly payments based on the harvest, but for the past few years, Julio's harvests have been poor, so, during that time he has not been able to make the required payments. He attributed the poor harvests to the "heat" and the lack of water before the rains become heavy. Another factor was not using fertilizer (too costly). Also, there have been typhoons that bring an excess of water, particularly to some of his low fields, which, because of lack of drainage, hold the water, rotting the plants. Furthermore, typhoons often sweep seedlings away.

In late June and early July, he begins preparation of the fields as the rains begin. Usually, Julio rents a carabao and laborer (he has his own plow) for P 10 per day. This year, however, he has rented a gasoline-powered hand tiller from his wife's sister's husband for P 300 per hectare, using it to prepare two hectares. He found that it is faster and more effective, and therefore, preferable. For transplanting the seedlings, his family helps, and if he has some cash, he hires a team of transplanters (organized by someone in the village) consisting of 14 people, each of whom receives P 4 per day and lunch.

Julio purchased a gasoline-powered water pump from the National Irrigation Administration (NIA) for P 7000 with a P 700-downpayment. When the new road was being constructed, however, he was unable to use the pump for all of his fields (the road runs through his fields) because he was told that it would interfere with construction (during a five-month period). Since the road disects Julio's fields, preventing the one water pump from irrigating all of them, the road builders began to arrange a conduit, but when it was half completed, work was halted. Julio has rammed a hollowed-out coconut log through the unfinished portion to allow the passage of water, but it becomes blocked by silt.

Julio also pointed out that as the road was constructed, dirt was dumped on his paddy fields. Near the farmstead there was a large pile of dirt on which ipil-ipil trees have been planted, and Julio estimates that he has lost 40 to 50 meters of fields. He pointed out that his mother lost a good portion of a 1/2 hectare that she rents, and a man in Barangay San Ramon lost all of his fields when the plaza was constructed. Julio claims that the construction chiefs promised to replace the lost land, but nothing was done.

Julio also described a meeting organized by the Bicol River Basin Development officials. Mr. Tony Pejo presided at the meeting, during which he promised to assist farmers such as Julio with low fields by providing fill for them and to dig drainage ditches, but nothing was done.

Julio's wife goes to the Bula market once a week to buy food. Julio noted that one advantage of the new road is that vendors can come into the area, reaching farmsteads that once were isolated. Vegetables purchased include egg plant, calabash, and taro. The family consumes around four kilos of fish (fresh or dried) per week. They seldom eat meat, but they do get it at celebrations, such as baptisms, weddings, and funerals. The well-to-do serve lavishly but people like Julio only make the minimum expenditure.

Julio completed two grades and his wife three. He wants his own children to learn to read (he jokingly added "so that they can read to me"). In the primary school the children have some instruction on improved gardening methods, particularly the growing of vegetables. They arranged a garden, but when the planting season came, they worked in the fields and the garden was neglected.

Case #10, Ramon - Ramon is a 33 year old farm laborer in Barangay Botxan, Tiwi, Albay Province, and in July 1977, he was working for a farmer busy preparing his fields. Ramon goes to work in the fields at 8:00 a.m. and the initial responsibility in preparing fields for planting of rice is to pull the roots of the harvested plants. As the sun reaches its height around noon, Ramon and the other laborers repair to a shelter to have lunch and rest. After an hour and a half, they return to the fields, remaining there until around 5:00 p.m. He receives P 7 per day for this labor. Ramon noted that if he had a plow and carabao, he could get P 12 per day as wages.) He can expect to be employed by this farmer for around 25 days in the course of the planting. Ramon pointed out that he works for five different farmers (some of whom are kinsmen), giving him steady employment for six months of the year, working six days a week and even on Sunday if there is an "emergency." Weather affects the duration of the work. If there is a typhoon, for example, the laborers must remain out of the fields. Ramon estimates that in a normal year, one month is lost because of bad weather. Around August -- after the transplanting and before the harvest -- there is no demand for field labor, so he cultivates yams, some of which he will sell if the crop is abundant.

As we talked, several of his friends gathered around and his father appeared (he had been a vendor of pottery along the coast, transporting his wares by boat, but he has become too old to continue this activity). They began complaining about the nearby electric plant, which began functioning two years ago. It is operated by a diesel engine, and oil has been leaking into the irrigation system, ruining some of the paddy fields. They claimed that one farmer lost his one-half hectare because of the oil. He complained to the National Electrification Administration (NEA) but was only compensated for one-fourth of the value of the P 300 loss he suffered. It took the farmer and laborers over a month to clean the oil from the fields.

Ramon noted that some people in the vicinity benefit from the electricity. He says he cannot afford it, relying on kerosene lamps to light his house (he pays P 2.50 per week for the kerosene).

Ramon is in debt to a wealthy local farmer, and his interest rate is 20 per cent of the whole amount. There is no fixed time for repayment, so Ramon gives him money following the harvest, if it has been a good one.

Ramon and his wife have three small children, and currently, his father is staying with them. One girl is in school. Each week, the family consumes 15 kilos of rice and he pays P 2.50 per kilo. Fish costs about P 20 per week. They do not buy vegetables or fruit because their garden produces papaya, bananas, yams, and maize. Ramon added that he had to borrow money in order to keep the family fed. There is a free medical clinic in Tiwi that they use when necessary.

Ramon said that if he had sufficient money, he would buy a carabao. Since he already has a plow, he could earn more money preparing farmers' fields. He has one brother working with the Volcanology Project Salt Making Plant in Tiwi. This brother sends money to their father.

Case #11, Dolores - Dolores (age 28), her husband, and their two small children live in a very small thatched and bamboo house along the main road in Barangay St. Augustin, Libon, Albay Province. It is a very rudimentary structure of one room with an opening in the front where Dolores has some coconuts she sells. She purchases the coconuts in the market and makes a profit of around P one per week. Her parents are tenant farmers as are the parents of her husband.

Dolores' husband runs a tricycle transport. Two years ago, he purchased a used Honda tricycle for P 270 (a new one would have cost P 7000), with money borrowed from the Rural Bank of Polangui. He makes his daily runs between Libon and Matanao, a distance of five kilometers one way. Normally, he uses five liters of gasoline (one liter costs P 1.70). He realizes a profit of around P 15 per day.

Dolores noted that they were squatters on the land and paid no rent. She buys one kilo of rice per day. In addition she plants some tomatoes and ginger. They also buy some fish but never any meat.

She pointed out that if there was electricity in the area, particularly along the road, her husband could work longer hours and make more money.

Case #12, Lucia - Barangay Duena Pescada is a community of mostly fishing folk on the edge of Lake Bato in Camarines Sur Province. Along the main road the houses on the shore are constructed on high piling, and in one of the small bamboo and thatched houses lives Lucia, a 67 year old woman and her husband. The husband is a laborer, and he built the house of salvaged wood and nipa palms for the roof. They rent the lot for P one a month from a man who owns nine lots. In July 1976, Lucia's husband began working as a janitor in the central market at Bato, a building owned by the municipality. He works from 4 a.m. into the evening, but he usually returns home for his meals. He gets paid P 180 per month, but has not been paid for two months.

Lucia has cataracts on both eyes and for two years she has not been able to see very well. As we were talking a bright young girl in a blue and white school uniform came into the house. She is in third year high school and lodges with Lucia. Although she pays no rent, she helps with the cooking and housekeeping. Lucia said that they spend around P 5.50 per day for rice and P 2 for fish. They light the house with kerosene which costs P 1.50 per liter. They buy some fruit and vegetables but little else.

Lucia and her husband had one child who died. She has siblings in the area, but they are laborers and poor.

Case #13, Juan Garcia - In the fishing village at Cabusao, next to the house of Miguel and Conchita (Case #6) an elderly man named Juan Garcia (62 years of age) was turning small fish over on a rack so they would dry in the sun. Juan's father had rented a boat and worked as a laborer on other fishing boats. Juan works as a laborer on boats, and his pay depends on the size of the catch, but normally he makes between P 10 and P 20 per day. When the seas are rough (such as during a typhoon), Juan cannot work. He is a widower with two sons, 17 and 18 years of age. They went to school, completing the 1st and 2nd years of high school but they cannot find work.

Juan complained about the large fishing trawlers in San Miguel Bay (as did Miguel and Conchita in case # 6). He said that it was making it difficult for small boat owners and those renting boats to make a living.

