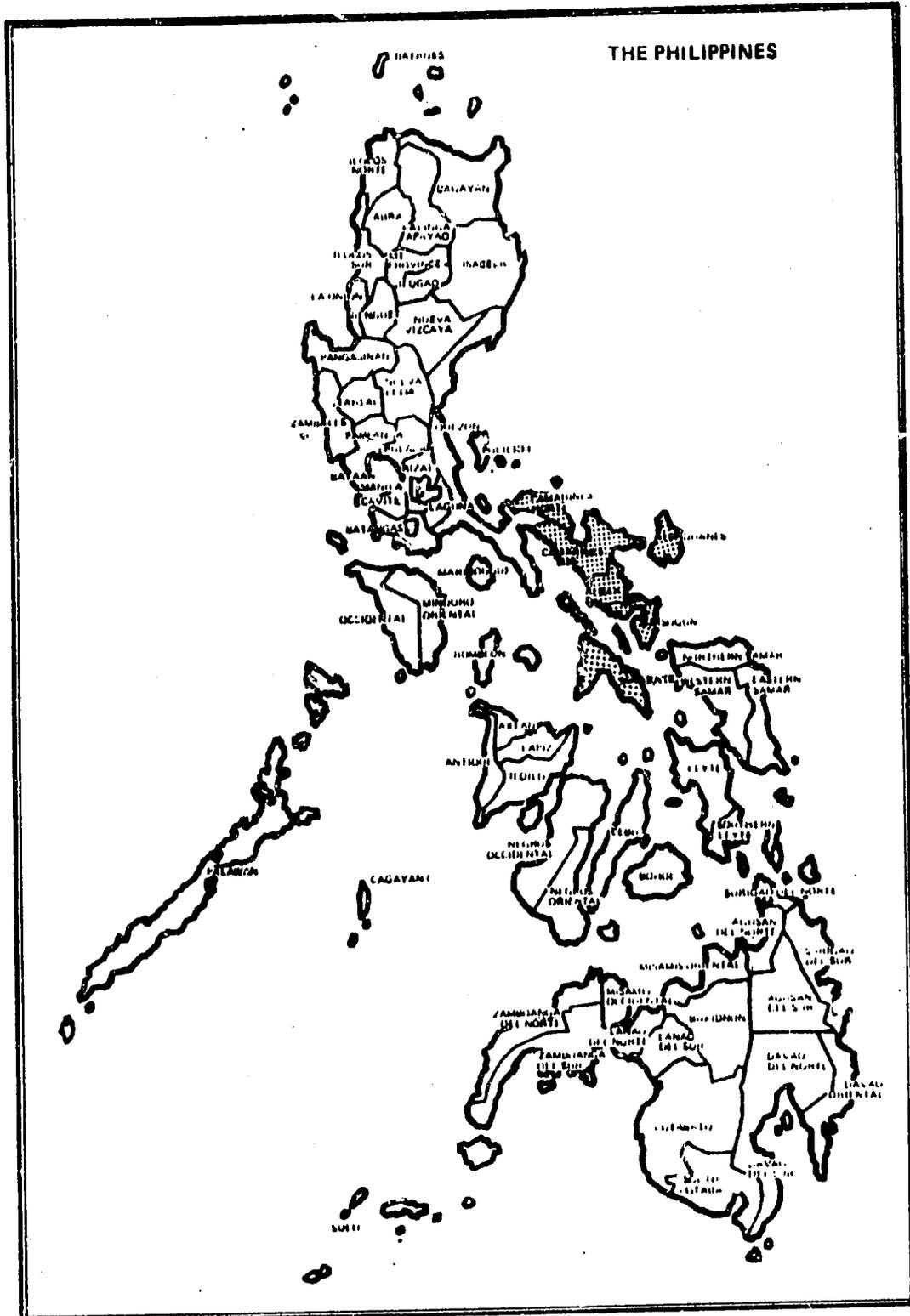


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Economic Profile and Causes of Poverty in Bicol (Region V)



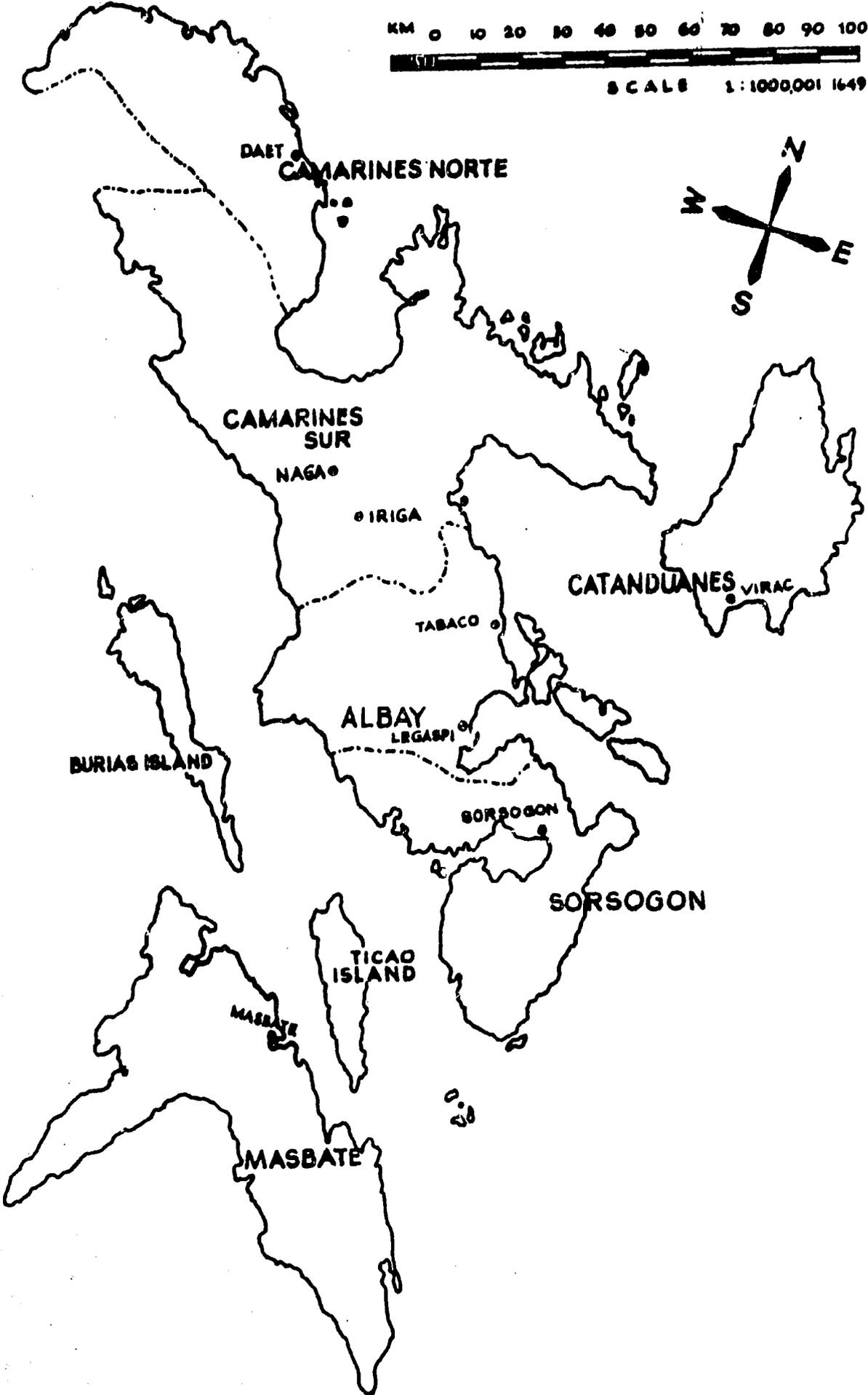
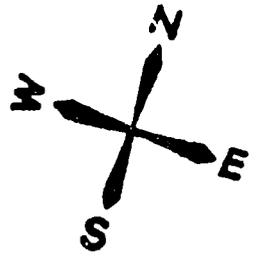
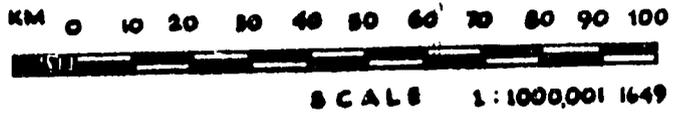
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MAY 1982

**ECONOMIC PROFILE AND CAUSES OF POVERTY
IN BICOL (REGION V)**

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ECONOMIC PROFILE AND CAUSES OF POVERTY IN BICOL (REGION V)

I. Geographic Features

The Bicol Peninsula (Region V) is located in the southeastern tip of the Luzon Island. It has a total area of 17.6 million square kilometers and occupies roughly 6 percent of the national territory. The region is bounded on the north by Quezon province, on the south by the island of Samar, on the east by the Pacific Ocean and on the west by the Sibuyan Sea.

Six provinces comprise Region V, namely, Camarines Norte, Camarines Sur, Albay, Sorsogon (which are all located on the Luzon mainland) and the island provinces of Catanduanes and Masbate. It has three chartered cities (Legazpi in Albay, Naga and Iriga in Camarines Sur), 113 municipalities and 3,142 barangays, with Legazpi City designated as the regional center.

The region's topography is generally mountainous and hilly with few scattered areas of plains and valleys, mostly concentrated in Camarines Sur and Albay (including the Bicol River Basin). Among the prominent elevations are the Calinigan mountain ranges, Mt. Iriga and Mt. Isarog in Camarines Sur; Mt. Masaraga, Mt. Malinao and the famous volcano, Mt. Mayon, in Albay; and another volcano, Mt. Bulusan in Sorsogon.

Aside from the numerous rivers and creeks that crisscross the region's land mass, Bicol has a lengthy coastline with very rich fishing grounds, including Lamon Bay in the north, Ragay Gulf in the east, San Miguel and Lagonoy Bay in the west. Other major bodies of water within the region are the Albay and Asid Gulf, the Sibuyan Sea, Burias and Ticao Pass, Maqueda Channel and San Bernardino Strait. Likewise, the large freshwater lakes of Buhi, Bato and Baao in Camarines Sur and Bulusan in Sorsogon, and several rivers, including the Bicol and Quinale rivers in Albay and the Sipocot River in Camarines Sur, provide convenient waterways and additional fishing grounds in the region.

Three distinct types of climate are observed in the different parts of Bicol. The whole of Camarines Norte and Catanduanes and the northeastern portion of Camarines Sur, Albay and Sorsogon have no dry season with very pronounced maximum rain during November to January. The remaining areas of the three latter provinces experience even distribution of rainfall throughout the year. The island of Masbate, meanwhile, is relatively dry from November to April and wet during the rest of the year. The mean minimum and maximum rainfall registered in the region was 3,493 mm. and 3,755 mm., respectively. Camarines Norte is the wettest province with an annual average rainfall of 3,750 mm., while Masbate is the driest, receiving an average rainfall of 2,225 mm. per year.

The Bicol Region lies within the "typhoon belt" of the country and is regularly visited by the Pacific cyclones. From 1973-1977, the region experienced 71 tropical storms. A good number of these storms have caused extensive flooding of lowland areas, heavy destruction of crops and properties and loss of human lives, especially during the months of October to December.

II. Demographic Features.

The regional population in 1980 was 3.47 million, of which approximately 1.76 million were males and 1.71 million were females. Bicol's population comprised about 7.2 percent of the country's entire population in 1980. The region's average annual population growth rate from 1975 to 1980 was only 1.7 percent, slightly higher than the 1.5 percent annual growth from 1970-1975 but lower than the 2.3 percent annual growth rate recorded between 1960 and 1970. The country's overall growth rate was 2.6 percent per annum from 1975-1980. (See Table 1.) Despite a lower growth rate, partly attributable to out-migration, Bicol is one of the most densely populated areas in the Philippines. Its average population density in 1980 was 197 persons per sq. km. -- a figure well above the national average of 160 persons per sq. km.

Nearly one-third or 1.10 million of the region's population were in Camarines Sur while another 23.2 percent were in Albay. Catanduanes and Camarines Norte were the smallest provinces in terms of population size, with only 5.1 percent and 8.9 percent, respectively, of Region V's total inhabitants. Albay, Sorsogon, and Camarines Sur have the largest population densities in the region, with Albay having a very high 315 persons per sq. km. in 1980. Camarines Norte, and the island provinces of Masbate and Catanduanes have much lower population density than the regional average, the latter having a mere 116 persons per sq. km.

Bicol has a relatively young population, with about 47.6 percent (or 1.52 million) of its total population in 1975 belonging to the 0-14 age bracket. Some 49.2 percent belong to the productive age group, 15-64 years old, and the rest (3.2 percent) were in the 65 years-old-and-over age group. Thus, there is approximately one dependent per member of the productive age group in the region, indicating the relatively high burden of dependence which the age structure imposes on its economically-active population.

The Bicol Region is predominantly rural with approximately 82.7 percent of its people living in rural areas in 1975. The proportion of rural to total population is greater than the national figure of 68.2 percent in all of the six provinces. In both Masbate and Albay more than 87 percent of the inhabitants are located in rural areas -- the highest in the region.

About 553,000 or 17.3 percent of Bicol's population in 1975 are in urban areas. The two Camarines provinces have the highest proportion of urban dwellers to total population, more than 20 percent. Some 41 percent of Albay's urban inhabitants are in Legazpi City, while 44 percent of Camarines Sur's urban dwellers are in its two cities, Iriga and Naga.

The region has been losing a significant number of its population through outmigration, which is partly the reason for the relatively low population

growth during the last two decades. Recent NCSO data indicate that between 1970 and 1975 there were 35,517 in-migrants to the 67,102 outmigrants from Region V for a net outmigration loss of 31,585 during the period, or 12.2 percent of the natural population growth increment for that period. Most of the outmigrants were young (22.2 percent belong to the 5-14 age group and 55.9 percent were in the 15-29 age bracket), indicative of the poor economic conditions prevailing in Bicol that have encouraged young Bicolanos to migrate to other major urban centers. More than half of the region's outmigrants went to Metro Manila and another 25 percent to nearby Southern Tagalog (Region V) provinces. Significantly, a high 57 percent of the young outmigrants were females, a large majority of whom went to the cities to work as housemaids, waitresses, etc.

Similarly, most of the in-migrants to Region V during the period were young and came from Metro Manila and Southern Tagalog. Presumably, a significant number of them (or their parents) were originally from the region who migrated in the 1960's, worked and after having earned some money (or finding life in the cities very difficult), went back to Bicol.

Net outmigration during the 1960's amounted to 90, 887, or 13.1 percent of the natural increase in population. The highest rates of net outmigration were posted in Albay, Catanduanes, and Sorsogon. (See Tables 1, 2 and 3.)

III. Economic Production

A. Gross Domestic Product.

The gross domestic product (GDP) of Region V at current prices amounted to ₱7.36 billion in 1979. Bicol's aggregate production represented some 3.3 percent of the country's GDP of ₱221.0 billion. But considering that in the early 70's its share to Philippine GDP was around 4.0 percent, the region's contribution to national production has actually declined during the past years. This is due to the fact that from 1971-1979, Bicol GDP in real terms increased

by an average of only 4.0 percent per year, which is less than two-thirds the annual 6.6 percent growth rate of the country's aggregate domestic output during the period. The poor performance of its agricultural sector compounded by the relatively slow growth of manufacturing and construction are to be blamed for this mediocre rate of economic growth. (See Tables 4 and 5 in Annex.)

Bicol's agriculture sector (including fishery and forestry) accounted for one-half (or ₱3.73 billion) of its GDP in 1979, most of which was contributed by crop and livestock production. By comparison, the country's agriculture sector contributed only 24.1 percent or less than one-fourth of total national production. Regional agricultural output increased by an average of 3.4 percent annually during the 70's, well below the 4.9 percent annual growth of the nation's total agricultural production. From 1975-1979, the total real value-added of Bicol's agricultural sector rose by just 2.6 percent annually, compared with a hefty 5.7 percent for the whole country. (See Table 6.)

The region's industrial sector, meanwhile, contributed ₱1.35 billion, or a mere 18.4 percent of GDP in 1979, a level which is only about half the 36.4 percent share of this sector to the country's GDP. This reflects the relatively limited state of industrial development in Bicol, although from 1975-1979 the industrial sector's output in real terms grew by 5.7 percent annually, which is a significant improvement over its sluggish performance in the early part of the 70's. The manufacturing subsector, comprising about three-fourths of the industrial sector and composed of a few large establishments and a large number of small-scale industries and home enterprises, accounted for 13.5 percent of the region's aggregate production. Construction is another leading growth industry in Bicol, though it contributed only 3.9 percent of regional GDP in 1979. Its growth, however, slackened considerably from a high 18.9 percent yearly from 1971-1975 to only 0.9 percent annually

in the next four years, primarily because of the slowdown in government construction activities. This is partly because some government projects have been completed (i.e. the Mahalika Highway) and partly due to the sharp increase in construction costs.

The output of the region's service sector amounted to ₱2.28 billion in 1979 or 31.0 percent of total regional production, lower than the 39.5 percent share of the whole service sector to Philippine GDP. Commerce, personal and government services and transportation are the leading service activities in Bicol. In the 70's, the region's service sector grew by an average of 6.0 percent yearly, approximating the 6.1 percent growth of the country's service sector during the period.

In terms of per capita output, Region V has one of the lowest in the country. Its GDP per capita reached only ₱2,181 in 1979 or about 46.0 percent of the national average of ₱4,745, and only 18.2 percent that of Metro Manila, the region with the highest per capita GDP. These ratios declined during the 1970's due to the relatively slower growth rate of production in Bicol.

B. Agricultural Sector.

1. Land Area and Utilization.

The Bicol Region has a total land area of 1.76 million has. which are distributed as follows: commercial forest, 14.7 percent; non-commercial forest, 4.5 percent; brushland, 1.4 percent; openland, 7.3 percent; marshland, 21.9 percent; and cultivated land, 69.9 percent.

Some 90.6 thousand has. or 35 percent of the region's commercial forest are found in Camarines Sur. It also has the most cultivated land area with 415.5 thousand has. or one-third of the aggregate cultivated land in the region. Masbate has the largest percentage share of Bicol's non-commercial forests (43.3 percent), open land (72.5 percent) and marshland (43.3 percent). (See Table 7.)

Around 212.8 thousand has. or 83.3 percent of Albay's total land area are cultivated, the highest/^{such proportion} in the region, followed by Camarines Sur with 78.9 percent of its land area cultivated. Catanduanes, on the other hand, has the lowest percentage of its land area cultivated (54.4 percent).

Rice, coconut and abaca are the region's major agricultural crops. Sugar, corn, citrus, cacao, fruits and nuts, rootcrops and vegetables are also grown as supplementary crops. This region has more than attained self-sufficiency in rice for the past few years and has been exporting its 'surplus' grain to other regions. (Please refer to Paul F. Novick and Cesar B. Umali, Jr., Agricultural Profile and Assessment of Region V, USAID/Philippines, Dec. 1980, for a thorough discussion of the agricultural sector).

2. Major Crops.^{1/}

Palay. Palay is the staple food of the Bicolanos and constitutes the bulk of the region's agricultural produce. Based on the 1971 Census on Agriculture, hitherto the only reliable source of data on agriculture, there were a total of 132,460 farms planted to palay in the region, more than 56 percent of which grew palay as their major crop. The physical area planted to this crop totalled some 177,384 has., or 14.4 percent of the total cultivated land in the region. Only 36.6 percent (or 72,445 has.), however, of the total palay area was irrigated, mostly lowland. The average annual yield of these irrigated areas was 63.0 cavans (2.8 M.T.)^{2/} per hectare, more than two and a half times that of the unirrigated areas but nevertheless quite low, indicating that the effectiveness of the

^{1/} See Tables 8 through 18.

^{2/} A cavan in this Census was defined as equal to 44 kg. of palay.

"irrigation" was not very high and that much of this land was, for all intents and purposes, rainfed for at least a major portion of the year. (38% of the "non-irrigated" riceland were planted to upland and kaingin palay, which produced very low yields -- 0.7 M.T. per annum per ha.)

Of the six provinces in Bicol, Camarines Sur has the largest portion of its cultivated land devoted to palay (21.8 percent). In 1971, some 90,692 has. were planted to palay in this province, representing more than half of the Region's total palay area.

Coconut. Coconut is one of the primary commercial crops of Region V. Of the region's total cultivated land, roughly one-third (415,205 has.) was planted to coconut in 1971.

The average size of coconut farms in the region was 5.7 has., higher than the national average of 5.0 has. Of all the provinces in the region, Camarines Norte has the biggest average coconut farm size with 7.9 has. Average annual yield is 8 nuts per bearing tree. In 1978, the region contributed 4.5 percent of the country's total coconut production.

Camarines Sur has some 129,508 has. or 31.2 percent of Bicol's total coconut farm area, the largest/^{share} in the region. Camarines Norte, on the other hand, has the highest proportion of its cultivated land (62.0 percent or 78,855 has.) planted to coconut.

Corn. Next to palay, corn is the next most important grain crop in the region. Not only is corn grown for home consumption, it is also an important source of animal feed. There were 25,471 farms covering some 75,650 has. in the region producing corn as their major crop in 1971. Of all the provinces in Bicol, corn is most significant in Masbate where 82 percent (62,416 has.) of its total agricultural area were planted to corn in 1971.

Abaca. The Bicol region is the largest producer of abaca in the Philippines, both in terms of production and hectarage. This commercial crop is extensively grown in the provinces of Albay, Sorsogon, Catanduanes, and Camarines Sur, which collectively account for some 27,106 has. or 86.5 percent of the total area planted to abaca. Around 3.4 percent of the aggregate cultivated land in the region is planted to abaca.

The best type of abaca in the world is produced in the region. Much of the abaca is exported in the form of raw fiber or pulp and the rest is consumed locally as raw materials for the handicraft industry.

Sugar. There were in 1971 some 489 farms in the region producing sugar as its main crop, 300 of which are in Albay. Total area planted to sugar covered some 1,435 has., a mere 0.1 percent of the region's cultivated land. Expansion of area planted to sugar has been limited by unfavorable climate and inadequate processing facilities, but total sugarcane hectarage is currently believed to be around 1,760 has.

In 1976, the region produced 13,445 metric tons of sugar which were mainly utilized for local consumption and in the manufacture of confectionary products.

Rootcrops. Some 14,090 has. are planted to rootcrops, mostly camote, cassava and gabi. Albay, Camarines Sur and Catanduanes are the leading provinces in terms of hectarage, altogether accounting for some 76.5 percent of the total area planted to rootcrops in the region. In 1979, total production reached 653 thousand metric tons.