As we were talking, Juan's boss, a lady in her late 50's entered. She owns two fishing boats and has strong feelings about the trawlers. She noted that the commercial fishing boats have 30 to 40 men on them and they can fish at night. She claimed that the de Guzman family owned some of the large trawlers. They dock them in the Bicol river. She did have praise for the new road from Cabusao to the villages (the road and canal

project that Dolores, Case #11, complained about), saying that it permitted transportation of fish to the markets inland.

Case #14, Tomas - Tomas, about 32, is a laborer who lives near Bula, Camarines Sur. He also owns three hectares given him by the Department of Agrarian Reform (DAR), but it is not farmable. He is married to a wife of about the same age, and they have three boys and one girl ranging in age from four years to eleven years. They are temporarily living in a bamboo hut of one room (on piling) that belongs to Tomas's mother-in-law while their own house is being moved from the farm where it was located to a new 300-square-meter site in a nearby barrio. Tomas formerly farmed five hectares of land which he received without title about ten years ago when a larger farm owned by a wealthy family was broken up. The DAR whittled this down to three hectares, none of which is presently farmable due to incompetent leveling by the National Irrigation Administration (NIA); our supposition is that the bulldozer simply scraped the topsoil off the high places and dumped it in the low places, leaving only subsoil exposed to the air for farming. At the moment, Tomas makes his living by working for other farmers in the area; he makes P five per day for six days a week. He has no carabao, but if he did have one he could command P 10 per day. His work-day is 12 hours long. Women and older children earn P 4 per day for similar work.

The family has no garden at present, but they did have one at their former home site; homes at the new barrio site do seem to have gardens. Tomas has some banana plants in the yard, and the family has two chickens, seven baby chicks, and a dog. The chickens will be sold for cash. The family eats no meat at all, but they do buy dried and fresh fish and receive some vegetables occasionally from the wife's sister.

Tomas has a second grade education, his wife has a third grade education, and their oldest child is now in the third grade. The school is one kilometer away. The family does little traveling, but they do occasionally go to Naga City for fiestas or in family emergencies.

The people in the area favor the irrigation projects, but believe that the DAR was haphazard in the way it drew the new boundaries to the land when land consolidation was effected and the NIA land leveling was sloppily conducted. Local representatives seem to realize these mistakes, but claim that there is a lack of money to make the necessary corrections. The officials also plan to do much less land leveling in the future, but pay more attention to the routing of irrigation ditches along the highest ground.

Rice is the main crop in the area. The land is presently double-cropped and yields about 50 cavans per hectare per year; they expect that the land should average about 80 cavans (of 50 kilos each) after irrigation. Most of the rice is IR-36. Irrigation was promised by

August, but by mid-July the pump site was far from completion; the main ditches appear finished, and there is a wealth of pipe lying around at the pump site rusting away, but bad weather had apparently delayed construction.

The farmers in the area are unhappy about too many terraces, arbitrary division of land, poor leveling, and the poor road. They are not happy with certain government officials, to say the least. There does appear to be some local attempt on the part of these officials to cover up their mistakes.

Case #15, Elena - Elena, about 21, is the wife of a tenant farmer living near Ocampo, Camarines Sur. She is the mother of two boys, aged three years and nine months. The family lives in a comparatively nice, new bamboo hut of one room, up on stilts. It has a roof made of anahaw, a thick thatching material said to be good for ten years. The house also has a small front porch and a floor made of lauan wood. They have two wells in their yard, one used for drinking and another one, fenced in, for washing and bathing. They have banana and coconut trees in the yard, and have free access to whatever grows on them. The land slopes gently and appears to be quite fertile, well-watered and well-drained. They farm just under one hectare of land which is owned by the husband's mother, and they pay no rent for the land.

Elena's family is one of the beneficiaries of a new small-scale irrigation project sponsored by the Farm Systems Development Corporation, which in turn is supported by the National Electrification Administration (NEA). The family had been getting about 56 cavans of rice per year from two crops, using about half of their near-hectare of land for rice. With irrigation, they expect three crops and plan to plant their third crop this fall. Likewise, they had been getting two crops of corn each year on the other half of their land, and this totalled about 20 cavans per year; they now expect to get three crops. The family consumes some of the rice and sells some; they sell nearly all of their corn, however, and it brings about P 60 per cavan.

The family appears to be better off than most of our interviewers. They own a 5-year-old female carabao, which they use for plowing, for transport, and occasionally for milk. They also own some chickens and pigs, which they mainly consume themselves, especially on "special days," like birthdays and anniversaries. They also buy fish from a vendor who comes by their house fairly often. They shop once a week in a village about 1 1/2 kilometers away. Occasionally they go to the movies in Iriga City, but there is a health clinic nearby staffed by a nurse; Elena says it is always out of medicines. They are three kilometers away from electricity. Elena and her husband, both high school graduates, are concerned mainly about the lack of a hospital or doctor in the area.

Case #16, Lita - Lita, about 25, from near Ocampo, Camarines Sur, runs a sari-sari store, owns two hectares of land, and is married to a history teacher at a local high school. Her husband graduated from a college in Iriga City, and she is a high school graduate. The sari-sari store is well stocked, and Lita wears a nice dress and has a wrist watch. Their house-and-sari-sari-store combination is made of concrete blocks and wood and has a metal roof. They have no children. They raise and sell pigs and have a garden in which they raise cassava and gabi (Taro). They also have banana, coconut, papaya, and star apple trees. They have a few chickens which they consume themselves. They have a radio, and at one time they owned a motorcycle. They are probably the highest-income family we interviewed.

Lita and her husband raise rice and corn on their two hectares of land, which is irrigated with water from a recently-completed small-scale irrigation project sponsored by the Farm Systems Development Corporation. Thanks to the irrigation, they are getting three crops of rice a year, although the average yield, according to Lita, is only about 23 cavans per hectare per crop. One of the hectares is in rice, the other in corn. They market nearly all of their rice and corn. We did not ask, but it appears that they hire the labor needed to plant and harvest these crops.

Lita and her husband have no electricity, but they would like to have it. If they did have it, their first appliance would probably be a refrigerator, according to Lita. It would no doubt serve both the sari-sari store and their own needs.

Case #17, Jayme - Jayme, about 35 years of age, is a tenant farmer whose wife is deceased. He lives about seven kilometers from the town of Libmanan, Camarines Sur; his rented land fronts on the new road and irrigation project which the National Irrigation Administration is constructing in the district. Jayme has two children, a boy seven years of age and a girl of nine, both of whom attend school approximately one kilometer away. Jayme has a first grade education (his deceased wife had gone as far as the sixth grade).

Jayme farms just under one hectare of land and raises mainly rice, getting two crops per year by irrigating from a stream which passes next to his farm. He does not feel that the irrigation project will help him very much because his land is already getting water; he does think the new road might make it easier for him to get his crop to market. As present he uses a motorized "skate" (a quasi-illegal contraption, much like a railroad handcar with an eight-horsepower Briggs and Stratton engine powering it), which plies the nearby railroad tracks, to get his rice to town.

Jayme reports that he gets about 60 cavans per hectare from each crop of rice, or 120 cavans per year. He markets most of it, keeping back only 10 cavans per year for his own use. He also raises some corn,

sweet potatoes, eggplant, and some other vegetables for his own use. He has a pig and twelve chickens, too; the family eats some of them and markets some of them. He also has banana trees on the land and gets to consume them without sharing with the landlord, but the coconut trees' output go entirely to the landlord. The family drinks water from the stream from which they irrigate.

Jayne's main out-of-pocket expense is the hiring of a man with a carabao to plow his land before each planting of rice; this costs him P 10 per day. His children help in the fields at planting and harvest time. His main complaint is that he lost some land when the irrigation ditch was put through, but he does not seem especially upset about the amount that he lost.

Case #18, Pablo - Pablo, about 60 years of age, is a tenant farmer and landowner living about 7 1/2 kilometers from the town of Libmanan, Camarines Sur. Both his rented land and his owned land front on a new road and irrigation ditch being constructed by the National Irrigation Administration. Pablo has six children, all of whom completed elementary school; one married daughter and two granddaughters live with him, but the others have all left home. Pablo is married to a sickly woman who appears to be about his age (she has sores all over her legs and moves very slowly and painfully). He lives on the rented land; his farmstead appears a bit more prosperous than the average in this district, with more animals and more machinery visible.