Other Crops. A wide assortment of fruits and vegetables are grown in the region, the more significant ones include tomatoes, banana, jackfruit, calamansi and pineapple. Indigenous plants which are important sources of raw materials are also grown in Bicol like bamboo, buri, and rattan, although their declining supply is increasingly being felt in the local market. Collectively, these crops cover some 144,364 has. of cultivated land in the region.

3. Livestock and Poultry^{1/}

Cattle. There were 112,400 cattle in Region V in 1979, 58.3 percent or 65,490 heads were found in commercial farms while the rest were raised in backyards. Masbate, which is well known as a leading cattle producer in the Philippines, accounted for 78.0 percent of the cattle raised commercially and 51.5 percent of the total cattle in the region. The average size of cattle farms in this province was 124.8 has., way above the national and regional average of 16.4 has. and 54.0 has. respectively.

Carabao. According to the Bureau of Animal Industry, the number of carabaos in the region has remained relatively stable from 1976 and account for roughly 8.5 percent of the national total. In 1979, there were 238,140 head, 98 percent of which were raised in backyard operations and used mainly for farming purposes. Camarines Sur and Masbate have nearly half of the total number of carabaos in the region.

Hogs. There were around 577,300 hogs in Region V in 1979, nearly 97 percent of which were raised in backyard farms. Except for a significant drop in 1977, the annual hog population in Bicol has been gradually increasing over the past few years. Albay and Camarines Sur account for almost three-fifths of the region's hog population.

Poultry. Chicken population in Region V increased by 20 percent to 3.1 million heads in 1979 from the 1974 level of 2.6 million heads. In spite of this increase, the poultry population in the region is still considered low, and only represents 5 percent of the total number of chickens in the Philippines.

^{1/} See Table 19.

4. Fishery^{1/}

Bicol's fishing grounds are considered one of the richest in the country. Among the more important fishing grounds are the Albay Gulf, Asid Gulf, Burias Pass, Lamon Bay, Samar Sea, San Miguel Bay, Ticao Pass and Ragay Gulf. The Bicol River, Lake Bato and Lake Buhi are also important in terms of municipal fishing.

Fishing is one of the major sources of food and livelihood in the region. Fishing is broadly categorized into three types, namely municipal (sustenance), fishpond (brackish) and commercial (deep sea) fishing.

A large number of fishermen (numbering nearly 79,000 in 1979) are dependent on municipal fishing. Some 28,185 or 36 percent are in Masbate and 18,944 or 24 percent are in Camarines Sur. The total number of small fishermen is believed to be understated since many small fishermen are also engaged in some other activities like farming.

Total municipal fish production in 1978 amounted to 122,332 metric tons, or 15.8 percent of the country's municipal fisheries production. Two-thirds of the total municipal catch in the region came from Masbate and Sorsogon. Production statistics from BFAR show that municipal fisheries production in Bicol is declining over time. This is attributed to the tight competition with big trawlers over limited resource base, to the rising fuel cost in the case of fishermen with motorized bancas which make them engage in other economic activities, and to/lack of modern fishing equipment. While municipal fishing is labor intensive, it is also inefficient. Average catch per fishermen is only 1.55 M.T. The traditional fishing equipment of these fishermen permits them to operate only in coastal areas near the shore and only during good weather.

^{1/} See Table 20.

In terms of commercial fishing, total production in Region V was 37,000 M.T., representing 7.4 percent of the national output in 1978. Camarines Sur is the biggest producer of fish from commercial operations accounting for 71 percent of the region's total catch from commercial fisheries. Yield per fisherman in this province was 80.50 M.T. There were 162 registered commercial fishing vessels in operation in 1975, but their number and catch are declining. Illegal trawlers, on the other hand, continue to compete for the limited catch.

Fishpond production reached 4,335 M.T. in Bicol (3.6 percent of the national output). The spawning bangus known as "sabalo" does not spawn under cultured conditions. Most fishpond operators depend on the sea for their supply of fry. It was estimated that some 25,000 has. of swampland can be converted into productive fishponds. Masbate province has the highest potential for expansion with some 16,750 has. of mangroves available for development. It is uncertain, though, what effects further conversion of mangroves to fishponds will have on spawning grounds. Some fishpond areas have been abandoned due to the peace and order situation, and some fishpond operators are slow to adopt modern techniques due to inadequate funds or credit.

5. Forestry

Forest land in Bicol covers some 339 thousand has., 76 percent of which are classified as commercial forest. Camarines Sur has the largest area of commercial forest representing some 35 percent of the region's total commercial forest area. On the other hand, Masbate has the largest area of non-commercial forest representing some 43.3 percent of the Bicol's total non-commercial forest area.

As of 1975, there were 38 sawmills operating in the region with a daily rated capacity of 332 thousand board feet. Lumber production was 46 million bd. ft., or some 7 percent of the country's total output in 1975.

As in other regions of the country, forestry specialists have noted the rapid depletion of the region's forest resources. There are 166,200 has. of open and cultivated lands in the region that need reforestation and some 35,450 has. have already been declared reforestation areas. Implementation of reforestation projects in Bicol is, however, hampered by lack of good roads and tracks leading to project areas and the continued pressure on forest lands for food and fuel.

C. Industrial Sector

1. Manufacturing.

The level of industrial development in Bicol is still insignificant. Based on NCSO statistics, although there were 5,292 manufacturing establishments employing an estimated 16,832 workers (including working owners and unpaid family workers) in Region V in 1977, the total investment and production values of these firms lagged behind those of the other, more developed regions in the Philippines. Bicol accounted for 7.1 percent of the country's total number of manufacturing firms in 1977, but only 1.5 percent and 0.8 percent of its total investments in fixed assets and its gross output, respectively.

Moreover, there are just a few large-scale industries operating in the region. These include the Legazpi Oil Company and Isarog Pulp and Paper in Albay, the Bicol Sugar Development Co. and two softdrink bottling plants (Pepsi Cola and Coca-Cola) in Camarines Sur. The others are small-scale enterprises and cottage industries, almost 90 percent of which are engaged in food processing, textiles and garment manufacturing, abaca basket and mat weaving, and handicraft making. The rest include enterprises manufacturing hollow blocks and other construction materials; small fabricated metal products; light machinery and electrical equipment; furniture, plywood and woodwork; industrial chemicals; printing materials; and several ricemills and feedmills.

In 1977, the total output of the region's listed manufacturing establishments amounted to around P531.6 million. Food processing firms accounted for 77 percent of total production value of all manufacturing establishments in Region V. Other relatively significant industries in Bicol included textiles, beverages, and paper. However, the net value-added (the difference of the value of goods and the cost of materials or supplies that are used in producing time) of the output of the region's manufacturing firms amounted to only P60.1 million, or only 11.3 percent of total gross production value. The value-added is significantly high in the local beverage and textile industries (50.0 percent and 40.0 percent, respectively, of production value) but very low in the food processing industries (only 3.7 percent).

Total expenditures on fixed assets in manufacturing for the year reached P42.2 million, of which the major investments were made in the paper (30.9 of total), beverage (21.8 percent), food processing (17.7 percent), textiles (14.0 percent) and wearing apparel (13.4 percent) industries. Though more than four-fifths of those employed in the region's manufacturing firms were in food, textile and wearing apparel industries, the highest average number of workers per establishment were in the paper and beverage industries, with 128 and 54 employees per firm, respectively.

The number of manufacturing establishments by industry in Region V appears in Table 21. No provincial breakdown is available.

2. Mining.

The minerals that generally abound in the region are non-metallic such as clay, perlite, gypsum, silica sand, limestone, marble and gravel. However, there is also significant metallic mineral deposits like gold, silver, nickel, copper and chromite ores in certain areas of Bicol, found mostly in Camarines Norte and Camarines Sur. There

are around 30 small mining firms or concessions doing drilling and/or exploration works in the region. The big Philippine Iron Mines of Camarines Norte closed down its operations for technical reasons, and the mining sector's value-added dropped from ₱25 million in 1971 to only ₱1 million in 1979, in constant 1972 prices. The net output of this sector rebounded to ₱214 million in 1980 (or ₱10 million in 1972 prices) with the opening of a new iron mine in Aroroy, Masbate. (See Table 5.)

A uranium exploration project is currently being undertaken by the Benguet-Getty consortium, covering 250,000 hectares in Larap-Paracale, Camarines Norte. The uranium-bearing ores in Larap have been estimated to contain some 200 metric tons of uranium together with economic grades of copper, molybdenum and magnetite. Exploration of possible uranium deposits is also planned for several sites in Camarines Sur, Catanduanes and Masbate.

3. Power

Most of Bicol's electric power is distributed by local electric cooperatives which get their power from the National Power Corporation's (NAPOCOR) Luzon grid. A large majority of the municipalities in the four mainland provinces have been covered by the country's electrification program. Away from Luzon, only one municipality in Masbate and four towns in Catanduanes have electricity, and it is much more expensive, since it comes from diesel generators.

Power service in the region is unreliable, however, as brownouts occur very often. It is also more expensive than the electricity cost in Metro Manila, despite the fact that the relatively lower-cost Tiwi Geothermal Plant in Albay partly supplies the power requirements of the Luzon grid. In 1981, two 55-megawatt turbines were already operating in the Tiwi plant. A total of 440-MW capacity is expected to be operational at Tiwi by 1982. Four more 110-MW geothermal power plants in Bicol (two in Tiwi and two in Manito, Albay) are projected to be operational by

1985.^{1/}

While the percentage of Bicol households supplied with electricity more than doubled between 1970 and 1978 to 17 percent, it was still well below the national average of 32 percent and the 63 percent rate found in Central Luzon. (See Table 22.)

4. Water and Sanitation

The Bicol had the third largest number of households among the twelve regions without safe water and the fourth largest without sanitary toilets. The 1970 Population and Household Census indicated that 49% of Bicol households were without safe water and 88% were without sanitary toilets. The proportion of households without safe water varied widely among Bicol provinces, from only 20% in Catanduanes to 61% in Camarines Norte and 77% in Masbate. The percentage without adequate toilets showed much less variation -- it was high in every province -- ranging from a low of 79% in Camarines Sur (which/contained the largest number of households without sanitary toilets) to 97% in Masbate.^{2/} (See Table 23.) While some improvement in water and sanitation is believed to have been achieved during the 1970's, more recently reported statistics don't seem to be comparable.

D. Service Sector

1. Commerce and Services

In 1978, there were a total of 32,255 service-oriented establishments in Bicol, 23,496 or 72.8 percent of which were engaged in wholesale and retail trade. The other service establishments included 4,019 in transportation, storage and communication, 548 firms in financing, insurance, real estate and business services and some 4,192 in community, social and personal services (See Table 24.)

^{1/} According to the National Power Corporation, Manila.

^{2/} Aspects of Poverty in the Philippines, A Review and Assessment, Report No. 2984-PH, World Bank, draft dated May 9, 1980, Vol. III, p. 60, citing its source as NEDA, Regional Development Information, 1978.

The two provinces of Albay and Camarines Sur lead all other provinces in the region in terms of number of service firms with 10,408 (32.2 percent of total) and 8,931 (27.7 percent) respectively. Catanduanes has the least number of service establishments with only 1,917, or 5.9 percent of the total.

2. Financial Institutions

Banking facilities are the more important financial institutions in Region V. There are currently some 30 branches of commercial banks, 18 of savings banks, 6 of Philippine National Bank (PNB) and 4 of the Development Bank of the Philippines (DBP), about 54 rural banks and 17 savings and loans associations in Bicol. Other financial institutions operating in the region include pawnshops, credit unions and financing corporations.

As in other regions of the country, these financial institutions are concentrated in cities and urban centers. The Philippine National Bank has its regional office in Naga City, which also functions as a branch office. Other PNB branches are located in Daet, Sorsogon and Legazpi City. The DBP has its branches in Daet, Naga, and Legazpi City. The regional offices of the Agricultural Credit Administration (ACA) and the National Cottage Industries Development Administration (NACIDA) are in Legazpi City, while the Government Service Insurance System (GSIS) and the Social Service System (SSS) are in Naga City.

3. Transportation

The Bicol region is linked directly to Manila via the national Maharlika Highway and by the Philippine National Railway (PNR). The latter maintains 3 daily passenger trips to and from Manila and Camalig, with PNR bus connections to nearby Legazpi, the travel taking about 12 hours each way (if the train is not derailed). Several large bus companies likewise operate regular Manila-Daet-Naga-Iriga-Legazpi-

Sorsogon bus runs daily, the Manila-Legazpi run taking only 10 hours. The buses plying the Manila-Tacloban route also pass through the region going to Matnog, Sorsogon where a ferryboat brings them to Allen, Northern Samar. Overland travel within the neighboring provinces and town centers is facilitated by buses, jeepneys, cars, trucks, tricycles and "skates." ("Skates" are wooden platforms usually 1.5 x 2.5 meters in size, with four ball bearings aligned to the railroad tracks, and either operated manually or powered by a light motor .

The region's major road network includes the all-concrete National Maharlika Highway, completed in late 1976, which traverses the provinces of Camarines Norte and Sur, Albay and Sorsogon for an estimated length of 407 kilometers and links the region to Manila and to Samar island by ferryboat. The highway has helped considerably in improving trading and commercial activities in Bicol, while making the travel between Manila and the region faster and more convenient. It has stimulated more traffic on and improvements of many secondary and arterial thoroughfares, especially around the major population centers. In spite of these recent developments, however, the existing road network and conditions within Region V still leave much to be desired.

As of June 1977, the total road network (excluding barangay and private roads) of the four provinces in the Bicol mainland was 3,744 kms. However, 2545 kms. or around 68 percent of these were unpaved.^{1/} In Masbate, about 79 percent of its 448 kms. of roads (excluding barangay roads) were neither cemented nor asphalted in 1980, while in the island of Catanduanes, nearly 90 percent of its 512 kms. of roads

^{1/} Based on the socio-economic profile on Region V in the Rural Enterprise Development Study for Regions V, VI and VIII done by SGV & Co., October 1980.

in 1975 were not paved.^{1/} Most of the unpaved (gravel and dirt) roads in Bicol are often impassable during the rainy season. These are generally the roads that link far-flung interior towns, mountain villages and rural barangays, where most of the people live, with the urban population centers.

Bicol's major maritime ports are in Legazpi and Tabaco, which are only 30 kms. apart and have direct linkages to Manila and Cebu. The Legazpi port, the region's principal port, has an average traffic volume of 150,000 tons per year while the Tabaco port has an average annual traffic volume of 70,000 tons. The other national ports that support Legazpi and Tabaco in meeting the maritime needs of the region include those in Jose Panganiban in Camarines Norte (a leading mineral area), Virac in Catanduanes, Masbate in Masbate province, Bulan and Matnog in Sorsogon. The last three ports also link Bicol with the provinces and islands of the Visayas. In addition, there are around 25 municipal and private ports in the region that are principally utilized as fishermen's ports. Some companies, like Legazpi Oil (Coconut oil) and Petron (petroleum products) ship their goods from their own private ports. Inter-island ships carrying domestic and foreign cargo call on the region's national ports. Similarly, ferry-boats and pumpboats are normally used for water transportation of both passengers and goods to and from the island provinces of Masbate and Catanduanes and coastal towns and villages that are not accessible by road.

The Region has five airports which are categorized as primary (Legazpi), secondary (Naga) and tertiary (Masbate, Virac and Daet).

^{1/} Based on the provincial socio-economic profiles of Masbate and Catanduanes.

Currently there are regular domestic flights to and from Manila to these airports, with the exception of Daet. The province of Sorsogon has no airport, but is serviced by Legazpi Airport, only 30 minutes away from the provincial capital. The Philippine Airlines (PAL) maintains daily flights between Manila-Legazpi, Manila-Naga, Manila-Masbate, and less frequently between Manila-Naga-Virac and Manila-Legazpi-Virac. PAL also has a regular Legazpi-Cebu flight three times a week.

4. Communications

The region has 12 telephone systems, 2 television and 16 radio stations and a large number of telegraph stations to service its telecommunication needs. But though there have been significant increases in the number of communication facilities in recent years, the communications system in Bicol remains inadequate.

All the provinces except Catanduanes have telephone systems, located in the cities and a few large towns. These are maintained by the government's Bureau of Telecommunication (BUTEL) and small private telephone operators. The telephone systems, however, are limited to servicing the areas within the respective cities and municipalities. Long-distance calls among these urban areas are not possible, and calls between them and Manila are difficult and often impossible.

Telegraph stations are more numerous and more readily accessible to a large percentage of the region's inhabitants. The telegraph facilities of BUTEL are available in all six provinces of Bicol. Private firms, such as the Radio Communications of the Philippines, Inc. (RCPI), Central Radio Communications (CRC) and the Philippine Telephone and Telegraph Co. (PT&T) also operate telegraph services in the region's cities and major towns..

Bicol's television stations are situated in the cities of Iriga and Legazpi, while the radio stations are all located in the four mainland provinces. Eleven of the 16 radio stations in the region are in Camarines Sur and Albay.

5. Social Services

As in the other less developed regions, Bicol suffers from much higher ratios of population per hospital bed and health professional than the national averages, and the latter ratios are themselves high. Bicol has twice the population per hospital bed, two-thirds more people per physician and per nurse, ^{half} and again as many people ^{employed} per/midwife as the national averages. (See Table 25.)

Although its literacy rate at 86.4 percent in 1970, its elementary school distribution (1978), and its elementary school enrollment rate (1975) were among the highest in the country, the Bicol Region's secondary school enrollment rate, at 29% (1975), was second lowest only to Western Mindanao and compares unfavorably with the nationwide average of 48%. (See Tables 26,27 and 28.) Furthermore, the quality of high school and college-education offered in the Bicol is reportedly much below the standards achieved in the Manila area.

Both public and private recreation facilities are poorly developed and scarce, and those that exist are relatively inaccessible to most of the population.

IV. Employment and Income

In 1975, some 864,000 or 40.4 percent of the region's working age population (10 years old and over) were gainfully employed. The rest were students (24.2 percent), housekeepers (23.9 percent), those engaged in non-gainful activity or with no reported activity (6.1 percent), and new entrants to the labor force (3.1 percent). Bicol accounted for

about 7.0 percent of total employment in the country in 1975. (See Table 29.)

Nearly 52 percent of those who were gainfully employed in the region were classified as self-employed or employer. This is largely because a majority of the farmers in Bicol tend their own farms with the help of household members or some hired labor. This is also the main reason why unpaid family workers constituted almost 18 percent of total regional employment. Only 30 percent of Region V's working population were considered wage and salary earners, most of whom were employed in the industrial and service sectors.

A. Employment by Sector^{1/}

Employment in Bicol is heavily concentrated in agriculture, with 572,142 or two-thirds of the total number of employed workers in 1975 belonging to this sector. Almost 90 percent of the agricultural workers (or 59 percent of aggregate regional employment) were engaged in crop production and livestock raising. The rest were engaged in fishing, forestry, logging and hunting. By comparison, 49.2 percent of those employed in the whole country were in agricultural crop and livestock production.

About 11.3 percent of the region's employed individuals were in the industry sector, with manufacturing absorbing 75 percent of the industrial labor force, or 8.5 percent of total employment in Bicol. Most of the manufacturing workers were in the textile (weaving), footwear, garments, food and wood processing industries. Construction absorbed another 3.4 percent of the total employed in the region, while mining and utilities hired the remaining 0.5 percent and 0.3 percent, respectively.

^{1/} See Table 30.

Nationwide, the whole industry sector accounted for almost 15 percent of the employed labor force in 1975, while manufacturing absorbed 10.7 percent of the total employment.

The region's service sector employed 21 percent of the working population, most of whom were in the retail trade business, in personal, community, and government services establishments and in transportation. More than 29 percent of the country's work force were in the service sector during the same year.

Among the six provinces in Region V, Masbate had the highest proportion of its employed labor force in the agricultural sector in 1975 with 80.8 percent, while Albay had the lowest at 53.8 percent. Conversely, Albay had 22 percent of its workers in the industrial sector (with 18.5 percent in manufacturing) -- the highest in Bicol -- while Masbate had a low 3.5 percent. However, in absolute numbers, Camarines Sur had the most workers in agriculture (32.8 percent of the regional total) and in services (33.5 percent). Albay had almost half the/number of the region's industrial workers.

B. Employment By Occupation.^{1/}

Farming is the leading occupation in the region, with farmers and farm workers comprising around 58.6 percent of those working in 1975. One-fourth of this group, on the other hand, were classified as unpaid family workers and only 12 percent reportedly received formal wages. Another 7.0 percent of the total workers in Bicol were fishermen, nearly three-fourths of whom were considered self-employed (with their own fishing boats and/or equipment).

^{1/} See Table 31.

Professionals, technicians, office managers and related workers constituted 4.9 percent of Region V's working population, while clerical and sales employees accounted for 6.8 percent. Around 11.0 percent of Bicol's work force in 1975 were craftsmen (carpenters, weavers, machinists, tool makers, tailors, etc.), 2.5 percent were skilled and semi-skilled workers (miners, drivers, etc.), and another 6.2 percent were service-related workers such as policemen, stevedores and housemaids.

In terms of the percentage of total employment by province, Masbate had the highest proportion of farmers (70 percent); Sorsogon and Masbate, of fishermen (both at more than 10 percent); Catanduanes, of professionals and office managers (7.6 percent); Camarines Norte, of sales and clerical workers (9.3 percent); and Albay, of craftsmen (21.4 percent).

C. Family Income Levels.^{1/}

There were around 517,700 families in the Bicol region in 1975, and their total income amounted to ₱2.216 billion. Some 87,200 families, or 16.8 percent of the total number of Region V families, were in the urban areas. Rural families numbered 430,500, or 83.2 percent of the total. The average income per family in Bicol was ₱4,280, or just three-fourths the average family income of ₱5,840 for the entire Philippines in 1975. Average earnings per urban family in Bicol was ₱5,745, or roughly 70 percent of the national average income of an urban household. The income of Region V rural families on the average amounted to ₱3,984, or 84 percent of the average earnings per rural families in the ^{whole} country that year.

Among the six Bicol provinces, Camarines Norte had the highest average family income level (₱5,036) and highest average income per rural family

^{1/} See Table 32.

(P4,967). Catanduanes and Sorsogon, however, had the highest average income per urban household, both with more than P7,000.

In general, families in Albay, Camarines Norte and Camarines Sur had average incomes relatively higher than those in the other three provinces. This was due largely to the higher average revenues of rural households in these areas. Rural families in Albay and Camarines Norte had average incomes that were greater by some 4 percent than the national average family income in rural areas, and about 24 percent more than the regional average. By contrast, rural households in the poorest, island provinces of Catanduanes and Masbate had average incomes amounting to only P2,340 and P2,446, respectively, (based on an average family size of six members, this was roughly P400 per capita), or only about 50 percent of the average 1975 income per rural household in the Philippines.

D. Poverty Incidence and Distribution.

According to the recent IBRD study of poverty in the Philippines,^{1/} some 286,400 families, or 55.4 percent of the total families in Region V, were living below the poverty line in 1975. This was an increase from 48.8 percent in 1971. (The 1975 poverty line was calculated as P827.4 per capita or around P4,964 per family in rural areas and P1,103.2 per capita or P6,619 per family in urban areas.) The nationwide incidence of poverty was 45.3 percent. The poor families in Region V constituted 9.2 percent of the country's poor in 1975, even though the region accounted for only 7.6 percent of the nation's population.

Of the 13 regions in the country, Region V has the third highest incidence of poverty among rural families, 56.4 percent, after Region X

^{1/} World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, Report No. 2984-PH, Vols. I and II, December 1, 1980.

(Northern Mindanao) with 75.3 percent, and Region VII (Central Visayas) with 62.6 percent.

The poverty incidence in the region's urban areas was only slightly lower at 50.4 percent. There were 43,900 poor families in Region V's urban areas, the majority of whom are informal service sector workers. Bicol's urban poor comprised 5.2 percent of the country's poor urban households in 1975.

Nearly 85 percent of the poor families in Bicol area were in the rural areas, composed mostly of families of small farmers (either on coconut farms, irrigated or rainfed rice lands, or upland rice and corn farms), artisanal fishermen, and landless agricultural workers.

In 1971 about 294,000 or almost 59% of all families in the Bicol depended on either farming, farm labor or fishing as their main source of income. These three occupations suffered the highest incidence rates of poverty: 80% for farm laborers, 64% for farmers and 56% for fishermen, compared with only 24% for the other occupations reported. As a result, these three occupational categories accounted for over three-fourths (78%) of the 242,100 families below the 1971 poverty line of ₱500 per capita: 63% were farmer, 9.3% were farm laborer and 5.7% were fishermen families. (See Table 33.) Taking the 174,000 poor farmers and farm laborers together, 62% of them depended mainly on rice and/or corn farming, 26% on coconuts and 12% on other crops. (See Table 34.) The next section will describe the immediate causes of poverty as they directly impinge upon the families in these three groups.

V. The Causes of Poverty in Bicol

The causes of poverty are often described as a vicious circle; so interrelated are they that any attempt to deal with poverty by attacking one cause at a time is not likely to succeed. So many different influences

are part of the general problem that a comprehensive discussion of its causes is difficult without sacrificing clarity to a maze of detailed redundancies. Economic analysis begins with the "art" of selecting only the more significant factors for discussion, ignoring those considered to have less influence. Selection of the more relevant variables is partly a function of collective judgment, based on the "state of the art" in development research and analytical methodology, but it risks the omission of constraints more important in the particular circumstances under consideration than in the generalized cases upon which the "collective judgment" has been formed.

This section attempts to provide a comprehensive framework for the analysis of poverty in the Bicol. It starts with the three larger identifiable groups of poor families -- farmers, farm workers, and sustenance fishermen -- and looks at the Bicol economy at the household level, first identifying the primary factors behind their low levels of income and quality of life. Secondly, we shall trace the chain of causation behind each of these primary factors far enough to provide policy and project handles for government planning purposes. The causal chains presented here are not complete. A more detailed analysis will be necessary for any particular project or policy intervention actually considered.

Thirdly, we attempt to summarize the final causes and to look back through the chain at the multiplicity of their effects, identifying some targets for government intervention.

Poverty, as used in this paper, is broadly defined to encompass more than simply low economic income. Although the emphasis is certainly on low economic income as its major component, poverty also includes poor health and nutrition status, low educational attainment, overly crowded living conditions and inadequate recreational opportunities.

In the discussion below, those factors peculiar to each poverty group are analyzed first, and a fourth subsection considers some factors common to the impoverishment of all three groups, namely unsanitary living conditions, the lack of social services and amenities, and, most importantly, the lack of non-farm employment opportunities. The major contributory causal factors, so designated for the relative importance and multiplicity of their effects and summarized in Part VI, below, are identified in this Part by underlining.

A. Causes of Poverty Among Farmers

There are three primary conditions affecting Bicol farmers that result in low income from farming: 1) small farm size, 2) insecurity and the high cost of land tenure, and 3) low profitability of farming per hectare. The last of these can be best broken down further into its three root causes for further analysis: a) low productivity per hectare, b) high cost of inputs, and c) low farmgate prices for outputs. We shall consider each of these in turn.

1. Small farm size

As one would expect, ^{operating} farm size has been found to be highly correlated with poverty.^{1/} Bicol shares this problem with the rest of the Philippines, with an overall average (1971) farm size of 4.1 hectares compared with 3.6 nationwide. It was slightly larger than the national average mostly because of the higher proportion of upland coconut farmers in the Bicol, the minimum viable size of which is larger than for rice and corn. The average size of farms that depend mainly on rice and/or corn was almost the same in Bicol as elsewhere, 2.7 has. compared with 2.8 has. nationwide. (See Table 8 for detailed comparison by crop.)
 /These comprised only 45% of all Bicol farms, however, compared with 64% nationwide. The average size of farms depending mainly on coconut was slightly larger in Bicol (5.7 has.) than nationwide (5.0 has.), and almost

^{1/} World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, Report No. 2984-PH, Washington, D.C., December 1, 1980, Vol. II, p. 62.

one-third (32.7%) of all Bicol farms fell into this category, compared with only 18% nationwide.^{1/} (See Table 8.)

The prevalence of small farms in the Philippines arises primarily from the pressures of a growing population on a fixed arable land base. There is very little arable land left unutilized in the Bicol or anywhere else in the Philippines. Rapid population growth, itself a product of declining death rates, due to medical advances, and continuing high birth rates, following traditional social and cultural norms, has combined with a notable lack of non-farm employment opportunities to cause a continual fragmentation of farms. Inheritance customs and laws provide for a division of land among the heirs of each generation. Land is also used as a store of wealth, and small plots of a farm may be sold off from time to time to meet family emergency or education expenses. The primary causal factor, however, is the pressure of population growth without an effective escape valve in the form of either unexploited lands or adequate non-farm employment opportunities. The reasons for the latter will be discussed in Section V.D.3 below. As can be seen in Table 1, the annual rate of natural population increase in the Bicol was 2.5% between 1960 and 1970, although it apparently declined to 1.7% between 1970 and 75, if the data can be believed.

2. Insecurity and cost of tenure

In the 1971 Census of Agriculture some 30% of all Bicol farms were reportedly operated by full tenants, while another 9% were operated by part-owners. The 1971 Family Income and Expenditure Survey (FIES), on the other hand, reported 54% of all Bicol farmer families as full tenants

^{1/} 1971 Census of Agriculture, National Census and Statistics Office (NCSO), NEDA, Manila.

and another 3% as part-owners of the land they tilled.^{1/} According to the Census 89% of all tenanted farms were operated on a share-cropping arrangement, with landlords commonly receiving between 30 and 50 percent of the annual harvest, depending in part on how much of the operating costs or capital investment (especially in the case of coconut farms) he also shared.

The Census data indicate that the incidence of tenancy among all farms was higher in the four mainland (Luzon Island) provinces, while it was significantly lower than average in the island provinces of Masbate and Catanduanes (particularly the latter, where it was only 6%). Almost two thirds of all tenants in the region were found in the two mainland provinces of Albay and Camarines Sur (See Table 11.)

The rate of tenancy was higher among palay and corn farms, followed by coconut, than among farms devoted to other crops,^{2/} and these three crops accounted for 85% of all tenanted farms in the Bicol, with palay farms accounting for 46%, corn 12% and coconut 26%. The composition of tenancy varied considerably among provinces, however, with the majority of tenants in Albay and Camarines Sur operating palay farms, in Masbate corn farms, and in Camarines Norte coconut farms. In Sorsogon 47% of the tenants operated coconut farms and another 38% palay; while in Catanduanes full tenants were hard to find on farms of any type. (See Tables 12 and 13.)

The Operation Land Transfer and Leasehold programs implemented in the 1970's on rice and corn lands have reduced tenancy to some extent

^{1/} It is not known why the 1971 FIES reported only 75,000 (rounded) Bicol farmer owners, or 31% of all farm families, while the Agricultural Census, conducted the same year, reported 131,548 Bicol farms operated by full owners, or 59% of all farms. See Tables 11 and 33.

^{2/} Except for sugarcane farms, which posted the highest tenancy rate of all at 55%, but the total numbers of these farms were very small, comprising only 0.2% of all Bicol farms. Of the big three, 42% of palay farmers were full tenants, compared with 32% of the corn farmers and 24% of the coconut farmers. (See Table 13.)

and reduced the insecurity and cost of tenure for the remaining rice and corn tenants. Of the 91,522 rice and corn tenants identified in a 1976 survey by the Ministry of Agrarian Reform (MAR), 27,627 had received Certificates of Land Transfer (CLT's) and 42,070 had executed written leasehold contracts by October 1980, or 76% of the total. The remaining 24% were eligible to receive CLT's and presumably would in the near future. (See Table 41.) Nationwide, about 40 percent of the rice and corn tenants have been issued CLT's.

The other 60 percent have executed written leases to secure their tenure status and ostensibly to reduce their rent to 25 percent of their annual harvest. CLT's are not land titles, however. The former tenants receive land titles only after years of amortization payments have been made. Written leasehold arrangements are often supplemented by verbal provisions raising rents beyond legal rates, as well, although the extent of this and other subterfuges of the land reform program are not really known.

It will take a number of years for the effects of the land reform program to make themselves felt on production and income by raising investment incentives for a significant number of farmers and by providing some of them the secure collateral (a clear title to the land) required for production credit. Coconut and other crop tenants, including most of those in the upland areas, have not yet been included in the land reform program.

The primary force behind insecure land tenure and rising rental rates is the increasing competition among landless and near-landless farmers for access to a fixed amount of farmland. The chief factor creating this competition is, as with the continual fragmentation of farms, a rapid rate of population growth with neither an outlet in the form of unexploited arable land that can be brought under cultivation nor the alternative of non-farm employment opportunities. See Section V.D.3. for a discussion of the latter.

Contributory factors include laws and legal customs protecting private property ownership in perpetuity, however inequitable its distribution might be, and permitting tenancy with insufficient legal protection of tenure security, especially in upland areas. Another one is the traditional social use of farm ownership by non-farmers as a store of wealth and a source of social prestige rather than primarily as an economically productive asset.

3. Low Profitability of Farming per Hectare

This pervasive problem area can be discussed in terms of its three component causes: a) low productivity per hectare, b) high cost of inputs, and c) low farmgate prices for outputs.

a. Low productivity per hectare

Agricultural productivity in the Philippines has long been among the lowest in Asia, and it remains quite low^{1/} in spite of a significant improvement in rice paddy productivity since 1975.

Within the Philippines itself the agricultural productivity of the Bicol has consistently been reported as among the lowest two or three of the twelve crop-producing regions. A NEDA study placed Bicol at the bottom of the list in terms of 1971 value-added per hectare in agriculture, fisheries and forestry and second lowest in value-added per worker. World Bank calculations based on the

^{1/} In terms of paddy yield per hectare the Philippines ranked third lowest among 20 developing Asian countries between 1971 and 1975. It rose dramatically to a median position in 1978 and 79, but its productivity remained about 24% below the developing Asia average (2.0 metric tons per hectare in 1979 for the Philippines compared with 2.6 for all Asia in 1979).

Its yield of maize per hectare kept the Philippines in third or fourth position from the bottom on a list of 18 developing Asian countries from 1970 through 78. It rose to sixth position from the bottom in 1979 with 1.0 metric ton per hectare, compared with an average of 2.1 M.T. for all developing Asian countries. --Key Indicators of Developing Member Countries of ADB, Asian Development Bank, Manila, Oct. 1980, Tables 14 and 16.

1971 Census of Agriculture placed Bicol third lowest among the twelve regions in gross value of crops and livestock, both per hectare and per capita.^{1/} Between 1971 and 1979 the average annual rate of real growth in agricultural, fishery and forestry value-added was only 3.4% in Bicol, compared with 4.9% for the nation as a whole.^{2/}

Looking at the 1971 record of the three main Bicol crops, palay productivity per hectare was slightly higher than the national average on farms with irrigation facilities, especially in Albay and Sorsogon, but lower on farms without irrigation, both for lowland and upland palay. Camarines Sur, with 39% of irrigated and 46% of all non-irrigated palay farms in the Region, had lower than average yields for both lowland and upland palay, irrigated and non-irrigated; but lowest palay yields of all were posted in Masbate. (See Tables 15 and 16.)

Masbate farmers dominated the Region's production of corn, comprising 42% of the farms reporting corn production and 62% of the effective corn crop area planted in 1971, and they harvested the lowest yields of all: 7.7 cavans^{3/} per hectare compared with 14.7 nationwide. The Bicol regional average was only 9.5 cavans with all three of the region's major corn producers, Camarines Sur and Albay in addition to Masbate, posting low yields. (See Table 17.)

1/ Aspects of Poverty in the Philippines: A Review and Assessment, Report No. 2984-PH, World Bank, Dec. 1, 1980, Vol. II, Table 4.1, p. 60. Bicol value-added per hectare was only half of the national average.

2/ "The Regional Income Accounts of the Philippines, CY 1971-1979," NEDA, Manila, Revised Nov. 1980, calculated from Table 2.2.2.

3/ A cavan of corn equals 57 kilograms.

With respect to coconut production Bicol productivity was also inferior in 1971, with the number of nuts harvested per hectare only 71% of the national average. Not one Bicol province matched the national average of 1,990 nuts per hectare, and Camarines Sur, the Region's largest producer with about a third of its hectarage and trees, brought in only 900 nuts per hectare, mostly due to an extremely low number of nuts per bearing tree. (See Table 18.)

Five key factors can be identified as contributing directly to low productivity on Bicol farms: (1) poor technology and land use practices, (2) insufficient water control, (3) insufficient credit, (4) frequent weather damage, and (5) the fact that some arable land is held idle by its owners.

1) Poor agricultural technology such as the excessive reliance on monoculture, suboptimum use of animal husbandry, farming practices leading to ecological damage to productive land and aquatic resources, acceptance of preventable and unchecked plant and animal diseases, and continued use of low-yield varieties and techniques is widespread. This can often be attributed to a lack of knowledge or understanding of more productive technology, insufficient credit for the new investments required, and/or inadequate incentives to make the appropriate investments of time and money. Poor incentives to invest can in turn often be laid to insecurity of tenure (See V.A.2 above), to the generally low profitability of farm activities, and to the inhibiting attitudes of (a) risk aversion and reluctance to change on the part of farmers and of (b) a (not entirely groundless) fear among landlords (especially of coconut farms) that such new technologies as intercropping and more livestock raising by tenants would

result in reduced landlord returns from the primary crop (whether due to the consumption of part of the primary crop by livestock or less time devoted to the care of the primary crop by the tenant).

2) Insufficient water control refers to the general lack of effective dry season irrigation (even on land supposedly "irrigated"), to poor drainage and flood control and, in some areas near the coast, to salinity intrusion. It can generally be attributed to a lack of local infrastructure in the form of water control facilities.

3) Insufficient credit for farming or animal husbandry is due to the high cost (at usurious interest rates) of non-institutional credit from middlemen and local moneylenders and to the general unavailability of institutional credit in rural areas. Government credit programs in the agricultural sector have been limited primarily to irrigated rice and corn farmers, and the larger numbers of rainfed farmers have been left out. In addition, the stringent real property collateral requirements for most forms of institutional credit effectively eliminate all but the farmers who hold clear land titles as potential clientele.

4) Weather damage in the Bicol is incurred at unpredictable intervals from the high winds and floods associated with typhoons. Since the Bicol Region is on the "typhoon path" it occasionally suffers a direct hit, with considerable wind damage to annual crops and perennials, although more often it suffers a near miss with some flood damage in lowland areas and less serious wind damage. The flood damage could be reduced in many areas with more local infrastructure providing faster drainage.

5) The fact that some arable land is held out of production by its (usually absentee) owners seems to be due to a fear of redistribution

to tenants if it is rented out or if squatters are tolerated, coupled with the traditional practice of holding land even for zero or small economic returns, as a store of wealth and a source of social prestige (instead of selling it for the capitalized value of its productive potential). There also appears to be little effective tax disincentive for idle land holdings.

b. High cost of inputs

The local price per kilogram of nitrogen fertilizer in 1971-2 was 22% higher in the Bicol than in Central Luzon and, since the price of palay was lower, the fertilizer/palay price ratio was 48% higher at 3.1, compared with 2.1 in Central Luzon. This largely explains why Bicol farmers utilized the least amount of fertilizer per crop and achieved yields averaging only 68% of those in Central Luzon (1969-71), despite the fact that they reported the highest percentage of palay area under improved varieties (73% versus 62% in Central Luzon and a 56% nationwide average).^{1/}

Within the region input prices at farmgate also vary considerably. A 1974 survey in Bula and Minalabac municipalities of Camarines Sur Province found that farmers whose land were some distance from a good road or navigable river had to pay as much as P4.50 to transport a 50 kg. bag of fertilizer from the market, whereas the cost to those near a good road was only P1.00.

Cost of other farm inputs are also higher than in more developed regions of the country -- items like pesticides, electricity, feed, chicks, and credit.

^{1/} Sharing in Development, International Labor Office, Geneva, 1974, pp. 80 and 106.

The rising world market prices for petroleum products has affected farmers worldwide by increasing costs of gasoline, diesel fuel, diesel-generated electricity and fertilizer. Aside from this, the relatively higher input costs faced by Bicol farmers stems mainly from high transport costs and a lack of input production in Bicol itself.

High transportation costs are basically attributable to the relative remoteness of many areas together with the poor operating conditions and inefficiencies of the primary modes of transportation. These relative cost disadvantages are exacerbated by, though not themselves caused by, the higher prices for gasoline and diesel fuel of recent years. Much of the region is rugged and mountainous or swampy lowland, and two provinces are separated from mainland Luzon by open seas. The needed transportation infrastructure is frequently lacking or in very poor condition.

Farm-to-market roads are scarce and most of those that exist are in such poor repair that vehicular traffic is difficult, time-consuming and expensive (costly in terms of capital-use and gasoline due to low speeds and maintenance requirements arising from high rates of wear and tear) and/or they are not passable much of the year due to muddy surfaces or missing bridges.

Port facilities and railway terminals are mostly antiquated, run-down and generally inadequate, and high shipping costs are attributable to high handling costs and inefficiencies arising from (1) inadequate and inefficient storage and transfer facilities, (2) monopoly premiums imposed by longshoremen unions, and (3) a high rate of pilferage during shipment. Frequent delays are encountered due to derailments and other problems on the dilapidated railroad bed and to engine and

equipment failures of the antiquated inter-island shipping fleet.

Lack of input production closer to home is mostly related to the generally slow growth of manufacturing investment in Bicol, the reasons for which are discussed in Section V.D.3. below.

c. Low farmgate prices for produce and livestock.

The 1971-2 price of palay in Bicol was 9% less than in Central Luzon according to one study,^{1/} 18% less in another,^{2/} and in both cases it was the second lowest price quoted on the list of twelve regions. Prices received at farmgate for other crops and animal products are also lower than elsewhere, especially perishable products or those that require special handling in transit. Within the region the cost of moving a 50 kg. bag of palay or any other product from farm to market increases significantly the farther away from a good road is the farm, and the net price received by the farmer is reduced accordingly. In 1974 this differential often amounted to between 5 and 10% of the market value of a bag of palay, and, in view of the relative remoteness of most of the coconut farms, its effect on farmgate price of coconut in the Region is probably even greater. This is particularly troublesome for coconut farmers during times like the present when world market prices for coconut products are depressed.

Five key factors can be identified that depress farmgate prices: (1) low quality of farm products, (2) high cost of transportation to market, (3) inadequate storage, processing and marketing facilities, (4) excessive profit margins of middlemen, and (5) artificially depressed prices.

1/ Ibid., p. 80.

2/ Aspects of Poverty in the Philippines, A Review and Assessment, Report No. 2984-PH, World Bank, draft dated May 9, 1980, Vol. II, p. 115.

- 1) Low product quality can be attributed to the lack of certified seeds, the lack of drying facilities (especially for rice and abaca) and their cost, small breeds of swine, cattle and poultry, and low-protein diets for livestock and poultry. The latter results from the high cost of seed mentioned earlier and the non-market orientation of the predominant backyard producers, who typically raise livestock and poultry primarily for personal consumption or as a savings mechanism for family emergencies and lack knowledge about (and/or the incentives to take advantage of) the profit potential and technology of quality livestock and poultry production.
- 2) The high cost of transportation to market arises from the same causes discussed in Section V.A.3.b. above, primarily due to inadequate transportation infrastructure. In addition, there is a serious lack of refrigerated transport vehicles for perishable plant and animal products.
- 3) Inadequate storage, processing and marketing facilities result from insufficient incentives for private investment, discussed further in Section V.D.3 below, from the lack of organizations and traditions of collective action among potential users, and from the unavailability of credit for such purposes.
- 4) Excessive middleman profits stem partly from a lack of access to timely and relevant market information by farmers, a situation that allows shrewd middlemen with such access to exploit price differentials to their own advantage, and partly from the monopsonistic control locally-based middlemen are able to exercise over remote areas, due to the high cost and difficulty of transportation in and out (inadequate transportation infrastructure), and to collusion among middlemen in dividing supply areas and controlling prices paid. The lack of viable farm marketing organizations contributes to this situation, since the bargaining power of any one individual farmer is weak.

5) Since world market prices for agricultural export commodities fixed in dollars, peso prices are artificially depressed by an overvalued peso exchange rate, which is buttressed by high protective tariffs on consumer imports and heavy borrowing from abroad. Other pricing policies have reduced returns to farmers, also, such as price controls on major food items, including rice, and the stiff levy on coconut products.

B. Causes of Poverty Among Farm Workers

The key factors responsible for poverty among families mainly dependent on farm wages for their income are obviously 1) the low daily wage rates resulting from insufficient farm demand for available labor and 2) the marked seasonality of most farm work itself, resulting in many idle days for which no wages are earned.

i. Insufficient farm demand for available labor and low daily wages.