Pablo received the land he owns from the Agrarian Reform program, and has no complaints about it, although it amounts to only one-half hectare. He rents another one and one-fourth hectares, farming one and three-fourths hectares altogether. He is very unhappy about having lost land to the irrigation project, however, and is even more vocal about a sizeable pile of loose fill that the construction company dumped upon his rented land. It appeared that he lost perhaps ten to fifteen percent of his rented land to the pile of fill; he used to raise sweet potatoes and corn in the area that he lost. The fill was dumped there in March, 1977; we interviewed him in mid-July, and he had no ideas when it might be removed, if ever. He had not been compensated for his lost land, and did not know if the landlord has received any payment or not.

Pablo plants two crops of rice per year, getting about 60 cavans per hectare from each crop. He markets all but about 30 cavans per year, which he keeps for the family's own use. He pays a fixed rent of 17 cavans to the landlord on his rented 1 1/4 hectare for the first crop; he pays one-fourth of the crop the second time around each year. He believes he could get three crops if the water were available for irrigation, and said that "he sure could use it." (He also reported

that his neighbors are all for the irrigation project, especially "if the water gets to them.") He plants IR-36 and IR-24 varieties of rice, but does not fertilize because he would have to pay the whole cost of the fertilizer himself. He thinks that the new varieties yield about the same as the ones he used previously, mainly because he does not fertilize. Apparently he does not feel that the potential added yield would pay for the fertilizer.

Pablo owns two carabao, but does not rent them out or do custom plowing for others. Carabao, says Pablo, live about 30 years, but are often blind in their later years and are not much good for work at that time; they also vary a good bit from one to the next in their working capacity. The family also raises chickens and pigs, most of which are marketed in Libmanan. For their own use, Pablo's family raises gabi-Taro) and has free access to whatever grows on mango, guava, coconut, and "sanpaulo" (a local fruit) trees.

Pablo hires help at both planting and harvest times. He pays P 3 a day at planting time, and one-eighth of whatever each person harvests at harvest time.

Case #19, Jorge - Jorge, about 60 years of age, is a fish marketer, farm laborer, and nipa roof section maker who lives alone in a bamboo hut on the beach in the village of Cabusao, Camarines Sur. His main source of income is from making the nipa roof sections; his secondary source is from buying fish from fishermen and selling them to customers in Cabusao, and he sometimes supplements this by helping nearby farmers plant rice. His hut is about 30 meters from the water at low tide, and almost next to the water at high tide. When typhoons come through, the water gets about two feet deep in his hut, and the floor is about one meter above the ground. The hut has a small lean-to porch facing San Miguel Bay where he makes the nipa roof sections.

Jorge makes the nipa roof sections by sewing the nipa leaves over a thin strip of bamboo with a stiffer leaf that he calls "vurri." With two helpers, he can make as many as 500 of these roof sections in a day, and can sell them for P 14 per hundred, or P 75 a day in total. Half of the gross, however, he pays to the supplier of the nipa leaves, leaving him only P 37.50 of this amount. He also pays each of his two helpers P 1.50 per hundred; if we assume that each of them makes 150 sections per day and that he personally makes 200, he has to cough up another P 4.50 for their efforts, leaving him a still-handsome P 33 per day net. Of course, he does not earn this sum every day; he produces only to order. He sells everything in the Cabusao market, but since nipa roofs only last from one to two years, it would seem that he has a reasonably ready market. He does not have any garden or fruit trees, however, and he even has to buy his water (which is trucked in from Libmanan), so while his cash income may look generous compared to those earned by laborers who work the rice fields, his standard of living does not appear to be any higher.

Case #20, Mauricio - Mauricio, 52 years of age, married to his second wife, is a tenant farmer of rice in the province of Albay at the upper end of Lake Bato. His house is located on an "island" about 50 meters into the fields from the road, and is reached by a very narrow path which is also a dike between rice fields. Beans were growing along the path, and fish seemed plentiful in the flooded rice paddies. Mauricio's bamboo and nipa house was larger than most of the ones we visited, but it was quite run-down and was a source of some concern to the family. There was a pump well with a concrete apron in the yard, a swept area where paddy was being dried, a small garden complete with the typical overhead arbor for growing certain types of vegetables (as well as for shade), and there were banana trees, coconut trees, and sugar cane growing in the yard. A noisy rooster was in evidence, as were some other scrawny-looking chickens and some ducks. The family also had a dog, a cat, and a battery-powered transistor radio.

Mauricio farms two hectares of land. Before the Masagana 99 program began, he planted such rice varieties as Miracle 8 and IR-26 and was getting 150 cavans of paddy per hectare per year out of two crops, even though he used no fertilizer. Presently he is getting only 45 cavans per hectare per year, with the use of fertilizer. In his view, "there is something the matter with the fertilizer." He is one of the angriest farmers that we interviewed--and well he might be, with his yields falling while his outlays for fertilizer (and his debts) rise.

Mauricio pays 17 cavans of rice per hectare per crop as rent to his landlord, and this rent holds whether he has a crop or not. At the time of the interview, he was in debt to the tune of P3000, P 2200 of which he owed to his landlord (the remainder was owed to the bank). This level of debt was partly due to the drop in yields and partly due to crops losses caused by typhoons, flooding, and so forth over the years. Overall, Mauricio felt that things were getting worse for him, rather than better. As one evidence of this, he told us how he used to divide his crop with the landlord at Mauricio's house, with the landlord hauling off his share at his own expense. Now, he says, he must haul the landlord's share to the landlord's house at his expense; this, of course, amounts to an effective increase in the rent Mauricio is forced to pay. In addition, he pays the landlord 14% interest on the P 2200 he owes him.

Mauricio was quite vocal about his economic situation. The banks, he says, are too rigid and unwilling to renew loans when times get tough; in consequence, he is planning to sell his only carabao in order to pay the bank the P 800 he owes there. Flooding is a major problem for him, too--he says that those who construct the dikes and canals which channel water in the Lake Bato region do not build the walls high enough nor strongly enough. When it floods, the water gets as deep as his knees even at the relatively high paved highway going past his farm, and it of course gets in his house. He told us that he thinks those who build the dikes purposely make them weak so they will break and they

can collect again from the government for repairing them. He did feel that a proposed Bicol Basin project which would build a diversion canal from Lake Bato to the Ragay Gulf (USAID assistance is programmed for this one) would benefit him and other tenant farmers in the area considerably, especially since their rents are fixed for the most part. A government official in the nearby town of Bato confirmed this view, saying that most of the farmers who are flooded out by Lake Bato are poor tenant farmers; the better-off farmers own land that is not so subject to flooding. There is little question, then, that this is one project which would appear to benefit the poor rural majority particularly, especially if conventional renting patterns are not altered. If the land belonged to the tenants, of course, there would be no doubt at all who would benefit.

The government official in Bato told us that when major typhoons come, every three to five years, the water in Lake Bato rises enough to cover the main road in the town and flood 1000 hectares of neighboring rice land, affecting at least 1000 poor farm families and perhaps more. They then lose an entire rice crop in an area where only two are generally harvested. In the best years, this land yields maybe 50 cavans of paddy per hectare, or 100 cavans per year; in ordinary years, the yields are less than half that. The lake, he said, may rise and fall as much as 10 meters, although seven would be more typical. People in the town are driven from their homes at these times and have a serious time finding safe drinking water.

Mauricio and his wife have four children. They are very proud that their eldest daughter went all the way through college, earning honors all the way and even beating out the son of a local judge for class honors in high school. She is presently an accountant working in Manila and had even worked in Canada for two years. Mauricio emphasized that this daughter was not sending any money home to help the family--he would not accept it, he told us. At the same time, however, he said that she was helping put her younger brothers and sisters through school. The family was very strong on the value of education for their children--they sent them, Mauricio said, even though one of their sons sometimes eats his lunch at school in private for fear the others will make fun of him because he only has one yam to eat for lunch.

B. Cases from Northern Luzon

Case #21, Magno - Magno is a tenant farmer of 57 years of age, who lives in Sitio Tomangan, San Juan, Botolon, Zambales Province. He and his wife have 13 children between the ages of 13 and 35. Two sons and daughters are married. The married sons work as farm laborers. Magno rents 2 1/2 hectares located in three different places. He hires two men, a plow, and a carabao at the rate of P 10 per day. He plows all of the fields three times. This takes three days, costing Magno a total of P 60. Then he hires one worker, a harrow, and a carabao for one day at the cost of P 10. Four laborers are hired to "pull seedlings" in preparation for transplanting for one day at the rate of P five each, a total cost of P 20. Seven laborers are hired for one day at the rate of P 5 per person to transplant, costing him P 35. Magno claims that he also provides the laborers (all of those involved in the preparation and planting) with a pack of cigarettes a day. With each pack costing P 1, this comes to 14 packs and P 14. All of these outlays of cash are based on labor for 1/2 hectare (a total of P 139 or P 278 per hectare). Magno also provides the workers with lunch, consisting of rice and cooked manioc root (in this area, they do not eat the manioc leaves). The cost of the lunch cannot be figured.