Low wages and wage-earner income result from an excess of labor supply compared with productive opportunities for employment. The labor surplus characteristic of rural Bicol is marked and is intensifying. Agricultural wages in the Bicol were reportedly ₱5.69 (U.S. \$0.80)/day during the 1974-5 crop year, or less than half the 1974 average daily wage rate for common laborers in Manila of ₱11.54 (U.S. \$1.63). If adjusted by the cost of living differential, however, the Bicol wage was equivalent to ₱8.89 (U.S. \$1.26) earned in Manila, or 23% less than the Manila rate for common labor.^{1/}

As in the rest of the country, real agricultural wages have dropped significantly in the Bicol over the last two decades, by 40% between 1957 and 1974. During this same period real wages in Manila for common labor dropped by 33%, mostly after 1970.^{2/}

^{1/} Abrera has estimated the 1972-May 1974 average rural cost of living deflator for Bicol, vis-a-vis Manila, to be .64. --Ma. Alcestis S. Abrera, "Philippine Poverty Thresholds," in Mahar Mangahas, ed., Measuring Philippine Development, Development Academy of the Philippines, 1976, p. 240. Regional agricultural wages and the Manila rates for common laborers are reported in World Bank, Dec 1, 1980, op. cit., Vol. II, pp. 170-3.

^{2/} World Bank, ibid., pages 169 and 173.

Continued net out-migration from all six Bicol provinces is additional evidence of a low and declining demand for labor, relative to a growing supply. (See Part II, above.)

Farm requirements for wage labor are limited by the generally low profitability of farming resulting from low productivity per hectare, high input costs and low farmgate prices as discussed in Section V.A.3. above. Excessive labor availability in rural areas arises from a rapidly growing population and labor force on a fixed arable land base already saturated with workers, coupled with the lack of non-farm employment opportunities discussed in Section V.D.3. below.

2. Seasonality of farm work

In addition to low and declining daily wages and employment opportunities, Bicol farm workers, like those in other regions, suffer from the pronounced seasonality of the demand for their services. The vast majority of farms are in operation for only a small portion of the year. In 1971 about 71% of all Bicol farms were in operation for no more than 6 months, and only 14% provided employment for more than 8 months. Nor are hired employees kept on for the duration, either, since many of the on-going tasks are performed by farm family workers themselves, with hired hands brought on only during period of peak labor demand. (See Table 35 A and B.)

The average number of Bicol farm workers employed in the third quarter of 1971 was 27% higher than in the second quarter, with the most pronounced seasonality found in Catanduanes and the least in Sorsogon. Bicol farm workers are not nearly so handicapped by the seasonality of farm employment as is the average worker nationwide, however, where the quarterly differential was 78%. In every province, though, 2 to 4 times as many farm workers were listed as temporary or occasional employees

(meaning they work less than half the working time during the crop year) than as permanent employees (those who work at least half the crop year working time). These data are recorded by farm, however, and it is customary for farm workers to work for short periods on each of a number of different farms. (See Table 36.)

The seasonality of farm demand for labor is naturally related to prevailing weather patterns and annual crop cycles, over some of which man has little control. It is accentuated, however, rather than alleviated in the Bicol by an over-reliance on monoculture cropping patterns, little use of animal husbandry potentials, and a general lack of efficient water storage and control for dry season irrigation. Chief contributory causes here seem to be a lack of useable knowledge of the more productive year-round technology on the part of farmers, lack of water control and irrigation infrastructure and facilities, and insufficient credit or capital for such investments.

C. Causes of Poverty Among Sustenance Fishermen

The primary factors contributing to poverty among fishermen are three: 1) the small fish catch per fisherman, 2) low fish prices at beachhead or wharf, and 3) the marked seasonality of the catch.

1. Small fish catch per fishermen.

The annual fish catch per "municipal" or "sustenance" fisherman in the Bicol is very small and believed to be declining, reportedly averaging only 1.55 metric tons in 1978, the gross value of which was around ₱8,200 (\$1093). The recorded catch per fisherman varied from only 310 kilograms in Albay and 670 kilograms in Camarines Sur to 3490 kilograms in Sorsogon. The average catch per "commercial" fisherman was not much larger than this, at 1.97 M.T. (although its gross value was almost double, at ₱15,759, that of the municipal fishermen), except in Camarines Sur, where the larger boatowners brought in an average of 80.5

M.T. each, primarily from the rich fishing grounds of San Miguel Bay. In Masbate and Sorsogon the catch and gross value of the average commercial fish catch were reportedly much less than that of the municipal fishermen. (It is not known how much of this is an incorrect appearance attributable to poor data.) Fishpond production per operator outstripped both municipal and commercial fishing both in terms of size of production vs. catch and its gross value, except in Camarines Sur and Catanduanes, where commercial fishermen fared better. (See Table 20.)

Bureau of Fisheries and Aquatic Resources (BFAR) records indicate a decline in total catch by municipal fishermen between 1976 and 1978, primarily in Camarines Sur, while commercial fish production increased.^{1/}

Several reasons can be identified for the relatively small and reportedly declining fish catch per fisherman: (1) inefficient boats and equipment, (b) over-fished waters, (c) inappropriate and often destructive fishing methods, (d) increasing pollution of prime fishing areas, and (e) destruction of mangrove swamp spawning grounds by fishpond developers.

The inability of so many fishermen to purchase motorized boats and better equipment is due largely to a lack of capital and inadequate credit mechanisms for such purposes. The credit problem is compounded by the generally poor credit behavior of small fishermen themselves, whose payback record on previous loans is one mostly of delinquency and default.

Prime fishing grounds are generally overfished due partly to increasing competition from commercial trawlers often assisted or subsidized through government programs to promote exports, but partly also to competition

^{1/} See Novick, Paul F., and Cesar B. Umali, Jr., "Agricultural Profile and Assessment of Region VI - Bicol," USAID/Philippines, Manila, Dec. 1980, pp. 66-7.

among the growing numbers of sustenance fishermen themselves. The latter results from rapid population growth in fishing villages in the context of limited employment opportunities both in agriculture (see Section V.B.1. above) and off-farm (See Section V.D.3. below).

Fishing methods in common use often destroy fish spawning areas, fingerlings, or habitat, sometimes out of lack of knowledge of the ecological effects as in the case of the destruction of tabios eggs in Lake Buhi by the Sakag method of scraping the bottom, and sometimes out of disregard for the general welfare as with the continued use of such illegal methods as dynamiting, which is often financed by leading members of the community.

2. Low prices at beachhead or wharf.

Despite their label as "sustenance" or subsistence fishermen, two-thirds of the municipal fishermen sell over 70% of their catch.^{1/} The prices received obviously affect their incomes, and these are thought to be unduly low for a number of reasons. One study indicated that prices of most fish varieties fluctuate within an average range of 10-20% annually due to seasonal variations in supply, with municipal fishermen selling most of their catch during the lower part of the cycle.^{2/} Small fishermen are also at a disadvantage in a marketing system "characterized by too many middlemen and market/credit tie-ups... It has been estimated that as much as 80% of the profits from fishing might go to middlemen and only 20% to fishermen."^{3/}

Low fish prices stem from four main factors affecting the fish trade:
(a) the seasonality of the catch and resulting saturation of local markets

1/ World Bank, Dec. 1, 1980, op. cit., Vol. II, p. 73.

2/ Rondon, Mariano V., "Seasonal Price Variations of Selected Fish Species in the Philippines, 1970-1977," Philippine Agricultural Economic Review, Bureau of Agricultural Economics, June 1979, pp. 27-35.

3/ World Bank, Dec. 1, 1980, op. cit., Vol. II, p. 73.

during the peak fish seasons, (b) the lack of ice plants and cold storage facilities to keep temporary surpluses until prices are higher, (c) the high cost of transportation to larger markets, and (d) excessive profit margins by middlemen.

The lack of such marketing infrastructure as ice plants and cold storage facilities is due in part to the cost and unreliability of power, the scarcity of capital or credit for such investments, and the lack of user cooperative organizations to build and operate them.

The high cost of transportation (as discussed in Sections V.A.3.b. and c. above) is due principally to the remoteness of most fishing villages and the poor condition or complete lack of road infrastructure reaching them, exacerbated by high gasoline and diesel fuel prices. The lack of refrigerated transport equipment is an important contributory factor reducing the beachhead value of fish.

Excessive middleman profits are made possible by their monopsonistic control of many fishing areas due to their remoteness, the high cost and difficulty of transportation in and out (lack of transportation infrastructure) and to effective collusion among middlemen to keep purchase prices down, resulting in a lack of alternative market channels.

3. Seasonality of catch.

Off-shore fishing is constrained by the seasonal migratory patterns of the fish and by weather. There are many days in the year, particularly during the typhoon season, when the seas are too rough for small fishing boats. For example, there were a total of only 156 fishing days in Camarines Sur between July 1977 and June 1978, of which 59 were during the lean months and only 107 were during the peak months. Only 46% of the fishermen surveyed operated more than 150 days during

that year.^{1/}

The seasonality of fish catch is caused by the natural biorhythm of fish school migration and the annual weather patterns of stormy weather, which makes small-boat fishing hazardous or impossible much of the year.

D. Causes of Poverty Among All Three Groups

Among the causes of poverty affecting all three of the poor groups discussed above are three of some importance: 1) unsanitary living conditions, 2) the high cost, inaccessibility or lack of basic social services and amenities, and 3) the lack of non-farm employment opportunities. The contributory causes and constraints of the first two are discussed briefly below, while considerably more space is devoted to the third, in view of the overriding and pervasive effect of underemployment and unproductive employment on income and poverty in the region.

1. Unsanitary Living Conditions.

The water and sanitary conditions in Bicol are described in Section III.C.4. above. Parasitic infestation and water-borne, enteric diseases are endemic in the region. The resulting poor health status and high mortality rates are significant components of poverty, reducing the quality of life of the family. Morbidity also reduces the ability of the farmer, fisherman or worker to perform his job productively and the ability of school children to learn, thus reducing their future productivity. Some of the contributory causes of these conditions are known.

Residents of rural barangays, comprising 83% of the Bicol population, typically lack knowledge about the causes of disease and the importance of sanitation and do not have adequate sanitary infrastructure and facilities. Even where people are better informed, they lack capital

^{1/} Laopao, Manuel L., and Rizal E. Diapo, "Factors Affecting the Level of Coastal Fish Production in the Philippines," Philippine Agricultural Economics Review, Bureau of Agricultural Economics, June 1979, pp. 36-60.

to construct desirable water, drainage and toilet facilities and seldom possess the spirit or traditions of community organization needed to build, operate and maintain such infrastructure and facilities effectively.

2. Cost, Inaccessibility or Lack of Social Services and Amenities.

The quality of life of a family, and therefore its relative poverty situation, is in part determined by the availability and quality of basic social services providing health care, preventive health and family planning information, education and recreational opportunities.

The scarcity and/or poor quality of secondary education and basic health services is most pronounced in rural barangays, and it is due primarily to the low levels of budgetary allocations to the responsible line agencies to build and operate the needed social infrastructure facilities. While this situation has improved somewhat during recent years, with government programs increasing education, health, family planning and nutrition services available to many barangays, it will take some time before the impact of these interventions can be measured. The substantive content of much of the public education curriculum is still poorly designed to help the children of poor families cope with the technology and structure of the modern economy and take advantage of income-earning possibilities, although there has been some improvement in recent years. The quality of instruction is also poor, with textbooks scarce, facilities inadequate, and antiquated lecture and rote memory methods of instruction still in common use. The cost of obtaining better quality education and health care in the private sector is beyond the means of most rural families, and these costs are exacerbated by difficult and costly transportation to and from the larger population centers due to inadequate transportation infrastructure. Recreation facilities are also sadly lacking in the region, and those that do exist are mostly located in the major cities and towns and are therefore costly and difficult for most rural folk to reach and utilize.

3. Lack of Non-Farm Employment Opportunities

The high rate of growth of the rural labor force places increasing pressure on fixed productive resources, such as land and fishing areas, and intensifies the competition among wage-earners for available jobs. The results are a continuing fragmentation of farm holdings and upward competitive pressure on farm rental rates, declining fish catches per fisherman, and lower real wage rates for labor--all of which will steadily exacerbate the impoverishment of the three main poverty groups.

The major potential outlet for this growing surplus of rural labor is the more rapid generation of productive non-farm employment opportunities, both in Bicol itself and/or elsewhere. The following discussion will consider first the reasons for the slow growth of manufacturing investment and employment in Bicol as the more desirable alternative and, secondly, the major reasons for the slow growth of employment opportunities in the Metro-Manila area, to which many more job-seeking Bicolanos would migrate if more jobs were available, thereby relieving the pressure on the limited jobs and resources at home.

a. Slow growth of manufacturing investment and employment in Bicol.

There seem to be four main areas of difficulty that contribute to the slow growth of manufacturing investment and employment in Bicol: (1) a lack of entrepreneurial attitudes, skills and talent, (2) the lack of and difficulty of obtaining information about investment possibilities, (3) the lack/of investment and operating capital or credit for small businesses, and (4) the high risk of low profitability or failure of new investments.

1) The lack of entrepreneurial attitudes, skills and talent is often attributed to a strong tradition of risk aversion among potential investors, cultural attitudes against borrowing money and going into debt for any purpose, a general lack of business management and

accounting skills and of the technical capability to direct manufacturing processes, and, for those already in business, a notable lack of adaptability to a changing economic environment.

2) The lack of and difficulty of obtaining information about investment possibilities results primarily from a poor data base on the business environment, on raw material and intermediate input supplies, and on potential markets, as well as from a lack of information channels to disseminate such information. Local entrepreneurs also lack both the technical capability and the financial resources to undertake appropriate feasibility studies, which can be costly and often of questionable validity in view of the dearth of reliable information.

3) The lack/of investment and operating capital or credit for small business can be attributed to three main factors: (a) excessive bank requirements for real property collateral for such loans, (b) bureaucratic requirements for loan approvals that favor large, and effectively deny credit access to smaller Bicol firms, Manila-based firms/ and (c) the general scarcity of mobile savings relative to demand for business loans.

Excessive collateral requirements for most bank loans seem to be due partly to the fact that bank loan officers are not equipped to evaluate and monitor manufacturing projects properly, so that collateral is required as a substitute for the bank's ability to judge whether or not an investment project is sound. Partly, also, they are a defensive mechanism against the poor credit behavior of borrowers and the consequent high risk of default on such loans, often resulting from such things as poor business accounting practices, the co-mingling of business funds with personal or household funds,

and the diversion of business funds to non-productive personal uses.

Unfavorable bureaucratic approval requirements stem from highly technical documentation requirements of loan applicants that are difficult or impossible for small businessmen to meet, coupled with a centralized and lengthy approval process, requiring numerous follow-up visits to Manila that are costly in scarce management time, effort and money.

The scarcity of mobile savings relative to demand for business loans (which allows banks to "ration" loan approvals to most favored customers --- i.e., those with plenty of collateral and an office in Manila) has resulted from (1) unattractive (negative real) interest rates paid to savers, (2) low interest rate ceilings on loans that have made small loans unattractive to banks, compared with larger loans to the better-established, low risk firms, (3) the limited geographic access of financial institutions, few of which are located outside regional centers and the larger provincial capitals, and (4) the fact that local bank branch deposits are routinely transferred to the bank head office in Manila for investment and loan applications are sometimes not even accepted by the local branch office, much less approved. Recent reforms have eliminated most interest rate ceilings and allow banks to pay market interest rates on savings deposits, so some of these problem areas are being addressed.

4. The high risk of low profitability or failure of new investments is itself due to several factors such as a) the low level of effective demand for locally manufactured products, b) the lack, unreliability and high cost of raw materials and other inputs, c) the use of inefficient production processes, d) low quality of the final product, e) inefficient marketing processes, and f) public policy contradictions and biases against local firms,

a) The low level of effective demand for local manufacturers arises largely from the low income of the bulk of the regional population, which keeps local demand low, and heavy competition from the rest of the world (and the rest of the Philippines) in export markets abroad. On top of this, however, must be added the economic burdens of inadequate market organization and facilities and the costs and difficulties of transportation and communication between consumers and markets, due to poorly developed transport and communication infrastructure. Local firms also suffer from heavy, often cut-throat competition in domestic markets, especially from capital-intensive, Manila-based firms benefitting from subsidized capital and easier access to imported inputs.

b) The lack, unreliability and high cost of raw materials and other inputs in the region arises from, in the first place, the unavailability of key imported inputs locally and a general lack of information about their availability in Manila and how to obtain them, together with the inefficient, high cost domestic production of similar inputs. The latter is due to the protective tariff structure, oligopolistic control over key industries, the lack of systematic attention to improving production efficiency, and in some cases the lack of productive public utility infrastructure as for water or electric power. In addition, input prices are increased by high transport costs due largely to inadequate transportation infrastructure and facilities (discussed in Section V.A.3b above).

A contributing factor frequently mentioned by local officials and businessmen is the high cost and unreliability of electric power, which affects the viability of many needed enterprises as, for example, chick hatcheries, which cannot tolerate brownouts.

This is understandable on the islands of Masbate and Catanduanes, which must rely on high-cost diesel generators that, for reasons of cost, operate only part of the day. It is surprising in the Luzon island provinces, however, since they are connected to the Luzon power grid and since the Tiwi Geothermal Power Plant in Albay is itself producing 110 megawatts of power, compared with a Bicol power consumption total of only 30 or 40 megawatts. It appears that Manila users are given priority during any power shortage for Luzon as a whole, with the outer provinces like those in Bicol forced to take a larger share of brownouts, regardless of the fact that much of the available power originates in Bicol. Much greater use could be made of alternative, non-conventional power sources such as mini-hydro and dendro-thermal, and the lack of such local power infrastructure is an especially important factor in Masbate and Catanduanes.

c) The use of inefficient production processes can be attributed to the lack of information about alternative or improved processes, inadequate distribution channels for such technical information that is available, the lack of appropriate technical expertise in the Bicol and inefficient organization for production. The last two factors arise from the scarcity of Bicol residents who have the requisite management skills and technical know-how and the relative unattractiveness of Bicol as a residence to people with such skills, due to the poor quality of local education and medical facilities, poor communications, and the general lack or poor quality of recreational facilities and other social amenities in the region.

d) The low quality of final products stems from poor product design, inadequate quality control, and insufficient information about market demand with respect to product types, design, quality and packaging requirements, prices, etc.

e) Inefficient marketing processes arise from several factors. Some of the more important ones identified in the Bicol are (1) high transport costs, largely due to inadequate transportation infrastructure and facilities (see Section V.A.3b above). (2) poor or non-existent communications links between markets due to a lack of communication facilities, (3) a lack of bonded warehouse storage and handling facilities (marketing infrastructure), (4) inefficient and high cost product delivery and distribution mechanisms, (5) inadequate channels for current marketing information, (6) inadequate procedures for identifying potential buyers and mechanisms for facilitating contact between buyers and producers, and (7) complicated, time-consuming and costly administrative procedures for making foreign trade transactions.

f) Locally-based firms find themselves at a distinct disadvantage compared with Manila-based firms due to the biases inherent in certain key public policies and programs. Fiscal and financial investment incentives favor larger, capital-intensive firms located in major urban centers (mainly Manila). The protective tariff structure increases the returns to capital and thereby favors capital-intensive, Manila-based industry with ready access to duty-free imported inputs; and it discourages the use of domestic inputs that could be produced in the other regions like Bicol. Complicated and time-consuming administrative requirements of various kinds are easier for the larger, Manila-based firms to meet. These arise from long-standing traditions of hierarchial control and the centralized decision-making policies of the government, banks and other organizations. In addition, the regulations and programs of different line agencies affecting local enterprises are often conflicting, as for example when one agency tries to promote the production of a commodity that requires the use of a raw material another agency is trying to conserve (i.e. - rattan).

b. Slow growth of employment opportunities in Manila.

Despite respectable growth rates of manufacturing investment and output in Manila, productive employment opportunities in that sector grew more slowly than the labor force during the 1970's. This poor employment performance seems to have resulted (a) from a strong capital-intensive bias in the manufacturing investments undertaken and (b) from insufficient domestic demand for domestic products that tend to be more labor-intensive.

The capital-intensive bias of investment has been caused by (1) a highly protective tariff structure and an overvalued peso exchange rate that has increased the returns to capital relative to labor (by artificially raising the relative prices of the generally more capital-intensive importable consumer goods, while reducing the cost of the duty-free capital goods), (2) a fiscal and financial investment incentive structure that has favored and subsidized the use of capital inputs more than labor inputs (low interest rates on capital loans, duty-free importation of capital equipment, generous depreciation allowances on plant and capital facilities, etc.), and (3) centralized bureaucratic paperwork requirements and approval processes that favored larger firms (which tend to be more capital intensive).

The low level of effective domestic demand for the more labor-intensive, domestically-produced commodities can be attributed to (1) the low household income of the bulk of the population, (2) the cascading tariff structure and overvalued peso exchange rate which lower relative peso prices of imported inputs, discouraging the use of domestic inputs in industrial production processes, and (3) inefficient, high-cost domestic production of manufactured items. The last factor arises from the protection afforded to inefficient

firms by high effective tariffs and the failure to mount any systematic effort to improve efficiency and total factor productivity in manufacturing.

VI. Major Contributory Causes of Poverty: A Summary

Most of the contributory causes of poverty discussed in Part V can be summarized in eight major categories: 1) rapid population growth, 2) lack of non-farm employment opportunities, 3) lack of infrastructure, 4) inadequate capital or credit, 5) lack of knowledge, information and information channels, 6) poorly organized market, production and distribution processes, 7) national government policies, and 8) lack of entrepreneurial, managerial and technical expertise. As we saw above, the effects of these factors on the initial causes of household poverty discussed in Part I are more often indirect than direct; but the effects are nonetheless multiple and, taken together, of a significant magnitude.

1. and 2. Population Growth and Lack of Non-Farm Employment.

The continued growth of the rural population and labor force in the face of a slower increase in productive non-farm employment opportunities affects farm families directly by causing a steady reduction in operating farm size and indirectly by increasing the competition among landless or near-landless farmers for tenancy access to farmland, thus bidding up the cost of tenure and strengthening the bargaining position of landowners. These two factors affect farm workers by increasing labor availability in rural areas relative to farm demand for labor, exerting a downward pressure on wages and reducing the number of days of employment available per worker. They affect fishermen by steadily increasing their numbers in already overfished waters, contributing to a declining fish catch per fishermen.

3. Lack of Infrastructure

One of the most pervasive contributory causes of poverty in the Bicol, as indeed in most of the outlying regions of the country, is the poor condition or lack of various kinds of infrastructure that would facilitate productive activities or social service delivery.

Inadequate transportation infrastructure directly raises the cost of inputs, reduces the farmgate and beachhead prices of output, and facilitates monopsonistic control by middlemen who further reduce producer prices. The absence of more efficient electric power infrastructure inhibits the storage and marketing of perishable commodities and local input production, contributing to higher costs and lower producer prices, as does the lack of adequate marketing facilities. Inadequate irrigation, drainage and other water control infrastructure keep productivity per hectare low. The resulting adverse impact on the profitability of farming not only bears directly on the income of farmers, but also affects the livelihood of farm workers and fishermen families by reducing farm demand for labor and the daily wage rate, which in the case of fishermen helps bottle-up the increasing number of workers in fishing villages, increasing the competition in overfished waters and contributing to the declining catch per fisherman. Inadequate irrigation facilities exacerbate the seasonality of farm work, a major cause of low income among farm workers.