Magno has no fertilizer and he has no irrigation. He grows a traditional variety of paddy called ceremas. He feels that the soil in the area is not well suited to any of the IR varieties. He also noted that these new varieties require considerable fertilizer.

Magno has one harvest and realizes between 35 and 40 cavans per hectare. He pays 10 cavans per hectare to the landlords (25 cavans for his 2 1/2 hectares). In addition, he borrows money at the beginning of the planting season to pay the cost of preparing and sowing the fields. Last year he borrowed P 600 at the rate of 20 cavans to the lender at the harvest. The 20 cavans were valued at P 1100 at harvest (p 55 per cavan), giving the lender a profit of P 500.

In Magno's kitchen garden there are eggplants, string beans, manioc, and yams. Other sources of food are the nearby Bakilan River and the hills to the east of the village. The river contains eels which are caught. In the hills they catch dragon lizards. Villagers also gather May beetles which are found on the bark of the casuarina trees (commonly known as Australian Pines) along the bank of the Bakilan River. The upland Ayta people (one of the Negrito groups) in the area gather the May beetles and sell them for P 7 per gallon. These beetles are boiled and dried and are toasted for consumption. Magno and his fellow villagers also gather wild yams, black plums (duhat) and small chokecherries (ayayhip). Magno also noted that dogs are eaten at celebrations, and cats also are eaten.

Magno makes drinks of fermented coconut (tuba) and fermented sugar cane (basi).

The family purchases milk fish, paying P 8 for fresh and P 7 for dried fish.

Magno pointed out that he has several children in school; for example it costs P 180 to keep a child in the second year of high school and P 200 for one in third year.

Case #22, Ramon - In a wooded section of Barangay Cadmang, Cabangan, Zambales Province, is the farmstead of Ramon, age 40, a farmer who rents 1/2 hectare. He and his wife have six children, ranging in age from two to fourteen years. Their house is a two-room bamboo and thatched structure located on barangay land.

Ramon begins to prepare his fields for planting in May, borrowing a plow, and carabao for three days from kinsfolks nearby to plow his fields three times. He also borrows an harrow, and he does all of the work himself. To pull seedlings, a young male kinsman helps, so Ramon does not have to hire anyone. For transplanting, however, Ramon must hire ten workers for one day, paying them P 8 per person. He does not give them food nor cigarettes. Ramon farms a traditional variety of paddy called binondok. In spite of the fact that Masagana 99 technicians have visited the village, he and the other farmers were not interested in the new varieties of rice because they feel that, because the area floods and the soil is not good, these varieties are not well suited to the area. These varieties also require fertilizer, and Ramon is concerned about the cost. As it is, he uses no chemical fertilizer nor does he have any means of irrigating his fields.

Ramon pointed out that a survey has been conducted for a new irrigation project planned in the area. Some farms in the general area already are benefiting, and Ramon was told by some National Irrigation Administration official that in another year, his village will benefit. He notes, however, that since his fields are relatively high, he won't benefit from the irrigation, so he will continue to rely on rain. He has no flooding problem. His one harvest yields ten cavans, a six-month supply for the family.

Ramon's major source of cash income is making fish traps, fish baskets and circular winnowing baskets. The bamboo used for these artifacts grows in the vicinity, and Ramon does not have to pay for it. He makes one fish basket (a sturdy basket for containing fish that have been caught) in a day and sells it for P 15. He estimated that he can produce around 100 baskets per year, realizing a cash income of P 1500. He can make one winnowing basket in a day, and he sells each one for P 10. He estimates that in one year he can produce 100, thus realizing P 1000. He learned the metier from his father.

In his kitchen garden, Ramon grows yams, maize, mangos, and sugar cane. In addition, he gathers wild guavas, black plums (duhat), and cashews. In addition to eating the cashews, he noted that they could sell them at the rate of P five per hundred (a mature, healthy tree will produce 1000 cashew nuts per year).

Ramon's family must buy rice six months of the year. They also pay around P 50 per week for fish and occasionally they buy meat (P 12 per kilo). At barrio fiestas and family celebrations they get meat, fish, San Miguel beer as well as their own sugar cane and coconut wines. There are around 20 such celebrations during the year.

Ramon has one daughter in the first grade, and this costs P 50 per year.

Case #23, Romualdo - In Barangay Carael, Sitio Eroc, Botolon, Zambales Province, Romualdo, a 25 year old laborer is building a new bamboo and thatch house next to the residence of his father-in-law. Romualdo is from another hamlet closeby, and after he married, he moved to Carael. Most of the year, he works in Botolon as a clerk in a grocery store owned by a Chinese. He works seven days a week, beginning at 7:00 a.m. and finishing at 6:00 p.m. for a salary of P 70 per month. In addition, he gets breakfast (coffee, rice, dried fish, and eggs), lunch (rice, meat, fish, and soup). Also, he can make purchases in the store on credit. During the planting and harvesting seasons, Romualdo works as a farm laborer, performing work for different farmers. During the planting period he can work seven days a week "pulling seedlings" and transplanting at the rate of P 5 per day (making up to P 150 per month).

Until his house is ready, Romualdo lives with his father-in-law who rents one hectare. They have had electricity in the house for one year. It costs about P 4 per month, which is cheaper than kerosene. The source of electricity here is a hydroelectric plant at the Ambuclan Dam complex. They have two pigs, feeding them rice bran which they buy at the rate of P 2 per can (a kerosene can of five gallons). The family buys rice, paying P 2.10 per kilo, dried and salted fish, but very little meat.

Romualdo's new house is a one-room structure built on piling. The itemized costs are:

- a. Nine hardwood posts costing P 10 each.....P90
- b. Bamboo - 30 logs at P 2 each.....P60
- c. Cogon grass roofing - 30 bundles at P2.50 ea. P75
- d. Nails - 3 kilos at P 6 per kilo.....P18

Total.....P243

Labor costs amount to about P 10 per man-day and around 36 days were required, for a total of P 360. The total cost of the house is around P 600. Romualdo did little or none of the construction himself.

Romualdo expressed the desire to be a tricycle operator rather than continue being a laborer. He noted that a new tricycle was too expensive for him, but he could rent one for P 20 a day. In addition, he would have to pay P 30 for a license and a driver must pay P 5 per year. He said that with a good loan, he could change occupations.

Case #24, Igmidio - Igmidio is in his mid-50's and is a member of the Ayata cultural minority (one of the Negrito groups). He was born in a small village near Barangay Villar, located in the uplands some 45 kms. to the east of Botolon, Zambales Province. Traditionally, his people farmed swiddens. Igmidio described how they selected the farming site by examining the soil and the flora (for example, if wild bananas grew, it indicated good soil). They began by cutting the trees with their bolo knives, allowing the cut wood and brush to dry for two months. After that period, they burned all of it, after which they raked the debris into piles, arranged so that it would form an enclosure around the swidden to protect it from marauding animals. After the rains began, they used dibble sticks to plant. Guitars were played as the men went in rhythm to make the holes while the women followed, planting the seeds. During the growing season they weed the fields constantly. Around the edges of the swidden they cultivated winged beans, maize, squash, manioc, eggplants, yams (including a purple climbing yam called ubi), taro, bitter melon, bananas, and papayas.

In October and November they harvested the dry rice. Igmidio noted that a swidden could be replanted two or three times, depending on the fertility of the soil. Afterwards, the swidden is left to fallow. When there has been a substantial new growth, it is possible to farm it again.

During World War II, Igmidio joined the resistance against the Japanese. Between 1961 and 1964, he worked as a guard at the Subic U.S. Naval Base, earning 75 centavos an hour. In 1965, he returned to farming, renting one hectare at Villar. He has his own plow and harrow, and he had two carabao, but sold one in order to have enough money for his daughter Erlinda to continue studying at an agricultural college in Manila. For the transplanting, Igmidio must hire five workers at the rate of P five each for one day and for the harvest, 10 workers at P five per worker for one day. He has no irrigation and only uses chemical fertilizer when he has sufficient money. Normally, his yield is between 40 and 50 cavans, but his rent is very high; if he has a yield of 50 cavans, he must pay 39 cavans in rent. That ratio is maintained for lower yields, i.e. around 78 per cent.