Farmers, farm workers and fishermen families alike suffer the consequences of unsanitary living conditions caused in part by a serious lack of sanitary infrastructure; and their poverty is compounded by the lack of rural social infrastructure like secondary schools and health facilities, while inadequate roads increase the cost and difficulty of obtaining such services in town.

Inadequate transportation and communication facilities and the lack of efficient public utility (water and power) and marketing infrastructure adversely affect the cost of manufacturing inputs, the efficiency of marketing activities, and effective domestic demand for locally manufactured goods. This increases the risk of low profitability or failure of manufacturing investments in Bicol and contributes directly to the slow growth of such investments, consequently reducing non-farm employment generation and adversely affecting all three poor groups.

4. Inadequate credit or capital.

The scarcity of capital funds inhibits national and local government efforts to construct and rehabilitate the various forms of infrastructure mentioned above.

The same lack of capital or credit also reduces the ability of the farmers to invest in new technology that would increase their productivity per hectare; and it inhibits local investment in more efficient marketing activities such as storage and processing that would help to increase overall farmgate prices. By thereby reducing the profitability of farming per hectare, the lack of capital or credit reduces income from farming directly, and it affects farm workers and fishermen by contributing to the low level of farm demand for labor. In the case of farm workers this means simply less work available for pay, and in the case of fishermen it also means increasing competition in overfished waters for lack of employment alternatives and a consequently declining fish catch.

Where credit could be used to increase the use of year-round technology, such as irrigation, diversified cropping and animal husbandry, its scarcity contributes to the marked seasonality of farm employment available to farm workers.

For fishermen the lack of credit inhibits their ability to purchase more efficient boats and equipment that would increase their catch, and it reduces investment in marketing facilities such as ice plants, cold storage facilities and refrigerated trucks that could increase fish prices on the beach.

For all three groups the lack of capital or credit for home improvements makes it more difficult to construct the sanitary facilities necessary for a more healthful environment. The notable lack of credit and capital for business investment on reasonable terms, without excessive collateral and administrative requirements, contributes directly to the slow growth of manufacturing investment and non-farm employment in the Bicol which affects all three poor groups adversely.

5. Lack of knowledge, information and information channels.

A lack of technical know-how among farmers contributes to the use of poor technology and to poor product quality, adversely affecting productivity per hectare and farmgate prices, respectively, which largely explain low farm profitability per hectare. Lack of farmer access to timely market information facilitates monopsonistic control by middlemen, which also reduces farmgate prices for agricultural products. As we saw above, low farm profitability reduces the demand for farm labor and the farm wage rate, affecting farm workers' income directly and, by reducing alternative job opportunities, increasing the competitive pressure on overfished waters and reducing the size of the annual fish catch per fisherman.

Lack of technical knowledge of crop diversification, animal husbandry, irrigation and other farming methods that can extend farm activities beyond the prevailing short monoculture cropping season also contributes

to the pronounced seasonality of farm work that affects farm workers' income-earning opportunities.

The lack of technical knowledge, timely information and information channels is a particularly serious inhibitor of manufacturing investment in the Region, directly and also indirectly, by contributing to the difficulty and cost of obtaining appropriate inputs, to the use of inefficient production processes, to the low quality of commodities produced and to inefficient marketing processes, thereby increasing the risks of failure or low profitability of such investments. The consequent slow growth of manufacturing investment and employment, compared with the growth in population and the labor force, greatly reduces the relative availability of non-farm employment in Bicol, adversely affecting the income of all three poverty groups.

6. Poorly organized markets, production and distribution systems.

To the extent that poor organization among potential users affects their cooperative ability to build and operate needed storage, processing and other marketing facilities, it also contributes to lower farmgate prices for farm output and lower farm profitability. Through its impact on agricultural employment it affects farm workers and fishermen as noted above, as well as farmers themselves.

Inefficient production, marketing and distribution systems are serious drags on the profitability of manufacturing activities, and they are major factors contributing to the slow growth of manufacturing investment and the consequent lack of non-farm employment opportunities in the Bicol, affecting all three poverty groups.

7. National government policies.

The financial and fiscal incentive structure, centralized administrative process and approval requirements, overly protective tariffs and an overvalued peso combine to create a strongly capital-intensive bias to industrial investment in Manila. The tariff structure and overvalued peso also protect inefficient, high-cost domestic production of final goods and, through lower tariffs or exemptions on intermediate goods, encourage the use of imported inputs rather than domestic inputs, in both cases reducing effective demand for domestically produced goods. The end result of these influences is to reduce the growth of employment opportunities in Manila.

Centralized administrative requirements and loan procedures requiring real property collateral reduce the credit available to smaller firms for capital investment or operating expenses, resulting in slower growth of manufacturing investment and employment in the Bicol Region. Furthermore, the protective tariff structure results in greater scarcity and cost of intermediate inputs to local firms without easy access to imports. Competition from Manila-based firms enjoying ready access to subsidized capital reduces demand for locally produced goods. These factors combine with the general bias favoring larger, Manila-based firms arising from the national government policies on fiscal and financial incentives, administrative requirements and tariff protection to increase the risk of failure or low profitability of manufacturing investment in Bicol. The higher risk in turn further reduces the rate of such investment and the consequent growth of non-farm employment opportunities within the Region itself.

As we have seen, a lack of non-farm employment opportunities, combined with a growing labor force, steadily erodes the capability of

all three poverty groups under study -- farmers, farm workers and fishermen -- to satisfy their basic needs.

National policies with respect to tenancy, permitting absentee landlordism and insecure tenure status on uplands and creating delays in the issuance of clear land titles in the land reform program, adversely affects incentives to invest in new technology (as well as denying the farmer the collateral required for investment credit, thus reducing productivity and farm profitability per hectare. In addition, the tariff and foreign exchange rate policy of maintaining an overvalued peso artificially reduces peso farmgate prices for export crops, and this also reduces the profitability of farming. This not only affects farmers' incomes directly, but through its depressing effect on farm demand for labor it also adversely affects daily wages for farm workers and, by reducing alternative employment opportunities, helps to increase competition among fishermen in overfished waters, reducing the size of their catch per fisherman.

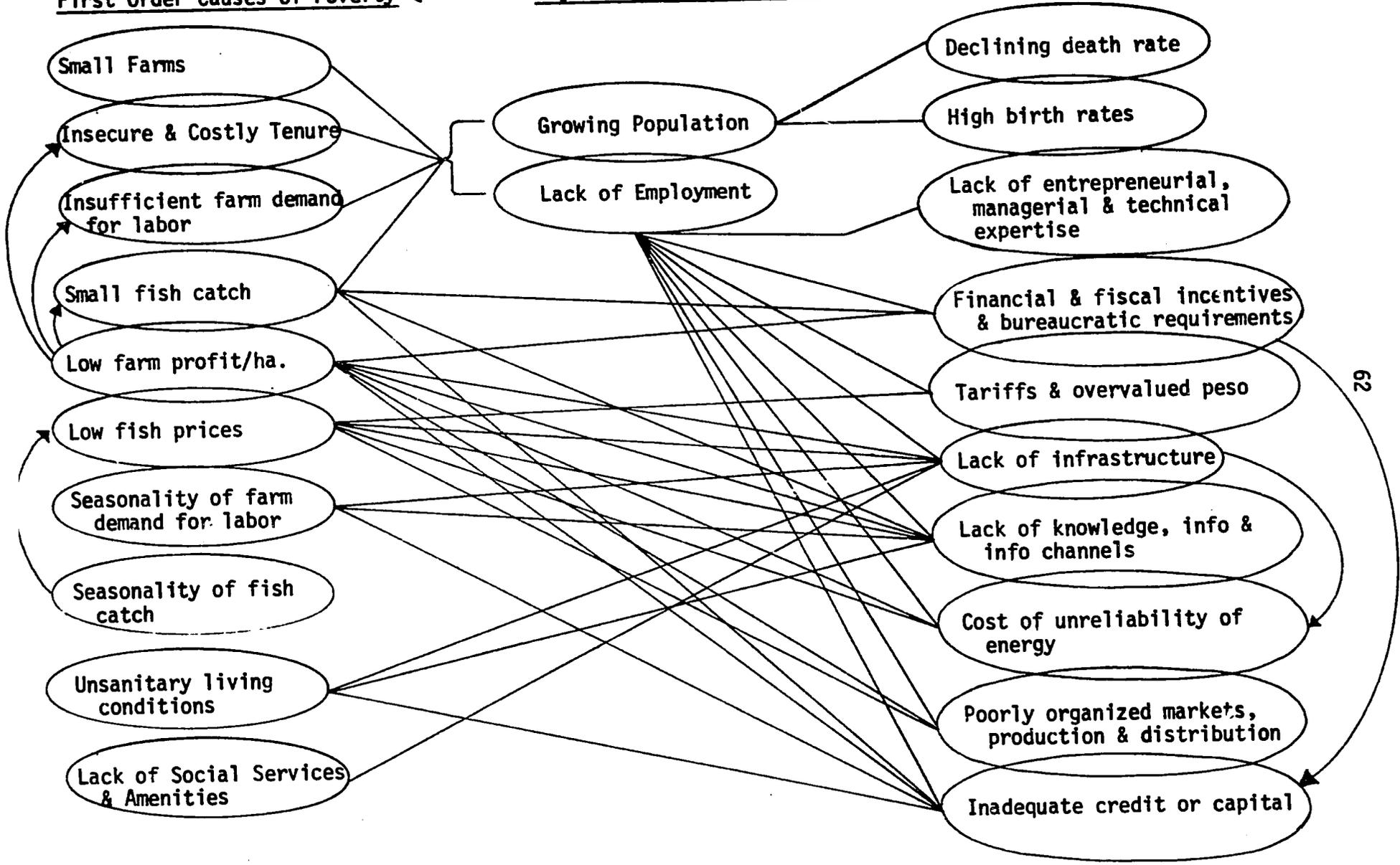
The general policy bias against the interests of local producers stems from a highly centralized government that is more responsive to the needs and interests of an urban elite than to those of the poorer, more distant and much less articulate people residing in the rural areas of the country. For the policy-making machinery to become significantly more responsive to the rural areas may well require significant socio-political change.

8. Lack of entrepreneurial, managerial and technical expertise.

Poor managerial and technical expertise contributes to the widespread use of inefficient production processes, increasing the risk of failure or low profitability of investment in Bicol, and this combines with the

general lack of entrepreneurial talent in the Region to reduce manufacturing investment and consequent employment generation. Combined with continued population growth, this will intensify four of the key causes of poverty affecting the three main poverty groups -- small farm size, insecurity and cost of land tenure, insufficient demand for available labor and consequent low daily wages, and the small fish catch per fisherman.

First Order Causes of Poverty ← Major Intervening Causes ← Major Contributory Causes



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Table 1 . POPULATION GROWTH AND MIGRATION TRENDS, BY PROVINCE, BICOL REGION V, 1960-1980

Item	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Bicol Region V	Philippines
Population (1000):								
1960	515.0	188.1	819.6	156.3	336.0	347.8	2,362.7	27,088
1970	673.9	262.2	948.3	162.3	492.9	427.0	2,966.7	36,684
1975	728.8	288.4	1,023.8	172.8	533.4	446.5	3,193.7	42,071
1980	803.3	308.0	1,100.0	175.7	580.4	499.6	3,467.0	47,914
Average Annual Net Population Growth Rate(%):								
1960-70	2.7	3.3	1.4	0.4	3.8	2.0	2.3	3.0
1970-75	1.6	1.9	1.5	1.3	1.6	0.9	1.5	2.8
1975-80	2.0	1.3	1.5	0.3	1.7	2.3	1.7	2.6
Net Change (1000):								
1960-70	158.9	74.1	125.7	6.0	156.9	79.2	604.0	9,596
1970-75	54.8	26.2	75.4	10.5	40.5	19.5	226.8	5,386
1975-80	74.5	19.6	76.2	2.9	47.0	53.1	273.3	5,843
Net Migration (1000):								
1960-70	-29.4	-0.6	-25.0	-6.7	-13.4	-15.8	-90.9	n.a.
1970-75							-31.6	n.a.
Natural Increase (1000):								
1960-70	188.3	74.7	153.7	12.7	170.3	95.0	694.9	9,596
1970-75							258.4	5,386
Ave. Annual Net Migration as % of Average Population:								
1960-70	0.49	-0.03	-0.28	-0.42	-0.32	-0.41	-0.34	0.0
1970-75							-0.21	0.0
Ave. Annual Rate of Natural Increase (%):								
1960-70	3.0	3.3	1.7	0.8	4.0	2.3	2.5	3.0
1970-75							1.7	2.8

Sources: NCSO, Geographical Patterns of Internal Migration in the Philippines: 1960-70, NEDA, Manila, 1976; NCSO, 1980 Census of Population, Preliminary Report, NEDA, Manila, November 1980; and 1980 Philippine Statistical Yearbook, NEDA, Manila, 1980; and Special Tabulations (unpublished) based on 5% sample of 1975 Census, NCSO, March 27, 1981. 1960 and 1970 figures for Catanduanes and Camarines Sur are of questionable accuracy, since their average annual rates of natural increase appear inexplicably too low.

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Table 2
NUMBERS OF 1960-1970 INTRA-REGIONAL AND INTER-REGIONAL MIGRANTS, BY PROVINCE AND MAJOR REGION OF ORIGIN AND DESTINATION, BICOL

Province or Region of Destination	Province or Region of Origins:						Total Bicol and Intra-Regional	Southern Tagalog	Manila	Visayas ^{2/}	Total Inter-Regional	Total Immigrants	Intercensal Immigration Rate (Per 1000 Pop.)						
	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon													
Albay	-	1,832	8,420	741	1,327	4,234	16,554	7,285	9,918	1,666	21,172	37,726	63.5						
Camarines Norte	2,248	-	5,579	1,387	263	1,812	11,289	6,225	2,968	445	12,223	23,512	104.4						
Camarines Sur	8,381	2,374	-	1,830	630	2,485	15,700	8,683	7,707	1,095	20,388	36,088	40.8						
Catanduanes	775	144	985	-	66	187	2,157	1,958	5,689	639	8,954	11,111	69.7						
Masbate	120	27	373	2	-	592	1,114	959	2,387	14,721	19,374	20,408	49.4						
Sorsogon	5,194	1,008	1,789	177	1,622	-	9,790	4,315	8,282	1,264	16,016	25,806	66.6						
Total Bicol and Intra-Regional	16,718	5,385	17,146	4,137	3,908	9,310	56,604	29,425	36,951	19,830	98,127	154,731	58.1						
S. Tagalog ^{1/}	35,549	11,901	31,345	10,000	14,654	22,542	125,991	Net Migration flow into (+) or out of (-) Bicol: -36,556											
Manila ^{2/}	7,530	3,388	6,207	1,765	2,256	4,694	25,830							+11,121					
Visayas ^{2/}	566	304	576	207	6,438	692	9,083								+10,747				
All Inter-Regional	50,370	18,683	43,974	13,696	30,002	32,289	189,014				-90,687								
All outmigrants	67,088	24,068	61,120	17,833	33,910	41,599	245,618					-90,887							
Ave. 1960-1970 Population(1000)	594.5	225.2	884.0	159.3	414.5	387.4	2664.7												
Intercensal Out-migration Rate (per 1000 pop.)	-112.8	-106.9	-69.1	-111.9	-81.8	-107.4	-92.2												
Intercensal Net Migration Rate (per 1000 pop.)	-49.4	-2.5	-28.3	-42.2	-32.4	-40.8	-34.1												

^{1/} Includes Rizal Province and its suburbs of Manila

^{2/} Total of Western, Central and Eastern Visayas.

SOURCE: NCSO, Geographical Patterns of Internal Migration in the Philippines: 1960-1970, NEDA, Manila, 1976.

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Table 3. Numbers of 1960-1970 Inter-Regional Migrants, by Region of Origin and Region of Destination: Philippines*

Region of Destination	Region of Origin												All Inmigrants
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
I Ilocos		10,228	17,401	5,449	1,459	685	786	1,123	588	523	1,530	15,299	55,071
II Cagayan Valley	29,635		34,232	4,812	1,820	876	609	835	82	202	436	8,996	82,535
III Central Luzon	22,144	10,898		48,458	16,809	10,340	6,839	18,932	1,276	2,204	3,170	67,801	208,871
IV Southern Tagalog	51,837	21,936	151,518		125,981	77,049	40,628	89,160	8,523	10,791	12,087	276,397	865,907
V Bicol	1,948	784	5,600	29,425		3,798	10,079	5,953	402	1,295	1,892	36,951	98,127
VI Western Visayas	642	674	1,890	7,546	3,040		22,230	1,671	2,161	2,619	8,422	22,377	73,272
VII Central Visayas	408	382	1,646	5,660	3,212	22,774		15,445	10,088	17,593	15,585	14,045	106,838
VIII Eastern Visayas	798	228	1,368	4,837	2,831	1,739	17,700		1,136	4,735	4,719	22,816	62,907
IX Western Mindanao	838	342	3,003	2,684	944	17,722	33,799	7,735		44,872	8,909	3,906	124,754
X Northern Mindanao	3,312	2,425	3,794	6,195	3,324	28,452	119,567	33,229	27,745		37,537	11,040	276,620
XI Southern Mindanao	10,008	2,384	20,877	8,468	3,764	101,161	110,884	40,837	19,362	40,336		13,378	371,459
XII City of Manila	21,226	9,301	55,292	62,219	25,830	23,716	14,190	34,746	1,909	2,868	4,104		255,401
All Outmigrants	142,796	59,582	296,621	185,753	189,014	288,312	377,311	249,666	73,272	128,038	98,391	493,006	2,581,762

* Both Sexes

"Significant" inter-regional migration stream

Source: Reprinted from Geographical Patterns of Internal Migration in the Philippines, 1960-1970, NCSO, NEDA, Manila, 1976, p. 40.

Table 4
Gross Domestic Product of Bicol, 1971-79
(in million pesos at current prices)

	<u>1971</u>	<u>1975</u>	<u>1979</u>	<u>% share of regional GDP</u>		
				<u>1971</u>	<u>1975</u>	<u>1979</u>
Agriculture, Fishery and Forestry	1110	2445	3725	54.0	55.6	50.6
Industry	423	792	1351	20.6	18.0	18.4
Mining and Quarrying	25	11	8	1.2	0.2	0.1
Manufacturing	340	538	995	16.5	12.2	13.5
Construction	53	214	288	2.6	4.9	3.9
Elec., Gas & Water	5	29	60	0.2	0.7	0.8
Service	523	1165	2282	25.4	26.5	31.0
Transportation, Communication and Storage	49	104	332	2.4	2.4	4.5
Commerce	255	629	1153	12.4	14.3	15.7
Services	219	432	797	10.7	9.8	10.8
Regional GDP	2056	4400	7358	100.0	100.0	100.0
Philippine GDP	49086	113378	221022			

Source: The Regional Income Accounts of the Philippines, CY 1971-1979, NEDA.

Table 5
Gross Domestic Product of Bicol, 1971-79
(in million pesos at constant 1972 prices)

	<u>1971</u>	<u>1975</u>	<u>1979</u>	<u>Comp. Annual Growth Rate (in %)</u>		
				<u>1971-75</u>	<u>1971-79</u>	<u>1975-79</u>
Agriculture, Fishery and Forestry	1172	1385	1535	4.3	3.4	2.6
Industry	462	464	580	0.1	2.9	5.7
Mining & Quarrying	25	5	1	(33.1)	(33.1)	(33.1)
Manufacturing	377	332	441	(3.1)	2.0	7.4
Construction	55	110	114	18.9	9.5	0.9
Elec., Gas & Water	5	17	24	35.8	21.7	9.0
Service	559	705	884	6.0	5.9	5.8
Transp., Communication & Storage	49	70	100	9.3	9.3	9.3
Commerce	280	337	410	4.7	4.9	5.0
Services	230	296	374	6.7	6.3	5.8
Regional GDP	2193	2554	2999	3.9	4.0	4.1
Philippine GDP	52534	67455	87328	6.5	6.6	6.6

Source: The Regional Income Accounts of the Philippines, CY 1971-1979, NEDA.

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Table 6
REGIONAL GROSS DOMESTIC PRODUCT BY
INDUSTRY ORIGIN, 1979
(in million pesos)

<u>Sector</u>	<u>1979 (current prices)</u>	<u>% share of Reg'l GDP</u>	<u>Average Annual Growth Rates (in constant 1972 prices)</u>	
			<u>1971-1975</u>	<u>1975-1979</u>
Agriculture, Fishery & Forestry	3,725	50.6	4.3	2.6
Industrial Sector	1,351	18.4	0.1	5.7
Mining & Quarrying	8	0.1	(33.1)	(33.1)
Manufacturing	995	13.5	(3.1)	7.4
Construction	288	3.9	18.9	0.9
Elec., gas & water	60	0.8	35.8	9.0
Service Sector	2,282	31.0	6.0	5.8
Transp. Communication & Storage	332	4.5	9.3	9.3
Commerce	1,153	15.7	4.7	5.0
Services	797	10.8	6.7	5.8
Region V GDP	7,358	100.0	3.9	4.1
Philippine GDP	221,022			

Source: The Regional Income Accounts of the Philippines, CY 1971-1979, NEDA.

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Table 7
General Land Use Pattern by Vegetative Cover, 1975
(in '000 has.)

	MIDAY	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V	% of Regional Total
Commercial Forest (% of region)	15.9 6.1	39.9 15.4	90.6 34.9	56.4 21.7	28.6 11.0	28.0 10.8	259.4 100.0	14.7
Non-commercial Forest (% of region)	12.5 15.8	23.4 29.5	4.4 5.5	0.7 0.9	34.3 43.3	3.9 4.9	79.3 100.0	4.5
Brush land (% of region)	4.1 16.5	17.9 72.2	2.6 10.5	-	-	-	24.8 100.0	1.4
Open land (% of region)	9.1 7.1	0.3 0.2	4.8 3.7	10.6 8.3	92.9 72.5	11.1 8.7	128.2 100.0	7.3
Marsh land (% of region)	0.8 2.1	3.3 8.5	8.6 22.2	1.2 3.1	16.7 43.3	7.9 20.5	38.6 100.0	21.9
Cultivated land (% of region)	212.8 17.3	126.5 10.3	415.5 33.7	82.3 6.7	232.9 18.9	163.1 13.2	1,233.0 100.0	69.9
Total Land Area	255.3	211.2	526.7	151.1	404.8	214.1	1,763.2	100.0

Source: The Bicol Region: A Profile
National Manpower Youth Council - Region 5.

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Table 8. Number and Hectarage of Farms by Main Crop and Province, Bicol (Region V), 1971

Main Crops	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines (1000)
A. Number of Farms:								
<u>All Farms</u>	45,740	15,007	74,166	16,239	43,224	28,647	223,023	2,354.5
Palay	18,257	2,928	36,740	3,459	5,214	8,017	74,615	981.9
Corn	2,082	61	3,410	395	19,162	361	25,471	514.2
Coconut	12,004	9,948	19,999	2,679	12,582	15,743	72,955	432.5
Sugarcane	300	42	98	26	11	12	489	27.0
Tuber, Root & Bulb	1,630	279	1,797	2,867	341	668	7,582	33.3
Abaca	1,462	17	615	2,672	-	1,058	5,824	12.5
Cattle	171	40	162	43	293	74	783	23.6
All Other	9,834	1,692	11,345	4,098	5,621	2,714	35,304	329.5
B. Hectarage:								
<u>All Farms</u>	131,085	101,816	292,796	54,470	234,387	106,723	921,277	8,493.7
Palay	31,454	9,931	92,452	9,278	37,183	16,639	196,937	2,661.2
Corn	3,919	103	8,012	604	62,416	596	75,650	1,493.9
Coconut	55,550	78,855	129,508	10,783	70,063	70,446	415,205	2,152.8
Sugarcane	578	264	494	60	27	12	1,435	368.1
Tuber, Root & Bulb	2,185	685	3,338	5,257	1,357	1,271	14,093	68.2
Abaca	7,850	115	4,110	11,299	-	7,957	31,331	64.3
Cattle	1,957	297	2,539	429	36,555	485	42,262	387.2
All Other	27,592	11,566	52,343	16,760	26,786	9,317	144,364	1,298.0
C. Hectares/Farm:								
<u>All Farms</u>	2.87	6.78	3.95	3.35	5.42	3.73	4.13	3.61
Palay	1.72	3.39	2.52	2.68	7.13	2.08	2.64	2.71
Corn	1.88	1.69	2.35	1.53	3.26	1.65	2.97	2.91
Coconut	4.63	7.93	6.48	4.03	5.57	4.47	5.69	4.98
Sugarcane	1.93	6.29	5.04	2.31	2.45	1.00	2.93	13.62
Tuber, Root & Bulb	1.34	2.46	1.86	1.83	3.98	1.90	1.86	2.05
Abaca	5.37	6.76	6.68	4.23	-	7.52	5.38	5.15
Cattle	11.44	7.43	15.67	9.98	124.76	6.55	53.97	16.43
All Other	2.81	6.84	4.61	4.09	4.77	3.43	4.09	3.94

Source: 1971 Census of Agriculture, NCSO, Table 4.

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Table 9. Percentage Composition by Main Crop of Total Farms and Hectarage in Each Province, Bicol (Region V), 1971

Main Crop	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines
A. Number of Farms:								
<u>All Farms</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Palay	39.9	19.5	49.5	21.3	12.1	28.0	33.5	41.7
Corn	4.6	0.4	4.6	2.4	44.3	1.3	11.4	21.8
Coconut	26.2	66.3	27.0	16.5	29.1	55.0	32.7	18.4
Sugarcane	0.7	0.3	0.1	0.2	0.03	0.04	0.2	1.1
Tuber, Root & Bulb	3.6	1.9	2.4	17.7	0.8	2.3	3.4	1.4
Abaca	3.2	0.1	0.8	16.5	-	3.7	2.6	0.5
Cattle	0.4	0.3	0.2	0.3	0.7	0.3	0.4	1.0
All Other	21.5	11.3	15.3	25.2	13.0	9.5	15.8	14.0
B. Hectarage:								
<u>All Farms</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Palay	24.5	9.8	31.6	17.0	15.9	15.6	21.4	31.3
Corn	3.0	0.1	2.7	1.1	26.6	0.6	8.2	17.6
Coconut	42.4	77.4	44.2	19.8	29.9	66.0	45.1	25.3
Sugarcane	0.4	0.3	0.2	0.1	0.01	0.01	0.2	4.3
Tuber, Root & Bulb	1.7	0.7	1.1	9.7	0.6	1.2	1.5	0.8
Abaca	6.0	0.1	1.4	20.7	-	7.5	3.4	0.8
Cattle	1.5	0.3	0.9	0.8	15.6	0.5	4.6	4.6
All Other	21.0	11.4	17.9	30.8	11.4	8.7	15.7	15.3

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 4.

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Table 10. Percentage Composition by Province of Total Farms and Hectarage for Each Main Crop, Bicol (Region V), 1971.

<u>Main Crop</u>	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Region V Bicol</u>	<u>Regional % of Philippines</u>
A. Number of Farms:								
<u>All Farms</u>	20.5	6.7	33.3	7.3	19.4	12.8	100.0	9.5
Palay	24.5	3.9	49.2	4.6	7.0	10.7	100.0	7.6
Corn	8.2	0.2	13.4	1.6	75.2	1.4	100.0	5.0
Coconut	16.5	13.6	27.4	3.7	17.2	21.6	100.0	16.9
Sugarcane	61.3	8.6	20.0	5.3	2.2	2.5	100.0	1.8
Tuber, Root & Bulb	21.5	3.7	23.7	37.8	4.5	8.8	100.0	22.8
Abaca	25.1	0.3	10.6	45.9	-	18.2	100.0	46.6
Cattle	21.8	5.1	20.7	5.6	37.4	9.5	100.0	3.3
All Other	27.9	4.8	32.1	11.6	15.9	7.7	100.0	10.7
B. Hectarage:								
<u>All Farms</u>	14.2	11.1	31.8	5.9	25.4	11.6	100.0	10.8
Palay	16.0	5.0	46.9	4.7	18.9	8.4	100.0	7.4
Corn	5.2	0.1	10.6	0.8	82.5	0.8	100.0	5.1
Coconut	13.4	19.0	31.2	2.6	16.9	17.0	100.0	19.3
Sugarcane	40.3	18.4	34.4	4.2	1.9	0.8	100.0	0.4
Tuber, Root & Bulb	15.5	4.9	23.7	37.3	9.6	9.0	100.0	20.7
Abaca	25.1	0.4	13.1	36.1	-	25.4	100.0	48.7
Cattle	4.6	0.7	6.0	1.0	86.5	1.1	100.0	10.9
All Other	19.1	8.0	36.3	11.6	18.6	6.5	100.0	11.1

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 4.

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Table 11. Number and Percent of Farms by Tenure of Operator and Province, Bicol (Region V), 1971

<u>Tenure Status</u>	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Region V Bicol</u>	<u>Philippines (1000)</u>
A. Number of Farms:								
All Farms	45,740	15,007	74,116	16,239	43,224	28,647	222,973	2,354.5
Full Owner	21,720	8,934	41,729	12,031	30,106	17,028	131,548	1,365.0
Part Owner	5,538	764	6,615	2,380	2,183	2,497	19,977	268.7
Tenant	17,749	5,227	24,587	961	10,449	8,811	67,804	681.7
-- Share Tenant	15,715	4,817	21,773	599	9,243	8,104	60,251	569.3
Manager	38	30	68	12	122	121	391	2.5
Other	495	52	1,167	835	366	190	3,105	36.7
B. Percentage of Provincial Totals:								
All Farms	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Full Owner	47.5	59.5	56.3	74.1	69.7	59.4	59.0	58.0
Part Owner	12.1	5.1	8.9	14.7	5.1	8.7	9.0	11.4
Tenant	38.8	34.8	33.2	6.0	24.2	30.8	30.4	29.0
-- Share Tenant	34.4	32.1	29.4	3.7	21.4	28.3	27.0	24.2
Manager	0.1	0.2	0.1	0.1	0.3	0.4	0.2	0.1
Other	1.1	0.3	1.6	5.1	0.8	0.7	1.4	1.6
C. Percentage of Regional Totals:								Regional % of Philippines
All Farms	20.5	6.7	33.2	7.3	19.4	12.8	100.0	9.5
Full Owner	16.5	6.8	31.7	9.1	22.9	12.9	100.0	9.6
Part Owner	27.7	3.8	33.1	11.9	10.9	12.5	100.0	7.4
Tenant	26.2	7.7	36.3	1.4	15.4	13.0	100.0	9.9
-- Share Tenant	26.1	8.0	36.1	1.0	15.3	13.5	100.0	10.6
Manager	9.7	7.7	17.4	3.1	31.2	30.9	100.0	15.9
Other	15.9	1.7	37.6	26.9	11.8	6.1	100.0	8.5

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 8A.

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Table 12. Percent Composition of Tenanted Farms in Each Province by Main Crop, Bicol (Region V), 1971

Main Crop	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines (1000)
All Farms (No.)	17,749	5,227	24,587	981	10,449	8,811	67,804	681.7
(%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Palay	50.1	28.9	65.7	29.6	9.8	38.0	46.0	53.0
Corn	6.8	0.6	4.3	9.4	55.9	1.0	12.3	22.9
Coconut	17.6	63.6	17.6	12.7	26.8	46.9	26.3	11.6
Sugarcane	1.3	0.02	0.1	0.5	-	0.1	0.4	2.1
Tuber, Root & Bulb	3.0	1.1	1.5	27.3	0.7	2.9	2.3	0.8
Abaca	1.6	-	0.5	2.8	-	3.6	1.1	0.2
Cattle	0.4	0.6	0.1	0.6	0.2	0.1	0.2	0.7
All Other	19.1	5.4	10.2	17.1	6.5	7.4	11.3	8.6

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 8A.

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Table 13. Percentage Land Tenure Composition of Farms by Main Crop in Each Province, Bicol (Region V), 1971.

Main Crop	Tenure Status	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines (1000)
<u>PALAY:</u>	All Farms (No.)	18,257	2,926	36,740	3,459	5,214	8,017	74,613	981.9
	Full Owner	32.5	40.6	41.8	62.3	72.9	43.7	42.8	45.0
	Part Owner	17.5	6.9	12.8	27.4	6.2	13.9	14.0	15.9
	Tenant	48.7	51.6	43.9	8.4	19.7	41.7	41.8	36.8
	Manager & Other	1.3	1.0	1.5	1.9	1.2	0.6	1.3	2.3
<u>CORN:</u>	All Farms (No.)	2,082	61	3,410	395	19,612	361	25,921	514.2
	Full Owner	31.7	42.6	63.3	52.4	65.3	69.0	62.1	61.4
	Part Owner	7.7	9.8	4.5	16.2	4.4	2.2	4.8	7.3
	Tenant	58.3	47.5	31.1	23.3	29.8	24.7	32.1	30.4
	Manager & Other	2.4	-	1.1	8.1	0.5	4.2	0.9	0.9
<u>COCONUT:</u>	All Farms (No.)	12,004	9,948	19,999	2,679	12,582	15,743	72,955	432.5
	Full Owner	65.7	61.4	72.7	81.1	70.4	66.8	68.6	74.4
	Part Owner	7.3	4.9	4.2	9.7	5.7	6.1	5.7	6.4
	Tenant	26.1	33.4	21.6	4.7	22.3	26.2	24.4	18.2
	Manager & Other	1.0	0.4	1.5	4.5	1.6	0.9	1.3	1.0
<u>SUGARCANE:</u>	All Farms (No.)	300	42	98	26	11	12	489	27.0
	Full Owner	15.7	97.6	77.6	80.8	100.0	50.0	41.3	30.7
	Part Owner	-	-	1.0	-	-	-	0.2	11.9
	Tenant	78.7	2.4	21.4	19.2	-	50.0	55.0	53.5
	Manager & Other	5.7	-	-	-	-	-	3.5	3.9
<u>TUBER, ROOT & BULB:</u>	All Farms (No.)	1,630	279	1,797	2,867	341	668	7,582	33.3
	Full Owner	59.8	77.4	74.8	75.7	73.9	57.9	70.5	76.6
	Part Owner	3.3	2.5	2.5	6.0	2.9	2.5	4.0	5.0
	Tenant	32.8	20.1	20.8	9.3	22.9	37.9	20.6	16.4
	Manager & Other	4.2	-	1.9	9.0	0.3	1.6	4.9	2.0

(Cont.)

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Table 13. (cont.) Percentage Land Tenure Composition of Farms by Main Crop in Each Province, Bicol (Region V), 1971.

<u>Main Crop</u>	<u>Tenure Status</u>	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Region V Bicol</u>	<u>Philippines (1000)</u>
<u>ABACA:</u>	<u>All Farms (No.)</u>	<u>1,462</u>	<u>17</u>	<u>615</u>	<u>2,672</u>	<u>-</u>	<u>1,058</u>	<u>5,824</u>	<u>12.5</u>
	Full Owner	73.3	100.0	73.7	84.8	-	61.3	76.5	76.7
	Part Owner	4.7	-	3.3	10.2	-	3.8	6.9	7.9
	Tenant	19.7	-	19.2	1.0	-	30.2	12.9	13.5
	Manager & Other	2.3	-	3.9	4.0	-	4.6	3.7	1.8
<u>CATTLE:</u>	<u>All Farms (No.)</u>	<u>171</u>	<u>40</u>	<u>162</u>	<u>43</u>	<u>293</u>	<u>74</u>	<u>783</u>	<u>23.6</u>
	Full Owner	50.9	22.5	50.0	58.1	76.5	74.3	61.4	62.5
	Part Owner	4.7	-	14.8	14.0	6.8	8.1	8.2	14.7
	Tenant	41.5	72.5	17.9	14.0	6.1	16.2	21.1	20.0
	Manager & Other	2.9	5.0	17.3	14.0	10.6	1.4	9.3	2.8
<u>OTHER:</u>	<u>All Farms (No.)</u>	<u>9,834</u>	<u>1,692</u>	<u>11,345</u>	<u>4,098</u>	<u>5,521</u>	<u>2,714</u>	<u>35,304</u>	<u>329.5</u>
	Full Owner	51.6	78.7	68.0	73.6	73.9	61.4	65.0	69.0
	Part Owner	11.9	3.8	7.4	16.0	4.4	13.0	9.5	11.5
	Tenant	34.5	16.6	22.2	4.1	12.1	24.1	21.8	17.9
	Manager & Other	2.0	0.8	2.3	6.3	9.6	1.4	3.7	1.6

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 8A.

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Table 14. Palay: Farms Reporting, Hectarage Planted, and Production by Irrigation Facilities and Province, Bicol Region V, 1971.

Type of Farm and Crop	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines (1000)
A. Total No. of Farms Growing Palay	32,032	7,386	57,767	7,620	12,991	14,664	132,460	1,462.5
Farms with Irrigation Facilities	15,149	2,811	18,945	2,007	925	8,594	48,431	490.0
Lowland Palay ^{2/}	14,362	2,693	18,274	1,991	895	8,479	46,694	477.0
Upland and Kaingin Palay	945	118	671	16	30	115	1,895	13.0
Farms without Irrigation	16,883	4,575	38,822	5,613	12,066	6,070	84,029	972.5
Lowland Palay ^{2/}	4,810	3,111	23,019	4,840	10,265	3,473	49,518	686.5
Upland and Kaingin Palay	12,375	1,490	15,803	773	2,242	2,597	35,280	290.8
B. Total Physical Hectarage Planted to Palay^{1/}	32,746	10,096	90,692	6,710	22,401	14,739	177,384	2,305.3
On Farms with Irrigation ^{1/}	18,387	4,643	36,364	1,873	1,806	9,372	72,445	868.8
Lowland Palay ^{2/}	17,688	4,535	35,406	1,865	1,725	9,252	70,471	854.9
Upland and Kaingin Palay	699	108	958	8	81	120	1,974	13.9
On Farms without Irrigation ^{1/}	14,359	5,453	54,329	4,837	20,596	5,367	104,941	1,436.5
Lowland Palay ^{2/}	4,837	3,932	34,931	4,400	16,968	3,396	68,464	1,074.3
Upland and Kaingin Palay	11,714	1,684	19,398	437	3,644	2,507	39,384	367.9
C. Annual Palay Production (cavans)^{4/}	1,311,387	429,661	3,130,954	307,224	443,704	880,718	7,123,648	95,134.3
On Farms with Irrigation	1,462,264	289,795	1,973,151	99,811	59,964	678,143	4,563,128	51,110.3
Lowland Palay ^{2/}	1,448,374	287,632	1,952,728	99,646	58,232	675,682	4,522,294	50,820.6
Upland and Kaingin Palay	13,890	2,163	20,423	165	1,732	2,461	40,834	289.7
On Farms without Irrigation	469,123	139,866	1,157,803	207,413	383,740	202,575	2,560,520	44,024.0
Lowland Palay ^{2/}	222,609	119,392	868,415	199,086	341,883	169,395	1,920,780	36,749.7
Upland and Kaingin Palay	246,514	20,474	289,388	8,327	41,857	33,180	639,740	7,274.3

1/ A hectare planted to 2 or 3 crops per year is counted only once.

2/ First crop or total minus upland and kaingin, whichever is larger. Some farms report both Lowland and Upland rice on same plot as different crops, so sum of lowland and upland and hectares sometimes exceeds subtotals above.

3/ All cropping seasons

4/ cavan = 44 kg.

Source: 1971 Census of Agriculture, CSSO, Tables 15A, B and C.

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Table 15. Palay: Physical Hectarage per Farm and Production per Farm and Hectare, by Irrigation Facilities and Province, Bicol Region V, 1971.

Type of Farm and Crop	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V Bicol	Philippines
A. Physical Ha. per Farm Planting Palay^{2/}								
Farms with Irrigation Facilities	1.02	1.37	1.57	.88	1.72	1.01	1.34	1.58
Lowland Palay	1.21	1.65	1.92	.93	1.95	1.09	1.50	1.77
Upland and Kaingin Palay	1.23	1.68	1.94	.94	1.93	1.09	1.51	1.79
Farms without Irrigation	.74	.92	1.43	.50	2.70	1.04	1.04	1.07
Lowland Palay	.85	1.19	1.40	.86	1.71	.88	1.25	1.48
Upland and Kaingin Palay	1.01	1.26	1.52	.91	1.65	.98	1.38	1.56
	.95	1.13	1.23	.56	1.63	.97	1.12	1.27
B. Annual Production per Farm (cavans)^{1/}								
Farms with Irrigation Facilities	60.3	58.2	54.2	40.3	34.2	60.1	53.8	65.0
Lowland Palay	96.5	103.1	104.2	49.7	64.8	78.9	94.2	104.3
Upland and Kaingin Palay	100.8	106.8	106.9	50.0	65.1	79.7	96.8	106.5
Farms without Irrigation	14.7	18.3	20.4	10.3	57.7	21.4	21.5	22.3
Lowland Palay	27.8	30.6	29.8	37.0	31.8	33.4	30.5	45.3
Upland and Kaingin Palay	46.3	38.4	37.7	41.1	33.3	48.8	38.8	53.5
	19.9	13.7	18.3	10.8	18.7	12.8	18.1	25.0
C. Annual Production per Ha. (cavan)^{1/2/}								
Farms with Irrigation Facilities	59.0	42.6	34.5	45.8	19.8	59.8	40.2	41.3
Lowland Palay	79.5	62.4	54.3	53.3	33.2	72.4	63.0	58.8
Upland and Kaingin Palay	81.9	63.4	55.2	53.4	33.8	73.0	64.2	59.4
Farms without Irrigation	19.9	20.0	21.3	20.6	21.4	20.5	20.7	20.8
Lowland Palay	32.7	25.6	21.3	42.9	18.6	37.7	24.4	30.6
Upland and Kaingin Palay	46.0	30.4	24.9	45.2	20.1	49.9	28.1	34.2
	21.0	12.2	14.9	19.1	11.5	13.2	16.2	19.8

1/ cavan = 44 kg.

2/ Denominators for farms with and without irrigation figures are physical farm hectarage, while denominators for lowland and upland palay figures are crop hectarage (first crop for lowland palay), which results in some overlap in the latter and small discrepancies between a few subtotals and their components.

Source: Calculated from Table _____.

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Table 16. Palay: Percentage of Farms Reporting by Irrigation Facilities and Type of Crop (Upland or Lowland) and by Province, Bicol Region V, 1971.

Type of Farm and Crop	Albay	Camarines Norte	Camarines Sur	Latanduanes	Masbate	Sorsogon	Region V Bicol	Region V Bicol (No.)	Philippines (1000)
A. <u>Total No. of Farms Growing Palay</u>	<u>32,032</u>	<u>7,386</u>	<u>57,767</u>	<u>7,620</u>	<u>12,991</u>	<u>14,664</u>	<u>132,460</u>		<u>1,462.5</u>
Percentage:	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0
Farms with Irrigation Facilities	47.3	38.1	32.8	26.3	7.1	58.6	36.6		33.5
Lowland Palay	44.8	36.5	31.6	26.1	6.9	57.8	35.3		32.6
Upland and Kaingin Palay	3.0	1.6	1.2	0.2	0.2	0.8	1.4		0.9
Farms without Irrigation	52.7	61.9	67.2	73.7	92.9	41.4	63.4		66.5
Lowland Palay	15.0	42.1	39.8	63.5	79.0	23.7	37.4		46.9
Upland and Kaingin Palay	38.6	20.2	27.4	10.1	17.3	17.7	26.6		19.9
B. <u>Percentage of Regional</u>									<u>Bicol % of</u>
<u>Totals of Farms Growing Palay</u>	<u>24.2</u>	<u>5.6</u>	<u>43.6</u>	<u>5.8</u>	<u>9.8</u>	<u>11.1</u>	<u>100.0</u>	<u>132,460</u>	<u>Philippines</u>
Farms with Irrigation Facilities	31.3	5.8	39.1	4.1	1.9	17.7	100.0	48,431	9.9
Lowland Palay	30.8	5.8	39.1	4.3	1.9	18.2	100.0	46,694	9.8
Upland and Kaingin Palay	49.9	6.2	35.4	0.8	1.6	6.1	100.0	1,895	14.6
Farms without Irrigation	20.1	5.4	46.2	6.7	14.4	7.2	100.0	84,029	8.6
Lowland Palay	9.7	6.3	46.5	9.8	20.7	7.0	100.0	49,518	7.2
Upland and Kaingin Palay	35.1	4.2	44.8	2.2	6.4	7.4	100.0	35,280	12.1

Source: Calculated from Table A.

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Table 17. Shelled Corn: Farms Reporting, Effective Area Planted and Production, by Province, Regions V, VI and VIII, 1971.