Igmidio plants yams (camote) in his fields after the rice harvest. He requires no hired help for this, doing the work himself. He also plants some maize, mungo beans, and potola (a variety of squash). He sells some of the yams at the rate of P 5 per can (four kilos). He has a pig and four chickens on his farm. Igmidio also works for wages. When he was interviewed on July 27, 1977, he was going to work the next day to plow a field near Botolon, for which he would receive P 10. His family consumes all of the rice he grows and keeps. When the rice is gone, they subsist on yams and beans.

Igmidio worked hard to see that his daughters receive an education. As was noted above, his elder daughter, Erlinda, was trained at an agriculture college in Manila, and she now works in the Zambales Provincial Agriculture Service as a technician. She contributes to her parents' support and she is helping her younger sister to continue in school.

Case #25, Arcadia - Along the coast of Pangasinan Province in Barangay Hermosa, Dasol Municipality, paddy fields and coconut groves dominate the lowlands. Next to the main road, Arcadia, a widow of 58 years, runs a small shop and rice-vending business. She has five children, four of whom live in Cabangan in Zambales Province, her place of origin. Arcadia's parents were from Hermosa, and she returned here to live five years ago. Her house is of wood, painted a bright green, with thatched roof and built on low piling. There is a main room and a thatched kitchen off of it. Appended to the main room is a very small shop, where Arcadia serves the customers who stand outside through a small window. On the shelves are a variety of items that the local people purchase, such as powdered coffee, various types of detergents in foil bags (Tide, Mr. Clean, etc.) as well as Palmolive Hair Shampoo, condensed milk, canned fish, tobacco, cigarettes, dried fish, candy (toffee, hard candy) and some manufactured items (small scissors, etc.).

She purchases her stock in nearby Santa Cruz and some sellers visit the village. She figures that she realizes a profit of about P 5 per week. Some of her customers buy on credit, but they always pay their bills. She also sells rice, buying it by the sack in Santa Cruz and selling it for P 5.20 per ganta (2.2 kilos).

Arcadia owns the building, and she pays P 200 every five months for the 10 square meters of land on which it is located. She receives no money from her children, although they come with the grandchildren to visit quite often. She pays P 5.50 a month for electricity. She has a chicken and two dogs, and in a small garden she grows taro, climbing beans, yams, and bitter melons.

Case #26, Lolita and Guillermo - The area of Currimao in Llocos Norte Province is normally very dry, and most of the farms grow tobacco and maize. In Barangay Salugan, Guillermo (age 31) and his wife Lolita have a rented 1/2 hectare farm on which they grow maize, dry rice, and tobacco. Their house is of bamboo, some wood planks, with a cogon grass roof. The lot on which it stands belongs to Guillermo's father, so they do not pay any rent. They share the house with Guillermo's brother, a doctor's assistant, and his family. Guillermo is a tricycle driver, receiving a percentage of the day's earnings, and his share usually amounts to between P 5 and P 10 per day.

Guillermo owns a plow and carabao, and all of the family assist in the farm labor. When the rice and maize are harvested in December, they plant tobacco, the major cash crop. The fields are plowed, and the seeds planted. They have a well as a source of water, and they hand-carry water to the plants every other day. They also employ five kilos of chemical fertilizer (paying P 2.50 per kilo). A small P 5 bottle of pesticide is mixed in water and sprayed on the plants. In May, they begin harvesting, taking the lower leaves off first as they mature. The leaves are dried in local kilns, tall square structures built of bamboo with wattled walls. Charcoal fires are lit at the bottom and the racks of tobacco leaves are suspended above where the heat and smoke rise as in a chimney to escape at the outlets near the roof. Some farmers own their own kilns, and those, like Guillermo, must rent the kiln, which in this case is owned by the barangay captain who charges a fee of two racks (bamboo sticks about two feet in length) that hold from 30 to 40 leaves depending on the leaf-size. Some kiln owners charge P 30 to cure an entire crop.

The tobacco is sold at the local market and prices depend on the quality of the leaves. According to Guillermo, leaves that are large and thick sell for P P 8 per kilo while the smaller leaves sell for P 5 per kilo. The Philippine Virginia Tobacco Authority sets the prices. Last year, Guillermo realized a profit of around P 300.

Dry rice and maize are farmed separately. A good dry rice harvest will amount to 15 cavans. No fertilizer is used and they depend on the rain for water. They got around three sacks of maize and were able to sell 10 gantas (a ganta is 2.2 kgs.) for P two per ganta.

Guillermo and his family gather food from local trees that are typical of northern Luzon. They eat the flowers of the Madre de Cacao tree, and the katudai (Ilocano designation) tree (sispana grana flora) provides flowers which are eaten in salads as well as edible leaves and long beans. In their fields they also have chili plants that yield more than they require for home consumption, so they sell some of the chilis.

Guillermo said that he would like to have more water sources to improve his tobacco crop. There is electricity in the village, but Guillermo and his family say they cannot afford it. They claim that the installation would cost P 200-300.

Case #27, Remedio - Barangay Lumaba is located not far from the town of Villaviciosa in the remote hills of Abra Province. Remedio, a man of 67 years of age who identifies himself as Tinguian, owns one hectare which he purchased seven years ago for P 2000. He had another small farm and sold it to get the funds to buy this farm. He and his wife have one daughter, 20 years of age. She, her husband, and their three children live with Remedio.

In July, when the rains begin to fall steadily, Remedio prepares his fields for planting, using his plow and two carabao. They plow the fields and then harrow them. He uses not fertilizer, noting that when he plows, "the carabao fertilize the fields." He cultivates a traditional Tingguian rice called gankab. He has heard of the Masagana 99 program but he has not used any of the new varieties of rice. He hires ten workers for five days at the rate of P 5 per day to pull seedlings and transplant them. The harvest takes place in November and December, and he hires 50 workers to help (paying P 5 per person per day), or they are paid in kind (measured in "bundles" of paddy). He does not supply any of the workers with food.

Harvests in this area are not measured in cavans but in bundles, and Remedio harvest between 400 and 500 bundles, keeping the rice for his family.

Tobacco is a traditional crop in this area but it was not until 1955-1956 that Virginia tobacco was introduced on a wide scale. The plants are watered by hand, and for the initial watering, Remedio hired 10 workers to carry the pails of water to the fields from his well. New plants require water three times a day, and then once a month after they have grown sufficiently. In three months, the leaves low on the plants are ready for harvest. He owns his own kiln for curing (he noted that the Philippine Virginia Tobacco Authority had the only oil-operated kiln in the vicinity). In this area they have five classes of tobacco. Last year he sold 100 kilos of first class tobacco. He cannot remember the total amount of his last tobacco crop.

In March and April, after the tobacco harvest, Remedio plants maize, none of which is sold. The maize is planted in about 1/4 of the hectare while the remainder is planted to peanuts, various kinds of beans, eggplant, potola (squash), summer squash, calabashes, Gourd squash, chili peppers, and taro. In addition, on his farmstead he has papaya, banana, mango, star apple, avocado, and coconut trees. He also gathers karut, a type of wild root, mushrooms (during the rainy season), bamboo shoots, wild manioc, flowers from the Madre de Cacao tree, and other plants known locally as kamangug and manungay. He also fishes in the nearby river and catches crawfish and snails.

Remedio has two carabao, two pigs, some chickens. He hunts deer and wild pigs (the meat of which is ample and is shared with neighbors).

His wife purchases 150 kilos of rice annually, paying P five per ganta (2.2 kilos). They eat meat and fish twice a week. He has kerosene lamps in the house, paying P 5.20 per gallon.

Remedio would like to have better irrigation for his fields. The local Catholic church, the young priest (who had studied in the United States, pointed out that the bishop had been interested in a wide variety of projects in the diocese to improve the lot of the people. He had built the two spillways crossing local streams that we had driven across, and he had other irrigation and water control projects. The previous week, the priest had organized students and other young people to plant 1000 giant Ipil-ipil trees as part of the Food for Work Program organized by Catholic Relief Service with USAID support. Food brought in under this program includes bulgur wheat, milk, and cornmeal. We also met two nuns who have food and medical programs for the local population. They operate a small dispensary and one nun makes visits to the isolated farmsteads back in the mountains to visit the sick.