Province and Region	No. of Farms ^{1/}	Farm % of Regional Total	Effective Crop Area Planted ^{2/} (Ha.)	Effective Ha. per Farm	Annual Production (1000 cavans) ^{3/}	Cavans per Farm	Cavans per Effective Ha.
Albay	15,795	20.3	16,436	1.04	200.27	12.7	12.2
Camarines Norte	1,631	2.1	1,237	.76	30.88	18.9	25.0
Camarines Sur	22,551	29.0	27,332	1.21	317.62	14.1	11.6
Catanduanes	2,653	3.4	1,852	.70	28.95	10.9	15.6
Masbate	32,387	41.7	82,205	2.54	631.06	19.5	7.7
Sorsogon	2,675	3.4	2,642	.99	38.66	14.5	14.6
Bicol Region V	77,692	100.0	131,704	1.70	1,247.44	16.1	9.5
-- % of Philippines	7.8		5.7	73.6	3.7	47.2	64.6
Aklan	1,839	3.1	1,486	.81	14.33	7.8	9.6
Antique	8,355	14.2	5,368	.64	36.85	4.4	6.9
Capiz	4,641	7.9	7,215	1.55	98.22	21.2	13.6
Iloilo	19,765	33.7	17,264	.87	147.35	7.5	8.5
Negros Occidental	24,118	41.1	55,271	2.29	567.92	23.5	10.3
W. Visayas Region VI	58,718	100.0	86,604	1.47	864.67	14.7	10.0
-- % of Philippines	5.9		3.8	63.6	2.6	43.1	68.0
Leyte	40,538	65.5	63,058	1.55	865.90	21.4	13.7
S. Leyte	2,279	3.7	1,330	.58	25.72	11.3	19.3
E. Samar	270	0.4	260	.96	4.91	18.2	18.9
N. Samar	1,909	3.1	1,941	1.02	25.22	13.2	13.0
W. Samar	16,888	27.3	19,856	1.18	376.38	22.3	19.0
E. Visayas Region VIII	61,884	100.0	86,445	1.40	1,298.13	21.0	15.0
-- % of Philippines	6.2		3.8	60.5	3.8	61.6	102.2
PHILIPPINES	990,630		2,293,118	2.31	33,796.45	34.1	14.7

1/ Number of farms reporting any corn production.

2/ Each crop during the year is counted cumulatively.

3/ Cavan = 57 kilos

Source: 1971 Census of Agriculture, NCSO, Table 16.

USAID/Philippines, OD/PE, 6/1/81, CSC, cst

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Table 18. Coconut: Farms Reporting, Area Planted, Trees and Production by Province, Regions V, VI, and VIII, 1971

Province and Region	No. of Farms ^{1/}	Farm % of		Ha. per farm	Total No. of Trees (1000)	% of Trees		Production (1000 nuts)	Nuts per farm (1000)	Nuts per hectare (1000)	No. of Trees bearing per ha.	No. of Nuts per bearing tree
		Regional Total	Hectares Planted			Bearing (1000)	Bearing (1000)					
Albay	24,930	18.9	54,446	2.18	7,308	4,449	60.9	102,643	4.12	1.89	82	23
Camarines Norte	12,545	9.5	63,058	5.03	7,894	5,154	65.3	87,116	6.94	1.38	82	17
Camarines Sur	37,234	28.2	114,830	3.08	15,608	9,952	63.8	102,986	2.76	.90	87	10
Catanduanes	7,537	5.7	11,902	1.58	1,357	695	51.2	7,403	.98	.62	58	11
Masbate	27,570	20.9	67,237	2.44	7,385	4,322	58.5	109,056	3.96	1.62	64	25
Sorsogon	22,197	16.8	63,312	2.85	7,583	4,808	63.4	122,741	5.53	1.94	76	26
Bicol Region V	132,013	100.0	374,785	2.84	47,135	29,380	62.3	531,945	4.03	1.42	78	18
-- % of Philippines	12.1		17.6		18.0		18.6	12.6				
Aklan	16,080	20.8	17,310	1.08	1,673	1,128	67.4	24,301	1.51	1.40	65	22
Antique	12,331	16.0	5,721	.46	661	407	61.6	9,752	.79	1.70	71	24
Capiz	11,402	14.8	7,945	.70	765	462	60.4	13,184	1.16	1.66	58	29
Iloilo	27,909	36.2	15,173	.54	1,712	906	52.9	22,326	.80	1.47	60	25
Negros Occidental	9,469	12.3	18,738	1.98	2,097	1,160	55.3	23,196	2.45	1.24	62	20
W. Visayas Region VI	77,191	100.0	64,887	.84	6,908	4,063	58.8	92,759	1.20	1.43	63	23
-- % of Philippines	7.1		3.0		2.6		2.6	2.3				
Leyte	62,040	41.4	105,145	1.69	12,741	7,117	55.9	237,013	3.82	2.25	68	33
S. Leyte	20,735	13.8	35,574	1.72	3,790	2,378	62.7	54,047	2.61	1.52	67	23
E. Samar	21,406	14.3	55,653	2.60	7,981	4,823	60.4	99,939	4.67	1.80	87	21
N. Samar	23,468	15.6	74,939	3.19	9,686	6,007	62.0	165,798	7.06	2.21	80	28
W. Samar	22,385	14.9	37,647	1.68	5,641	3,127	55.4	82,803	3.70	2.20	83	26
E. Visayas Region VIII	150,034	100.0	308,958	2.06	39,839	23,452	58.9	639,600	4.26	2.07	76	27
-- % of Philippines	13.7		14.5		15.2		14.8	15.1				
PHILIPPINES	1,093,085		2,127,547	1.95	262,059	158,279	60.4	4,232,359	3.87	1.99	74	27

1/ Number of farms reporting some coconut production, not just those depending mainly on coconut.

Source: 1971 Census of Agriculture, NCSO, Table 21

USAID/PHILIPPINES, OD/PE, 5/27/81, CSC, cst

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Table 19
Livestock Population in Bicol by Province, 1976-1979
(in thousand heads)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
Cattle				
Albay	14.2	22.7	27.0	16.9
Camarines Norte	3.7	4.4	5.4	5.4
Camarines Sur	21.5	21.3	29.4	21.7
Catanduanes	2.0	1.5	2.5	1.8
Masbate	60.0	59.2	77.4	57.9
Sorsogon	6.8	7.0	9.2	8.6
TOTAL	108.2	116.2	150.9	112.4
Carabao				
Albay	42.9	51.1	49.3	47.6
Camarines Norte	17.0	18.1	20.3	22.3
Camarines Sur	72.6	71.6	72.0	60.8
Catanduanes	13.9	14.3	16.8	17.2
Masbate	48.6	52.0	66.2	58.1
Sorsogon	38.5	33.3	28.1	32.1
TOTAL	233.4	240.3	252.7	238.1
Hog				
Albay	102.4	98.7	108.4	124.5
Camarines Norte	26.1	22.1	29.4	40.7
Camarines Sur	157.8	127.1	200.3	214.8
Catanduanes	34.8	23.1	37.1	36.8
Masbate	115.7	72.3	85.1	84.5
Sorsogon	65.6	57.6	63.0	76.0
TOTAL	502.3	400.8	523.4	577.3

SOURCES: Bureau of Animal Industry (BAI)
Ministry of Agriculture

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Table 20. Annual Fish Production per Fisherman by Type of Fishery, by Province, Bicol Region V, 1978

	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Bicol Region V	Bicol Without Camarines Sur
Municipal Fisheries: 1978 Production (M.T.),	2924	13851	12759	11180	41560	40058	122332	
No. of Fishermen (1979)	9484	5993	18944	4846	28185	11493	78945	
Catch per Fisherman (M.T.)	.31	2.31	.67	2.31	1.47	3.49	1.55	
-- Average Value (pesos)	1642	12234	3548	12234	7785	18483	8209	
Commercial Fisheries: 1978 Production (M.T.)	1382	9003	26436	89	378	62	37400	10914
No. of Fishermen (1979)	682	4105	329	27	607	118	5868	5539
Catch per Fisherman (M.T.)	2.03	2.19	80.50	3.30	.52	.52	6.37	1.9
-- Average Value (pesos)	16236	17516	643839	26393	4959	4159	50947	15759
Fishponds: 1978 Production (M.T.)	129	412	881	157	2210	546	4335	
No. of Operators (1979)	25	59	82	50	236	61	513	
Production per Operator (M.T.)	5.16	6.98	10.74	3.14	9.36	8.95	8.45	
-- Average Value (pesos)	35351	47820	73580	21512	64125	61316	57891	

Note: Commercial fishermen are defined as those operating boats weighing 3 tons or more and who are licensed to fish in waters 7 fathoms or deeper or 3 miles and farther off-shore. Municipal fishermen are those with smaller boats who are licensed to fish in the shallower waters closer to shore.

Sources: Bureau of Fisheries and Aquatic Resources (BFAR), Region V, Naga City and Manila. Average 1978 values per metric ton of ₱5296 for municipal catch, ₱7998 for commercial catch, and ₱6851 for fishpond production calculated from 1980 Philippine Statistical Yearbook, NEDA, Manila, 1980, p. 282. These average national values do not necessarily represent the amounts received by the fisherman and would in any case represent a gross value of the catch before costs are deducted. 1978 production figures are the latest available and 1979 estimates as to the number of fishermen in each category are the only ones available. Production totals are not considered very accurate and probably vary more from year to year than do the fishermen figures. These data should be considered illustrative of orders of magnitude only.

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Table 21.

Number of Manufacturing Establishments
in Bicol, 1977

<u>Industries</u>	<u>Number of Establishments</u>	<u>Total Employment</u>	<u>Capital Expenditures during the Year (P000)</u>	<u>Gross Output (P000)</u>
Food	2,090	6,904	7,487	409,669
Beverage	10	540	9,189	35,166
Textiles (incl. weaving)	1,261	3,837	688	37,639
Wearing Apparel	1,415	3,127	5,925	7,899
Wood Products	9	264	5,655	7,596
Furniture	113	339	-	2,783
Paper	3	384	13,016	17,176
Printing & Publishing	42	205	6	2,140
Metal Products	196	453	1	1,216
Other Non-Metallic Products	44	150	-	1,703
Machinery & Equipment	26	180	186	2,752
Other Mftg. Industries	83	449	31	5,851
Total Manufacturing	5,292	16,832	42,184	531,590

Source: 1977 Annual Survey of Establishments (Preliminary Report) NCSO.

Table 22. Electricity Supply, 1970 and 1978

		Percentage of households supplied with Electricity	
		1970	1978 ^{a/}
<u>Philippines</u>		22.7	32.0
<u>Luzon</u>		33.2	37.4
I	Ilocos	39.3	37.0
II	Cagayan	4.4	9.0
III	Central Luzon	27.1	63.0
IV	Metro Manila	91.8	
IV-A	Southern Tagalog	18.7	61.0
V	Bicol	8.1	17.0
<u>Visayas</u>		7.2	15.7
VI	W. Visayas	7.6	18.0
VII	C. Visayas	9.3	18.0
VIII	E. Visayas	4.7	11.0
<u>Mindanao</u>		9.1	13.5
IX	W. Mindanao	7.9	10.0
X	N. Mindanao	9.3	14.0
XI	E. Mindanao	11.3	15.0
XII	C. Mindanao	8.0	15.0

a/ The 1978 data refers to electricity supplied to dwelling units, not households.

Source: National Electrification Administration, Annual Report, 1978, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 220.

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Table 23: REGION V BICOL

1970 Household Data

<u>Provinces</u>	<u>Total No. Households (000's)</u>	<u>% Without Safe Water</u>	<u>No. (000's)</u>	<u>% Without Sanitary Toilets</u>	<u>No. (000's)</u>
Albay	109.8	42.0	46.1	90.0	98.8
Camarines Norte	41.5	61.0	25.3	96.0	39.8
Camarines Sur	151.8	42.0	63.7	79.0	120.0
Catanduanes	26.2	20.0	5.2	86.0	22.5
Masbate	83.7	77.0	64.4	97.0	81.2
Sorsogon	69.3	49.0	33.9	89.0	61.6
Total	482.3	49.0	238.6	88.0	423.9

Source: NEDA - Regional Development Information 1978, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 60.

Table 24
Number of Establishments in the Services Sector, 1978
Bicol Region

	Albay	Camarines Norte	Camarines Sur	Catanduanes	Masbate	Sorsogon	Region V	Total Philippines
Wholesale and retail trade	7,552	2,457	6,273	1,572	2,377	3,265	23,496	306,895
Transportation, Storage & Communication	1,420	521	1,197	173	205	503	4,019	56,014
Financing, insurance, real estate & business services	201	104	149	18	37	39	548	11,924
Community, Social & personal services	1,235	721	1,312	154	325	445	4,192	77,143
Total	10,408	3,803	8,931	1,917	2,945	4,252	32,255	451,976

Source: Journal of Philippine Statistics, NCSO, April-June 1979.

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Table 25. DISTRIBUTION OF HOSPITAL BEDS AND HEALTH MANPOWER

		<u>Population per bed</u>	<u>Population per physician</u>	<u>Population per nurse</u>	<u>Population per midwife^{1/}</u>
<u>Philippines</u>		<u>833</u>	<u>3,125</u>	<u>5,000</u>	<u>5,882</u>
<u>Luzon</u>		<u>588</u>	<u>2,500</u>	<u>5,000</u>	<u>5,556</u>
I	Ilocos	<u>769</u>	<u>2,000</u>	<u>2,273</u>	<u>2,702</u>
II	Cagayan	1,428	4,762	6,250	6,667
III	Central Luzon	1,428	4,167	7,143	5,882
IV	Metro Manila	344	1,724	4,762	5,556
IV-A	Southern Tagalog				
V	Bicol	1,667	5,263	8,333	9,091
<u>Visayas</u>		<u>1,250</u>	<u>3,846</u>	<u>3,846</u>	<u>5,882</u>
VI	W. Visayas	<u>2,000</u>	<u>3,703</u>	<u>3,125</u>	<u>5,263</u>
VII	C. Visayas	1,111	3,030	2,941	6,250
VIII	E. Visayas	1,667	6,250	7,143	8,333
<u>Mindanao</u>		<u>1,667</u>	<u>6,250</u>	<u>8,333</u>	<u>7,962</u>
IX	W. Mindanao	<u>2,500</u>	<u>6,667</u>	<u>6,250</u>	<u>9,091</u>
X	N. Mindanao	1,428	4,762	10,000	5,556
XI	E. Mindanao	1,667	6,667	12,500	9,091
XII	C. Mindanao	2,500	6,667	11,111	7,143

Source: National Economic and Development Authority, Regional Planning Studies, #6: Health Issues and Strategies, June 1979, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 213.

^{1/} Per employed midwife. Midwifery is a popular college field of instruction in Bicol and there are many persons trained as midwives who are either unemployed or employed in some other occupation.

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Table 26. LITERACY RATES BY REGION (1970)

<u>Region</u>	<u>Total</u>	<u>Urban</u>	<u>Rural</u>
<u>Philippines</u>	<u>83.4</u>	<u>92.7</u>	<u>78.7</u>
Male	86.6 ^{a/}	94.8	80.3
Female	85.7 ^{a/}	92.2	77.2
<u>Luzon</u>	<u>87.9</u>		
I Ilocos	83.1	90.8	81.1
II Cagayan	78.8	89.9	76.8
III Central Luzon	90.4	94.2	88.5
IV Metro Manila	95.7	96.0	87.8
IV-A Southern Tagalog	88.2	93.9	85.7
V Bicol	86.4	92.1	85.1
<u>Visayas</u>	<u>79.2</u>		
VI W. Visayas	82.2	91.7	78.5
VII C. Visayas	77.8	88.1	73.6
VIII E. Visayas	77.6	88.1	74.9
<u>Mindanao</u>	<u>74.3</u>		
IX W. Mindanao	65.5	82.4	62.0
X N. Mindanao	83.7	92.1	81.4
XI E. Mindanao	81.8	91.5	78.4
XII C. Mindanao	66.7	80.3	64.1

a/ These percentages are for 1975.

Source: National Economic and Development Authority, Regional Development Information, 1978, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 216.

Table 27. REGIONAL DISTRIBUTION OF ELEMENTARY AND SECONDARY SCHOOLS (1978-79) AND SCHOOL AGE POPULATION (1978)

	Elementary schools ^{a/}		Secondary schools ^{a/}	
	Distribution of schools (%)	Distribution (%) of school age population	Distribution of schools (%)	Distribution (%) of school age population
<u>Philippines</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
<u>Luzon</u>	<u>46.1</u>	<u>52.1</u>	<u>54.6</u>	<u>54.5</u>
I Ilocos	9.3	7.2	16.3	7.4
II Cagayan Valley	6.8	4.5	4.0	4.7
III Central Luzon	7.8	10.2	8.1	10.6
IV Metropolitan Manila	2.6	8.1	3.5	10.7
IVA Southern Tagalog	10.8	14.3	15.3	12.9
V Bicol	8.8	7.8	7.4	8.2
<u>Visayas</u>	<u>27.5</u>	<u>22.0</u>	<u>25.1</u>	<u>22.3</u>
VI Western Visayas	9.6	8.8	12.2	9.0
VII Central Visayas	8.1	7.6	4.7	7.3
VIII Eastern Visayas	9.8	5.6	8.2	5.8
<u>Mindanao</u>	<u>25.0</u>	<u>25.8</u>	<u>20.5</u>	<u>23.2</u>
IX Western Mindanao	6.4	5.8	4.2	5.2
X Northern Mindanao	7.0	6.1	7.4	5.8
XI Eastern Mindanao	6.7	7.7	6.5	6.7
XII Central Mindanao	4.9	6.2	2.4	5.5

^{a/} The coverage is limited to the schools which submitted the requisite information to the Ministry.

Source: Ministry of Education and Culture Statistical Bulletin, 1979, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 219.

Table 28. ELEMENTARY AND SECONDARY SCHOOL ENROLLMENT RATES, 1975

<u>Region</u>	<u>Enrollment Rates</u>	
	<u>Elementary</u>	<u>Secondary</u>
<u>Philippines</u>	<u>105.1</u>	<u>48.0</u>
<u>Luzon</u>	<u>100.9</u>	<u>46.3</u>
I Ilocos	114.7	84.2
II Cagayan Valley	116.9	30.0
III Central Luzon	113.0	37.4
IV Metro Manila	85.5	47.3
IVA Southern Tagalog	86.1	49.7
V Bicol	111.3	29.1
<u>Visayas</u>	<u>115.6</u>	<u>58.7</u>
VI Western Visayas	139.2	64.3
VII Central Visayas	101.0	74.0
VIII Eastern Visayas	101.0	37.4
<u>Mindanao</u>	<u>105.5</u>	<u>42.2</u>
IX Western Mindanao	93.3	17.2
X Northern Mindanao	98.1	35.9
XI Eastern Mindanao	131.9	51.4
XII Central Mindanao	99.4	64.3

Source: NEDA/IBRD Regional Planning Project, Education Strategies for Regional Development, August 1976, as reported in World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, (Draft) May 9, 1980, Vol. III, p. 218.

Table 29
Bicol Household Population, 10 Years Old & Over
By Gainful and Non-Gainful Occupation, 1975

	<u>Sorsogon</u>	<u>Masbate</u>	<u>Catanduanes</u>	<u>Camarines Sur</u>	<u>Camarines Norte</u>	<u>Albay</u>	<u>Region V</u>	<u>Philippines</u>
Total Population (10 years and over) (number)	296,647	348,312	118,346	688,248	191,254	493,455	2,136,262	29,149,000
(% of total population):	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Non-Gainful Occupations	58.1	57.8	60.6	56.8	55.4	53.8	54.7	53.9
Housekeepers	25.2	25.9	22.8	23.5	24.2	21.7	23.9	21.9
Students	24.9	22.7	29.5	26.8	26.6	24.6	24.2	24.1
Pensioners & other related	0.6	0.2	0.5	0.9	0.7	0.5	0.5	0.9
Other non-gainful activity or no activity reported	7.3	9.1	7.7	5.6	3.9	6.9	6.1	7.0
Volunteers	.08	.08	.05	.06	.03	.07	.06	.06
New Entrants	1.9	2.7	1.8	4.3	4.5	3.0	3.1	3.5
Gainful Occupations	40.0	39.5	37.6	38.9	40.1	43.1	40.4	42.6
Gainful Occupations (number)	118,768	137,470	44,512	275,906	74,440	212,906	864,002	12,418,996
(% of gainfully employed):	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Wage and salary earner	30.0	26.6	25.3	29.1	32.3	33.7	30.0	42.5
Private	23.3	21.9	13.5	22.3	24.6	27.3	23.3	34.7
Government	6.7	4.7	11.8	6.8	7.7	6.4	6.7	7.8
In Own Business	53.8	54.9	57.0	49.1	53.5	50.1	51.7	41.1
Self-Employed	51.7	51.5	55.9	44.9	51.8	44.6	48.0	38.4
Employer	2.1	3.4	1.1	4.3	1.8	5.5	3.8	2.7
Unpaid Family Worker	15.4	17.9	17.1	21.2	13.8	15.4	17.6	15.6
Not stated	0.7	0.6	0.6	0.6	0.4	0.8	0.7	0.8

Source: 1975 Integrated Census of the Population and Its Economic Activities, NCSO.

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Table 30
Bicol Household Population, 10 Years Old & Over,
Gainfully Employed by industry, 1975
(percent of total employed)

Industry	Sorsogon	Masbate	Catanduanes	Camarines Sur	Camarines Norte	Albay	Region V	Philippines
Agriculture	68.47	80.84	70.30	68.03	62.01	53.78	65.22	54.34
Agricultural Production	56.92	69.89	65.05	62.52	51.61	49.43	58.89	49.2
Hunting, trapping & game propagation	0.02	0.01	0.004	0.02	0.03	0.01	0.02	0.02
Forestry & logging	1.04	0.10	0.63	0.30	0.70	0.26	0.41	0.42
Fishing	10.49	10.84	4.62	5.19	9.67	4.08	6.90	4.7
Mining & Quarrying	0.05	0.11	0.12	0.10	2.39	0.17	0.31	0.47
Manufacturing	8.32	2.51	2.87	5.22	6.16	18.52	8.45	10.7
Food, manufactured	0.52	0.33	0.24	0.80	0.88	0.81	0.67	1.4
Textiles	3.08	0.33	0.12	0.41	0.14	10.03	3.10	1.4
Footwear & other wearing apparel	2.13	0.96	1.32	1.86	2.11	2.19	1.83	2.8
Wood and cork products	0.55	0.10	0.29	0.72	1.39	0.88	0.67	0.77
Furniture & fixtures	0.14	0.07	0.11	0.14	0.22	0.20	0.15	0.26
Transport Equipment	0.16	0.29	0.20	0.14	0.43	0.36	0.25	0.60
Electricity, gas, water & sanitary services	0.16	0.03	0.20	0.11	0.19	0.24	0.15	0.29
Construction	2.53	0.89	2.85	2.27	2.72	3.07	2.35	3.4
Commerce	5.33	3.47	4.56	5.82	7.60	6.01	5.51	8.3
Wholesale trade	0.53	0.33	0.30	0.84	1.25	0.72	0.69	0.94
Retail trade	4.54	3.01	4.09	4.59	5.95	4.91	4.50	6.5
Financial Institution	0.10	0.02	0.09	0.19	0.22	0.18	0.15	0.43
Transport, Commun. & Storage	2.14	1.03	2.05	2.48	3.52	3.15	2.43	4.2
Transport	1.93	0.95	1.72	2.34	3.32	2.90	2.25	3.9
Communication	0.14	0.08	0.27	0.14	0.17	0.21	0.16	0.24
Services	11.81	9.90	16.37	13.70	14.20	13.73	13.02	17.0
Government	2.36	1.37	3.79	3.18	4.11	2.52	2.73	3.8
Community	4.06	3.63	7.57	3.85	3.67	3.87	4.02	4.3
Business	0.46	0.58	0.36	0.70	0.83	1.40	0.81	1.7
Recreational	0.11	0.05	0.10	0.15	0.18	0.14	0.13	0.27
Personal	4.82	4.28	4.54	5.82	5.41	5.81	5.33	7.0
Industry not adequately described	1.19	1.22	0.68	2.29	1.20	1.32	1.55	1.4
TOTAL EMPLOYED (number)	100.0 118,768	100.0 137,470	100.0 44,512	100.0 275,906	100.0 74,440	100.0 212,906	100.0 864,002	100.0 12,418,996

Note: Percentage may not add up to total because some industries are omitted.
Source: 1975 Integrated Census of the Population and Its Economic Activities, NCSO.