Case #27, Florenzio - Florenzio is a 30 year old tenant farmer with $3/4$ hectare, and he lives in Barangay Jesus Alcos, Pidigan, Abra Province. He lives with his wife and three children in a wood, bamboo and thatched house, which he built with the aid of kin and friends. It has a concrete floor and the whole structure cost P 2000. Lorenzo pays no rent for the farmstead land because it belongs to his father, the barangay captain. Recently they put in a water-sealed toilet, and they expressed great satisfaction with it.

Lorenzo farms a traditional variety of rice called virgie. He noted that he was not familiar with the Masagana 99 program. He does not use any chemical fertilizer because "it is too costly," relying instead on the carabao dung. No irrigation is available, so Lorenzo relies on rainfall which is unsteady. He harvests around 50 bundles of paddy in his one crop (he estimates that ten bundles equals seven gantas or 15.4 kilos). He has no second crop, such as tobacco, which is a common cash crop in this area, because he has no well to provide the needed water. There is a publicly owned well nearby but the pump is always in disrepair. The town mayor is supposed to be responsible for maintaining the pump but fails to do so (he is not a farmer). Lorenzo estimated that he would need a well of 15 meters, but there are no well diggers in the vicinity. There is one old man with the equipment to do the job, but it would cost P 3000 to dig a well between 12 and 15 meters. He added that most farmers in this place are poor. All of the landowners live in Pidigan. Lorenzo expressed his desire to own land, pointing out that it is cheaper to pay taxes than to pay rent. His rent is 50 per cent of his harvest.

Lorenzo and his wife work as laborers. Their services are in demand during the planting and harvesting periods. At planting they can work three days a week, receiving P 5 each per day. At the harvest, they are paid in kind, each receiving 1/10 of what they harvest -- i.e. one bundle in ten. They also gather firewood during the dry season, taking his father's carabao to the nearby mountains where they can gather three bundles of wood in a day (they pay for the carabao with firewood). In addition, they shell maize, which they

purchase from neighbors. Some villagers also give them maize to shell, letting them keep half of it. (The wife's aunt was in the house helping with the shelling, for which she was to receive some of the maize.) The shelled maize is sold (it is eaten mixed with rice). Lorenzo and his wife also raise goats for their neighbors, receiving 1/2 of the kids born.

They have electricity in the house -- two bulbs -- and installation cost P 100 with a P 15 fee for the electricity cooperative. Their electricity bill each month comes to around P 5 per month, which is less expensive than kerosene. They pointed out that it is better to have lights when they are shelling the maize after dark. They added that it is less "dirty" than the kerosene and good for the children's studies.

They have one girl in the 8th grade, and their expenditures for books, uniform, and PTA come to around P 200. When Lorenzo was offered a cigarette, he refused, saying that he did not smoke because he wanted to save his money to see that his children get a proper education.

Case #29, Erlinda - In the highland province of Ifugao, the town of Banawe is in the midst of the famous rice terraces of the Ifugao people. On the road outside of the town is the barangay of Pubu, and a small store there is stocked with the range of basic manufactured goods and other items needed in the homes of the rural poor. This shop is a cooperative, run by Erlinda, an Ifugao woman in her early 30's. Erlinda (who is the catechist in the local Catholic parish church) organized the cooperative, signing up 60 members. Cost of full membership is P 75, but one can join with a payment of P 15. Erlinda does the buying at wholesale prices in Banawe. She receives 10 per cent of the net sales revenue, but in the seventeen months the cooperative has been operating, she has only collected P 400 (she supports her parents who are too old to work). Goods sell at the cooperative at attractive prices, e.g. at the coop powdered coffee can be purchased by a member of P 6 (Erlinda buys it for P 5.90) while it normally would cost P 6.50.

Erlinda also has just organized a cooperative for women weavers, some of whom are the sole support for their families. She obtained applications for loans from the Self-Employment Assistance Program (SEAP) to obtain credit for weavers. On July 31, 1977, the day we visited her shop, she had received the applications and she was busy assisting six local women fill out the forms, which she planned to mail back to the SEAP. Three of the women wanted loans of P 256 each while two wanted P 138 and one needed P 150. Normally these women weave cloth (using their back-strap looms) on demand, receiving the money in advance so they can buy the needed thread, but with the loans, they can purchase thread in advance and produce cloth for sale. A tapis (a man's wrap-around garment) women's skirts, or blankets are the things they produce. One kilo of thread costs P 40 and 1/2 kilos will make a "family sized" blanket (for an Ifugao family). All of these ladies (including Erlinda) also work as laborers for P 4 per day.

While we were discussing the loans, an elderly Ifugao man entered the small shop. He explained to Erlinda that he wanted a loan of P 200 to purchase rattan at the market to weave traditional back baskets (Erlinda noted that he was the only one left in the vicinity who knew how to weave these unusual baskets). With P 200 he stated that he could weave four backbaskets. He has eight children and no land.

Case #30, Buyocon - Amidst the rice terraces below the barangay of Pugu, near Banawe, Ifugao Province, there is a small cluster of traditional Ifugao roofs of nipa. This is a settlement called Anganad, and one of the houses is occupied by Buyocon, a 50 year old man and his wife (they have no children). Buyocon worked in the mines near Baguio as a laborer (from 8 in the morning until 5 in the evening six days a week for 75 centavos a day). He became ill with tuberculosis and had to quit. He and his wife returned to their village, but they have no rice fields and Buyocon cannot labor. His wife, therefore, has become the breadwinner of the family. She works as a farm laborer at the rate of P 4 per day during the planting period and for 3 bundles of paddy a day at harvest. In addition, she farms a swidden on the mountainside, growing yams. In a small kitchen garden she cultivates some yams, manioc, bananas, and a little sugar cane.

She also weaves men and women's wrap-around garments and blankets on order (using her backstrap loom), realizing a profit of from P 20 to P 30 per piece. This lady is one of the applicants for a SEAP loan, the result of Erlinda's (Case #29) efforts. She is seeking P 150 so that she can purchase thread and make blankets to sell. Buyocon remains at home. When we visited the house, he was huddled by the fire, coughing in the morning chill. He explained that they have no kinfolk in the area from whom they might receive some assistance. The Baptist mission clinic gave him some medicine for the tuberculous, and they also gave him P 50 to repair his house.

Case #31, Duduli - Another resident of the barangay of Anganad, the Ifugao village amidst the rice terraces, is Duduli, a woman of 38, who also applied for SEAP loan so that they could buy thread for weaving. Duduli and her husband work as laborers, receiving P 4 per day and lunch during the planting period. At harvest, they receive three bundles of paddy each per day. They also farm a mountain side swidden, growing yams. Duduli also weaves, using a backstrap loom. She gets paid in advance when she receives an order. She explained that it takes four days to make a tapis - a male garment - working most of the day. She makes a profit between P 20 and P 30 for such work. Since Duduli contributes so much to the support of her family, the old Ifugao women allowed her to learn the gamon weaving method that normally is reserved for women past menopause. Duduli has a small kitchen garden with some sugar cane and taro.

Case #32, Apolinario - Apolinario, a man of 55 years, was born in Santa Rosa in Nueva Ecija Province, and during World War II he and his wife went to Manila where he worked as a carpenter. In 1975, his niece inherited a farm of 1 1/2 hectares in Barangay San Mariano, but, since she was unable to run it, she asked Apolinario to do it. He and his wife agreed, and they left the city to move into a wood and thatched house on the farm. As part of their arrangement, the niece hires a tractor to help plow the larger fields in addition to a carabao and plow for the smaller ones. She also pays each worker P eight per day and gives lunch to do the transplanting. Apolinario and his son also participate in the labor, operating the plow for the preparation of the fields. They farm IR-28 which matures in three months and use a chemical fertilizer called Urea. At the harvest, they hire workers to help cut the rice, thrash, winnow and put the paddy in sacks, and the workers get one of every six sacks as pay. He noted that before using chemical fertilizer he got between 30 and 40 cavans, but now he gets 60 cavans. After paying the laborers, he ends up with around 50 kilos of polished rice for himself while his niece takes the rest. He does not sell any rice, saving it for family consumption.

Apolinario has only one crop, but with irrigation, he could realize two. He thinks that irrigation will be possible when the Pantabangan Dam Project (being funded by the World Bank) begins to reach its area. Last year there was a shortage of water but he expects to soon begin receiving water from the project. This will enable him to have two and possibly three crops.

After the rice harvest, Apolinario plants a variety of vegetable cash crops, including melons (water melons and bitter melons), okra, eggplant, tomatoes, beans and maize. Most of this produce is put on a bus or jeepny to transport it to the Santa Rosa market every day. In their kitchen garden they grow taro, manioc, potola (squash), winged beans, gourds, eggplant, okra, ginger, chili peppers, saluyote (a green, leafy vegetable), peanuts, and local vegetables called molongai, and katuray. He also gathers wild bamboo shoots and wild saluyote. He added that he is reluctant to gather other edible wild vegetables because he is not sufficiently familiar with the toxic plants in this area.

Using fish nets, Apolinario fishes in his flooded paddy fields, catching snails, crabs, and several kinds of tilapia (a fast-breeding type of fish), including the large, brucille tilapia, hito, and bilang. He also digs for clams along the river bank, where he also casts for fish. He sells some of the catch in the Santa Rosa market.

Apolinario's wife purchases some meat for the family, sometimes trading vegetables from the field and garden for meat. There is electricity along the road near the farmstead, but Apolinario and his wife noted that they do not have it "because it has no benefit for the farm." Their son is 21 years of age and has completed 2nd year of high school. Apolinario noted that he and his family are happier here in the country than they were in Manila. "Everything is better away from the city," he added.

Case #33, a Group - Several families of tenant farmer-laborers living in a compound about five kilometers east of Botolan, Zambales, on a gravel road, appear to be of mixed Ayta (Negrito) and lowlander extraction, and are all related to each other. The core of the family is a widowed grandmother, who has her own bamboo hut with cogon roof. The other huts are occupied by her three daughters and their families; each daughter has four children, ranging in age from two months to about nine years. Some of the children go to school, but one older child was home because there was no food to send with him to school.

The families all live together on about one hectare of land, for which they pay a rent of P 20 per month. They raise various crops - mostly vegetables - on this hectare, including cassava, taro (gabi), sweet potatoes, corn, and some others. Some of these vegetables are sold in town. They also have a pig, some chickens, and a dog. On their rented rice land (estimated at about 1 1/2 hectares total for the three families), they produce mostly for their own use. They only get one crop of rice per year because of a lack of water, and the yield is usually about 30 cavnas per hectare. This is split 50-50 with their landlord. They also earn P 5 per day working for others at planting time, but this only lasts about two months per year. They also work in the sugar cane fields at harvest time; they work in teams at that time, and get P 10 per ton of cane (which works at about P five or P 6 a day per worker) and the work, they say, is "very hard." In the off season, they go to town and do any kind of work they can find. They also fish a nearby river most of the year, and one daughter runs a poorly stocked sari-sari store near the road. Things are very difficult for them during the dry season, they told us; they eat mainly tubers and some fish during this time, but they are usually hungry until the rains come. They generally share what they have among the various families. Their rice crop is not sufficient for a whole year; they have to buy rice much of the time. These people were at the very edge of subsistence.

Although typhoons are not common in this part of Luzon, they all lost their homes in 1972 to an unusual typhoon which came from the north. Their landlord sold them the bamboo they needed to rebuild. The homes are typical bamboo structures, with wooden floors about one meter up from the ground, cogon roofs (which lasts about three years), and lean-tos with dirt floors which serve as kitchens.

Across the road from the Ayta compound lived another young family living in a similar house. The father worked as a farm laborer. The mother was 19 years of age and pregnant for her fifth child. She was holding a baby about nine months old which was dying of anemia, and apparently, malnutrition. The baby's arms, legs, and neck were very thin. The baby had been taken to a hospital in Olongapo and received a transfusion of Type A blood and it now needed another one, but they didn't have the money to take it to the hospital (a jeepney ride into Botolan costs 50 centavos). (It appeared that the family had decided that this

child was not going to live and were not wasting too much food on it; the baby was writhing in pain.) This was probably the poorest young family that we interviewed. We struggled with the moral question of whether to give the family money for another transfusion or not; rightly or wrongly, we decided that the family had already adjusted itself psychologically to the death of the baby, and to prolong its life would only mean raising hopes again when those hopes would inevitably be dashed. (We understood how the parents of Karen Quinlan felt. We gave them no money. It still hurts.)

Case #34, Peter - Peter Fortaliza, about 45, and his wife of about the same age operate a farm and wood-planing mill near Cambangan, Zambales. They have seven children, five boys and two girls. One daughter, 18, is employed locally as an agricultural technician and lives at home. An older daughter is married to a well-off (by local standards) man who owns 37 hectares of mountain land and can afford a jeep; this daughter has three children and lives about two kilometers from the farm and planing mill. Peter and his wife live in a two-story house made of concrete blocks with a thatched roof about eight kilometers from the farm and planing mill. They have no electricity, but they are better off than most of the families we interviewed.

Peter worked as a conductor for the Victory bus line for 12 years, but 15 months ago he was given leave without pay because a medical checkup disclosed a spot on one of his lungs. Since he is not supposed to exert himself, he confines his activities to delivering the wooden beams which his wife planes (without power equipment of any kind) on a carabao drawn cart. They own seven carabao themselves, but only use one of them to draw the cart. The wife owns one-third of a hectare of land on which they grow rice and a few vegetables for their own use. They get only one crop each year due to a lack of irrigation water; this normally amounts to about 18 cavans. They also have 15 chickens, which they also consume themselves.

Typhoons occasionally affect their economic well-being, although they are not the problem here as much as they are in the Bicol region. A major typhoon in 1972 killed 20 of Peter's chickens and two goats. However, high water is a problem every rainy season, regularly washing out roads and bridges in the area and making it difficult for local people to ford swollen streams. Peter showed us one place where a PDAP bridge was being planned; the river was relatively low at the time of our visit, so that an adult could wade across without getting water above the waist, but Peter said that the children living on one side of the river regularly have to swim the river to get to school on the other side. Furthermore, swidden farmers from the mountainsides in the area regularly ford the stream with their mangos and bananas in baskets on their heads; when the river is high, they often lose their products and sometimes their lives. Apparently a rather sophisticated bridge which will accept motor vehicles is being planned for the site; local officials were inspecting the area just before we arrived. Peter claims, however, that a relatively inexpensive suspension-type foot-bridge is all that is really needed to meet most of the needs of the poor in that part of Zambales.

Peter and his family were rather unusual in several respects. For example, they grew about 100 giant ipil-ipil trees on their land, using the roasted seeds to make coffee. They had also planted mango trees, but they were not old enough to bear. They had enough cash income to afford to buy fish, rather than catch them themselves. Peter's wife was a vigorous, hard-working woman; although the apitong wood she planes into beams (for home construction) is rather soft, it takes muscle. Their planing mill is really just a shack with open sides and a roof, but it does keep the timbers and the tools dry. They are not busy all the time, however, since the beams are only planed to order. They get P 2.10 per running foot for their finished beams, or P 1.80 for rough, unfinished beams.

Peter's 18-year-old daughter also contributes to the family's support with her income as a local agricultural technician. Sharing is an established part of rural life in the Philippines.

Case #35, Ferdinand - Ferdinand, about 55, is an Ayta (Negrito) laborer who lives with his wife (about the same age) and three children in a bamboo-and thatch house about three kilometers from Botolan, Zambales. An older son has left home, but lives in the area, and a married daughter (pregnant with her first child) lives in a similar hut only a few meters away. Two of Ferdinand's children have died. The older son, 31 years old, has a first-grade education and the married daughter has a fifth-grade education. Ferdinand and his wife have no formal education.

Ferdinand works mainly as a farm laborer in the rice fields. In addition, the family raises vegetables (yams, cassava, beans, sugar cane, and maize) on a one-half hectare plot next to their hut; these vegetables are sold, for the most part, in Botolan. Their landlord (a "kind man," they said) charges them no rent whatsoever. They have also planted fruit trees, mainly mangos and labanos. They have 26 chickens, which they also sell for cash; they do not eat meat themselves. They do fish the nearby river during the dry season with a bow and arrow, eating some of the catch themselves and selling some of it. During the dry season, it is very hard for them to get enough to eat. The family shares food on a regular basis.

Ferdinand and his family have only lived in the Botolan area since World War II; before that, they lived in the mountains near Villar, raising rice on lands owned by the government. They only got one crop of rice in the mountains, too; they say that their standard of living is about the same as it was before. The 1972 typhoon took everything that Ferdinand and his family had--his house, his garden, and his animals. He said, however, that it did not affect his work very much. Even when heavy rains wash out roads and bridges, the family does not feel much effect either plus or minus, since there are no streams between their vegetable plot and the town of Botolan.

Ferdinand told us that they normally run out of rice fairly early in the dry season; they then have little to eat except root vegetables and a few fish. The family has one visible sign of "wealth": an inside water pump.

Ferdinand shows little interest in suggestions of ways to improve the land; it is not his, he says. We wondered if the family was afraid the "kind landlord" might evict them or begin to charge them rent if the land began to appear valuable.

APPENDIX B

Two Water Purification Plants
Camarines Sur Province

We visited two water purification plants (Frankel filter units) constructed with AID support, one near Magarao and one near Milaor, Camarines Sur. The unit near Magarao was not in use; the one near Milaor was in constant use. According to some children playing near the Magarao unit, it was shut down because of a lack of a regular supply of gas; apparently the periodic shutdowns allowed rust to get started, and the engine refused to run after a while. Also, the water appeared rusty. Local people now pay the well-off owner of a nearby private well P 2 per month for drinking water. Nearby there is also an unused shelter for market stands which was constructed two years ago as a "New Society" project; it was a nice structure, with a concrete floor and a metal roof. Apparently local people go to Naga City, just a few kilometers away, to do their shopping because a jeepney ride into Naga costs only 25 centavos. A lordly carabao was apparently the only user of this shelter.

The unit near Milaor appeared to be a roaring success. The barangay chief told us that people come from several kilometers away to load up on clean water, and that some members of the water coop had paid in advance as far as December (this was in July). While we were talking with him, there was a constant stream of people filling pots and cans with water from the unit. They appeared to be amazed that the filthy water of the nearby stream could be processed into safe, clean drinking water.

The difference between the two units seem to be the amount of local support each receives. It may well be that the well-off seller of water near Magarao saw fit to sabotage that unit, or at least to discourage people from using it; our guess is that he had a certain amount of local political influence. At Milaor, the community seemed to be more unified and justifiably proud of their water coop; the barangay chief was obviously just as poor as most of his neighbors, and there seemed little danger of anybody wanting to foul of the plant's operation. Perhaps this may serve as a commentary on why more even distributions of income seem to favor development, while uneven distributions seem to find development blocked in every direction.

APPENDIX C

The Handicraft Cooperative
at Santo Domingo, Albay Province

Handicraft cooperative at Santo Domingo, Albay. This cooperative, a member of the National Cottage Industry group, is composed of 150 members, 90 of them relatively young girls who do sewing in their own homes with electric sewing machines which they buy from the cooperative. The machines cost the girls P 800, and they pay off the coop at the rate of P 13.50 per month for five years. The cooperative, in turn, receives most of its capitalization from the National Electrification Administration (NEA), which has been supported in turn with some AID funds. (Feedback on the NEA was generally very positive; we were told that dissident groups on Mindanao which would bomb almost anything else would leave NEA power distribution facilities alone because they were obviously benefiting the poor--including, apparently, some of the dissidents. We were also told that the NEA has a good record of credibility--they keep their promises)

The girls in the coop initially receive three weeks of training from the National Cottage Industry group, and are then on their own. They produce mainly to order, and do design work in the off season. Their primary output is abaca handbags for export. The coop has a girl who checks the products for quality control, and the National Cottage Industry group also conducts a later check; defective work penalized by lower rates being paid. The girls earn about P 14 per day during the busy season (which is about triple what women in Albay Province would earn in the rice fields)

The materials are bought by the coop and supplied to the members; the members supply the machines and the labor. This is a good example of the way scale economies in purchasing raw materials and sewing machines in bulk and in selling quantities in bulk can be blended with highly individualized production in the home.

APPENDIX D

The Copra Oil Plant at Legaspi City

Visit to a coconut oil plant near Legaspi City, Albay. This was a very capital-intensive, modern production operation. The dried copra is brought in by truck or boat from all around the Bicol region. In the plant the copra is first milled into small chunks, then dehydrated into a greasy meal-like consistency. This meal is then put through a machine which heats and presses the oil out; the oil is run through a filter while it is hot, and is piped to a tanker ship which hauls it off to richer countries for further processing. Coconut oil is used for a wide variety of things, from soap to perfume.

The plant's capacity is 240 tons of oil per day, but it was running below capacity at the time of our visit because of a lack of copra supplies. The ownership of the plant is joint American-Filipino, but the major American stockholder lives in Manila.

APPENDIX E

Factory Producing Scissors, Knives, and Razors
Tabaco, Albay Province

Visit to a factory in Tabaco, Albay, which makes scissors, knives, and straight shaving razors out of the leaf springs of old cars. The production side was carried out in an L-shaped building with a metal roof but no walls; the products were sold in a fairly modern showroom closer to the street.

First the metal was heated at a forge which was equipped with an electric-powered blower. This was then cut into smaller widths by hand, using hammers and chisels. The thinner strips were sharpened by hammering them flat on both sides while they were hot. Pieces destined to become scissors had a hole punched in one end. Once the pieces took their basic form, they were ground and polished at grindstones powered by electric motors. Scissors were then bolted together and knives and razors were fitted with handles--mostly wood, but some of carabao horn. They were then coated with a thin film of oil and boxed for sale on the premises or for shipment to other parts of the country or even abroad.

The factory appeared to employ about thirty people, with perhaps 20 of these working in the production area and 10 (mostly women and young boys) in the bosing, sales, and administrative end.

APPENDIX F

Blacksmith near Ocampo, Camarines Sur Province

Visit to a small knife-making operation near Ocampo, Camarines Sur. There was no electricity or building; it was basically a blacksmithing type of operation in the smith's yard, with a small roof over the forge but none over the anvils, grindstones, and so forth. The forge blower was powered by hand, and the grindstones by foot pedals. It appeared that production was mainly to order, and that the major output was of the bolo knives which are so common throughout the Philippines. Various types of strap iron appeared to be the major source of raw stock. About six people were involved in different tasks--heating, chiseling, hammering, grinding, polishing, and so forth--but only four of them seemed to be needed, the other two acting as spectators most of the time. There was no sales office, no boxing, no shipping of output. The output was somewhat cruder than that of the Tabaco factory, but it appeared to be quite functional

APPENDIX G

Geothermal Electrical Power Plant
at Tiwi, Albay Province

Geothermal electric power plant under construction near Tiwi, Albay. The National Power Corporation has drilled 20 wells in its search for subterranean steam to power electrical turbines; two of these have turned up dry, but 18 have enough steam to justify an investment of around \$35 million in two producing units of 55 megawatts each, with more planned in the future. The National Power Corporation has a reservation of some 17,661 hectares in this volcanically active area with an estimated power potential of as much as 1000 megawatts. The Bicol region is estimated to need no more than 30 megawatts of this, leaving a substantial surplus to be exported to other parts of the Luzon grid.

Subterranean water, superheated by magma between 1900 and 9500 feet down, forms steam which is channelled through a series of separators to take out contaminants which might corrode the electrical turbines. Once cleaned, the steam is piped to the central turbines to generate electricity. As by-products, the plant lists salt, potassium chloride for use as a fertilizer, ammonia for use as a refrigerant, and dehumidified hot air which can be used for grain drying or food processing. A small five kilowatt-hour pilot plant is presently in operation, with the two 55-megawatt units slated for completion in 1978.

APPENDIX H

Diesel Electric Plant, Tiwi, Albay Province

Diesel electric plant owned by the National Power Corporation near Tiwi, Albay. This very noisy plant generated 1800 kilowatt hours per day of electricity using five White Superior diesel engines which were originally used in Vietnam. These engines use 10,000 liters of diesel fuel per day, which is trucked in by Petrophil. This plant, plus a twin 1800 kilowatt hour plant located elsewhere and a 1200-kilowatt-hour hydroelectric plant, supplies most of the electricity presently used in the Bicol Region. The major exceptions are electricity for Legaspe City, which is supplied by Legaspe Oil Company, and electricity for Naga City, which is (occasionally) supplied by a private company at the moment (but scheduled to be supplied from the National Power Corporation's Luzon grid in a few months).

The chief engineer told us that these particular diesel engines were old and hard to get replacement parts for, but that they were better than either Japanese or German-made diesel engines. The plant's output goes mostly to cities and towns; there are few rural customers. Five people were employed in total over three shifts each day; this plant will eventually be closed down when the geothermal plant goes into operation.

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