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Table 31
 REGION V - Bicol Household Population, 10 Years Old & Over,
 Gainfully Employed by Occupation, 1975
 (percent of total employed)

Occupation	Sorsogon	Masbate	Catanduanes	Camarines Sur	Camarines Norte	Albay	Region V	Philippines
Professional, technical & related	4.4	3.5	7.1	4.3	4.9	4.2	4.3	5.1
Professors & teachers	3.3	3.0	5.9	3.1	3.5	3.0	3.3	3.1
Physicians, surgeons & dentists	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Nurses, midwives & other medical	0.4	0.2	0.4	0.3	0.3	0.3	0.3	0.4
Administrative, exec. & managers	0.5	0.3	0.5	0.7	0.9	0.7	0.6	1.1
Clerical workers	1.0	0.8	2.0	1.2	2.2	2.0	1.5	3.9
Private wage & salary	0.3	0.2	0.3	0.5	1.0	0.8	0.5	2.3
Government wage & salary	0.7	0.6	1.7	0.7	1.1	1.2	0.9	1.6
Sales workers	5.1	3.4	4.4	5.8	7.1	5.7	5.3	7.5
Working Prop., wholesale & retail	2.3	1.9	3.0	2.8	3.7	3.1	2.8	3.3
Salesmen & related workers	2.6	1.4	1.2	2.7	3.2	2.3	2.3	3.8
Farmers, fishermen, hunters & loggers	67.4	81.3	69.7	67.7	62.0	53.6	66.0	53.9
Farmers & farm managers	34.9	42.7	46.8	39.2	36.9	31.7	37.5	28.1
Wage & salary	0.4	1.0	1.0	2.6	0.6	0.6	1.3	0.95
In own business	34.5	41.7	45.8	36.6	36.2	31.0	36.2	27.1
Farm workers	21.0	27.6	17.8	23.0	14.9	17.5	21.1	20.9
Wage & salary	8.7	11.2	1.3	3.8	2.6	5.8	5.9	6.9
Unpaid family worker	12.2	16.3	16.4	19.0	12.3	11.6	15.1	13.9
Hunters	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01
Fishermen	10.5	10.9	4.6	5.1	9.6	4.0	6.9	4.6
Wage & Salary	1.0	2.1	0.4	0.4	2.5	0.4	0.9	0.8
In own business	7.8	7.6	3.9	3.7	6.1	3.1	5.0	3.2
Unpaid family worker	1.5	1.2	0.4	0.9	0.9	0.5	0.9	0.6
Loggers & other forestry	1.0	0.1	0.4	0.3	0.6	0.3	0.4	0.3
Miners, quarrymen & related	0.07	0.04	0.09	0.14	1.06	0.18	0.2	0.3
Transport & Communications	1.9	0.9	2.0	2.4	3.7	2.2	2.3	4.3
Drivers, road transport	1.4	0.6	1.5	1.9	2.9	2.1	1.7	3.4

(cont.)

Table 31 (Cont.)
 REGION V - Bicol Household Population, 10 Years Old & Over,
 Gainfully Employed by Occupation, 1975
 (percent of total employed)

Occupation	Sorsogon	Masbate	Catanduanes	Camarines Sur	Camarines Norte	Albay	Region V	Philippines
Craftsmen, Production Process	11.4	3.3	6.7	7.4	9.2	21.4	10.9	12.7
Spinners, weavers, knitters, dyers	2.9	0.1	0.7	0.8	0.1	7.7	2.6	.9
Tailors, sewers, embroiderers	1.7	0.9	1.3	1.9	2.1	2.0	1.7	2.5
Toolmakers, machinists, etc.	0.4	0.2	0.5	0.6	1.2	0.7	0.6	1.5
Carpenters, cabinetmakers	2.1	1.1	2.3	2.0	2.9	2.1	2.0	2.5
Service, sports & related	5.1	4.8	6.0	6.6	6.6	6.4	6.0	8.1
Firefighters, police, guards	0.6	0.3	0.6	0.7	0.9	0.6	0.6	1.0
Housekeepers, cooks, maids	3.3	3.9	3.9	4.7	3.7	4.4	4.2	5.3
Stevedores & related freight handlers	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.3
Laborers N.E.C.	1.9	1.0	0.8	1.5	1.4	2.0	1.5	1.5
Other N.E.C. & Unidentified Occupation	0.8	0.4	0.4	2.0	0.8	0.8	1.1	1.2
TOTAL EMPLOYED	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(number)	118,768	137,470	44,512	275,906	74,440	212,906	864,002	12,418,996

Source: 1975 Integrated Census of the Population and Its Economic Activities, NCSO.

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Table 32
 Number of Families and Average Family
 Income by Province, Bicol, 1975

	<u>No. of Families (000s)</u>	<u>% share of Regional Total</u>	<u>Total Family Income (Million Pesos)</u>	<u>Average Family Income (Pesos)</u>	<u>% of Regional Total</u>
Albay	119.8	23.1	593	4950	115.7
Urban	14.3	16.4	74	5175	90.1
Rural	105.5	24.5	519	4919	123.5
Camarines Norte	41.9	8.1	211	5036	117.7
Urban	11.3	13.0	59	5221	90.9
Rural	30.6	7.1	152	4967	124.7
Camarines Sur	163.0	31.5	751	4607	107.6
Urban	31.3	35.9	184	5879	102.3
Rural	131.7	30.6	567	4305	108.0
Catanduanes	28.4	5.5	91	3204	74.9
Urban	4.9	5.6	36	7347	127.9
Rural	23.5	5.5	55	2340	58.7
Masbate	89.9	17.4	239	2659	62.1
Urban	11.0	12.6	46	4182	72.8
Rural	78.9	18.3	193	2446	61.4
Sorsogon	74.7	14.4	331	4431	103.5
Urban	14.4	16.5	102	7083	123.3
Rural	60.3	14.0	229	3798	95.3
Bicol - Region V	517.7	100.0	2216	4280	100.0
Urban	87.2	100.0	501	5745	100.0
Rural	430.5	100.0	1715	3984	100.0
Philippines	6859.3		40059	5840	
Urban	2095.8		17456	8329	
Rural	4763.5		22603	4745	

Source: NCSO, Special Release: Family and Expenditure Survey, 1975.

Table 33. Composition and Incidence of Poverty by Occupation, Bicol (Region V), 1971

<u>Occupation</u>	<u>No. of Families (1000)</u>	<u>% Composition of Families</u>	<u>% Incidence of Poverty^{1/}</u>	<u>No. of Poor Families (1000)</u>	<u>% Composition of Poor</u>
Agricultural	267	53.8	65.5	174.9	72.2
Farmers	239	48.2	63.8	152.2	63.0
- Farmer owners	75	15.1	59.5	44.6	18.4
- Farmer part-owners	7	1.4	57.8	4.0	1.7
- Farmer tenants	130	26.2	66.1	83.9	34.7
- Farmers not specif. and tuba gatherers	27	5.4	73.9	20.0	8.3
Farm laborers	28	5.6	80.0	22.4	9.3
Fishermen, fishpond workers	25	5.0	55.6	13.9	5.7
Loggers & forestry	6	1.2	-	3.1	1.3
Miners, quarrymen	0	-	-	0.0	-
Transport & communications	15	3.0	28.0	4.2	1.7
Craftsmen, production workers	56	11.3	32.8	18.4	7.6
Services, sport & recreation	18	3.6	27.8	5.0	2.1
Sales workers	32	6.5	19.7	6.3	2.6
Clerical & related	19	3.8	10.5	2.0	0.8
Professional, technical	8	1.6	-	0.0	-
Admin., exec. & mgr.	13	2.6	12.3	1.6	0.7
Occupation not reported or adequately described	37	7.5	38.9	14.4	5.9
ALL OCCUPATIONS	496	100.0	48.8	242.1	100.0

^{1/} % below a poverty line of P500 per capita.

Source: World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, Report No. 2984-PH, Washington, D.C., December 1, 1980, Vol. II, p.154. Calculated from 1971 Family Income and Expenditure Survey (FIES) data tapes, National Census and Statistical Office (NCSO), Manila

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Table 34. Composition and Incidence of Poverty By Industrial Sector, Bicol (Region V), 1971

<u>Sector</u>	<u>No. of Families (1000)</u>	<u>% Composition of Families</u>	<u>% Incidence of Poverty^{1/}</u>	<u>No. of Poor Families (1000)</u>	<u>% Composition of Poor</u>
<u>Agriculture, Forestry & Fishery</u>	<u>300</u>	<u>60.5</u>	<u>63.7</u>	<u>191.0</u>	<u>78.9</u>
Agriculture	269	54.2	64.7	174.0	71.9
- Palay & corn	177	35.7	60.8	107.7	44.5
- Sugarcane	0	-	-	0.0	-
- Tobacco	1	0.2	-	1.0	0.4
- Abaca & Other Fibers	4	0.8	-	2.0	0.8
- Coconut	65	13.1	70.3	45.7	18.9
- Other Crops	19	3.8	76.6	14.6	6.0
- Livestock & Poultry	3	0.6	-	3.0	1.2
- Agr. Services	0	-	-	0.0	-
Forestry & Logging	6	1.2	-	3.1	1.3
Fishing, Hunting, & Trapping	25	5.0	55.6	13.9	5.7
<u>Industry</u>	<u>48</u>	<u>9.7</u>	<u>32.3</u>	<u>15.5</u>	<u>6.4</u>
Mining & Quarrying	0	-	-	0.0	-
Manufacturing	36	7.3	33.3	12.0	5.0
Elect., Gas, Water, Sanit.	1	0.2	-	0.0	-
Construction	11	2.2	32.0	3.5	1.4
<u>Services</u>	<u>110</u>	<u>22.2</u>	<u>19.0</u>	<u>20.9</u>	<u>8.6</u>
Commerce	39	7.9	27.7	10.8	4.5
- General Commerce	33	6.7	21.7	7.2	3.0
- Sari-Sari Store	6	1.2	-	3.6	1.5
- Hawking & Peddling	0	-	-	0.0	-
Transport, Stor. & Com.	16	3.2	18.5	3.0	1.2
Govt. & Commun. Serv.	39	7.9	13.1	5.1	2.1
Domestic Services	1	0.2	-	0.0	-
Personal Services other than Domestic	15	3.0	13.1	2.0	0.8
<u>Indus. not reported</u>	<u>37</u>	<u>7.5</u>	<u>39.5</u>	<u>14.6</u>	<u>6.0</u>
ALL SECTORS	496	100.0	48.8	242.1	100.0

^{1/} % below a poverty line of ₱500 per capita.

Source: World Bank, Aspects of Poverty in the Philippines: A Review and Assessment, Report No. 2984-PH, Washington, D.C., December 1, 1980, Vol. II, p. 155. Calculated from 1971 Family Income and Expenditure Survey (FIES) data tapes, National Census and Statistical Office (NCSO), Manila

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Table 35 A. Length of Farm Operations by Province, Regions V, VI, and VIII, 1971 (Number of Farms)

Province and Region	Total No. of Farms	Number of Farms by Length of Farm Operations					
		1-2 mo.	3-4 mo.	5-6 mo.	7-8 mo.	9-10 mo.	11-12 mo.
Albay	45,740	802	948	22,102	8,136	9,347	4,405
Camarines Norte	15,007	709	896	10,120	1,916	619	747
Camarines Sur	74,166	1,788	4,873	48,979	9,987	4,743	3,796
Catanduanes	16,239	363	909	11,457	3,037	243	228
Masbate	43,224	743	2,861	29,221	5,856	3,566	977
Sorsogon	28,647	458	1,036	19,629	4,435	1,611	1,478
Bicol Region V	223,023	4,863	11,523	141,508	33,367	20,129	11,631
Aklan	19,080	355	1,121	14,276	2,017	586	725
Antique	26,611	1,014	1,879	19,548	2,068	941	1,161
Capiz	28,914	555	1,461	18,339	3,782	2,909	1,868
Iloilo	75,464	933	2,060	38,532	20,780	7,913	5,247
Negros Occidental	40,635	1,082	5,653	18,834	7,092	4,081	3,893
W. Visayas Region VI	190,704	3,939	12,174	109,529	35,739	16,430	12,894
Leyte	89,236	2,375	6,049	54,809	9,064	5,304	11,635
S. Leyte	23,326	605	1,187	17,235	2,171	1,164	964
E. Samar	23,707	970	1,018	15,663	2,952	1,570	1,534
N. Samar	26,798	1,321	2,149	20,458	1,865	569	436
W. Samar	37,080	207	621	27,267	4,317	2,686	1,982
E. Visayas Region VIII	200,147	5,478	11,024	135,432	20,369	11,293	16,551
Philippines	2,354,469	46,903	117,015	1,429,389	362,597	227,365	171,200

Source: 1971 Census of Agriculture, NCSO, Table 46

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Table 35 B. Length of Farm Operations by Province, Regions V, VI, and VIII, 1971 (Percentage of Farms)

Province and Region	Total No. of Farms	Percentage of Farms by Length of Farm Operations					
		1-2 mo.	3-4 mo.	5-6 mo.	7-8 mo.	9-10 mo.	11-12 mo.
Albay	45,749	1.8	2.1	48.3	17.8	20.4	9.6
Camarines Norte	15,007	4.7	6.0	67.4	12.8	4.1	5.0
Camarines Sur	74,166	2.4	6.6	66.0	13.5	6.4	5.1
Catanduanes	16,239	2.2	5.6	70.6	18.7	1.5	1.4
Masbate	43,224	1.7	6.6	67.6	13.5	8.3	2.3
Sorsogon	28,647	1.6	3.6	68.5	15.5	5.6	5.2
Bicol Region V	223,023	2.2	5.2	63.4	15.0	9.0	5.2
Aklan	19,080	1.9	5.9	74.8	10.6	3.1	3.8
Antique	26,611	3.8	7.1	73.5	7.8	3.5	4.4
Capiz	28,914	1.9	5.1	63.4	13.1	10.1	6.5
Iloilo	75,464	1.2	2.7	51.1	27.5	10.5	7.0
Negros Occidental	40,635	2.7	13.9	46.3	17.5	10.0	9.6
W. Visayas Region VI	190,704	2.1	6.4	57.4	18.7	8.6	6.8
Leyte	89,236	2.7	6.8	61.4	10.2	5.9	13.0
S. Leyte	23,326	2.6	5.1	73.9	9.3	5.0	4.1
E. Samar	23,707	4.1	4.3	66.1	12.5	6.6	6.5
N. Samar	26,798	4.9	8.0	76.3	7.0	2.1	1.6
W. Samar	37,080	0.6	1.7	73.5	11.6	7.2	5.3
E. Visayas Region VIII	200,147	2.7	5.5	67.7	10.2	5.6	8.3
Philippines	2,354,469	2.0	5.0	60.7	15.4	9.7	7.3

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 46.

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Table 36. Farm Labor: Distribution and Average Number Employed by Quarter in Each Province, Regions V, VI and VIII, 1971

Province and Region	July-Sept. (1000)	Oct.-Dec. (1000)	Jan.-March (1000)	April-June (1000)	% Difference Highest/ Lowest	Average No. of Farm Workers Employed ^{1/}		
						Permanent	Temporary	Occasional
Albay	685.5	682.0	630.2	569.3	20.4	8	14	17
Camarines Norte	51.3	52.1	49.9	42.9	21.4	6	9	8
Camarines Sur	844.1	801.7	686.6	620.9	35.9	6	10	16
Catanduanes	117.5	118.9	104.6	71.2	67.0	6	14	12
Masbate	152.6	155.3	128.5	115.0	35.0	6	10	10
Sorsogon	151.5	169.8	151.2	157.2	12.3	6	11	8
Bicol Region V	2,002.5	1,979.8	1,751.0	1,576.5	27.0			
Aklan	195.4	208.7	163.6	173.1	27.6	8	9	13
Antique	366.9	510.0	166.8	183.2	205.8	5	3	5
Capiz	230.3	231.1	192.2	194.4	20.2	9	10	14
Iloilo	1,336.5	1,172.0	553.0	353.6	278.0	6	19	22
Negros Occidental	288.0	292.8	235.9	217.7	34.5	10	19	21
W. Visayas Region VI	2,417.1	1,414.6	1,311.5	1,122.0	15.4			
Leyte	571.3	650.0	558.4	540.3	20.3	7	12	14
S. Leyte	78.0	80.8	76.7	67.7	19.4	5	5	5
E. Samar	94.8	156.2	105.8	160.4	69.2	6	17	13
N. Samar	96.6	152.8	126.6	136.2	58.2	6	11	33
W. Samar	279.4	293.7	261.4	199.0	47.6	8	15	16
E. Visayas Region VIII	1,120.1	1,333.5	1,128.9	1,103.6	20.8			
Philippines	19,957.2	19,385.6	13,735.0	11,216.1	77.9	7	13	14

^{1/} Permanent workers are those employed on the farm for at least half the working time during the crop year. Temporary workers are those employed less than half but at least one third of the crop year; and occasional workers are those employed less than one third of the crop year working time.

Source: 1971 Census of Agriculture, NCSO, Table 45.

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Table 37 A. Off-Farm Employment of Farm Households by Province, Regions V, VI, and VIII, 1971 (Number of Farm Households)

Province and Region	Total Farm Households	No. of Farm Households Reporting Off-Farm Employment	Main Off-Farm Employment Occupation						
			Prof., Tech., Admin., Exec. & Managerial	Clerical Workers	Sales Workers	Farm Workers, Fishermen Hunters & Loggers	Transport & Communications	Craftsmen & Production Process	Others ^{1/}
Albay	45,740	14,637	195	240	1,275	3,154	165	7,402	2,206
Camarines Norte	15,007	3,171	102	135	499	534	138	1,279	481
Camarines Sur	74,166	22,776	418	597	3,036	5,698	341	9,508	3,178
Catanduanes	16,239	7,237	202	224	464	1,479	78	3,224	1,566
Masbate	43,224	4,235	197	68	610	1,615	39	1,048	658
Sorsogon	28,647	10,026	149	125	1,080	2,339	116	4,771	1,446
Bicol Region V	223,023	62,082	1,263	1,389	6,964	14,819	877	27,232	9,535
Aklan	19,080	5,678	322	175	485	366	76	3,479	775
Antique	26,611	8,987	355	205	618	1,426	57	4,474	1,852
Capiz	28,914	3,149	132	130	311	287	42	1,653	594
Iloilo	75,464	16,652	719	528	1,937	2,719	282	7,086	3,381
Negros Occidental	40,635	6,895	323	338	720	1,516	122	2,723	1,153
W. Visayas Region VI	190,704	41,361	1,851	1,376	4,071	6,314	579	19,415	7,755
Leyte	89,236	14,463	515	337	1,646	3,134	143	5,145	3,543
S. Leyte	23,326	6,575	166	227	587	1,880	51	2,793	871
E. Samar	23,707	3,677	311	146	588	858	51	991	712
N. Samar	26,798	4,371	242	261	642	1,216	50	1,363	597
W. Samar	37,080	5,837	159	149	938	1,907	34	1,499	1,151
E. Visayas Region VIII	200,147	34,923	1,393	1,120	4,401	8,995	329	11,791	6,874
Philippines	2,354,469	422,453	15,058	13,655	53,890	80,513	11,915	170,883	76,539

^{1/} Miners, quarrymen, service, sports, stevedores, military & workers not elsewhere classified or not classified.

Source: 1971 Census of Agriculture, NCSO, Table 47.

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Table 37 B. Off-Farm Employment of Farm Households by Province, Regions V, VI, and VIII, 1971 (Percentage of Farm Households).

Province and Region	Total Farm Households (Number)	% of Total Farm Households Reporting Off-Farm Employment	% By Main Off-Farm Employment Occupation						
			Prof., Tech., Admin., Exec. & Managerial	Clerical Workers	Sales Workers	Farm Workers, Fishermen, Hunters & Loggers	Transport & Communications	Craftsmen & Production Process	Others ^{1/}
Albay	45,740	32.0	0.4	0.5	2.8	6.9	0.4	16.2	4.8
Camarines Norte	15,007	21.1	0.7	0.9	3.3	3.6	0.9	8.5	3.2
Camarines Sur	74,166	30.7	0.6	0.8	4.1	7.7	0.5	12.8	4.3
Catanduanes	16,239	44.6	1.2	1.4	2.9	9.1	0.5	19.9	9.6
Masbate	43,224	9.8	0.5	0.2	1.4	3.7	0.1	2.4	1.5
Sorsogon	28,647	35.0	0.5	0.4	3.9	8.2	0.4	16.7	5.0
Iicol Region V	223,023	27.8	0.6	0.6	3.1	6.6	0.4	12.2	4.3
Aklan	19,080	29.8	1.7	0.9	2.5	1.9	0.4	18.2	4.1
Antique	26,611	33.8	1.3	0.8	2.3	5.4	0.2	16.8	7.0
Capiz	28,914	10.9	0.5	0.4	1.1	1.0	0.1	5.7	2.1
Iloilo	75,464	22.1	1.0	0.7	2.6	3.6	0.4	9.4	4.5
Negros Occidental	40,635	17.0	0.8	0.8	1.8	3.7	0.3	6.7	2.8
W. Visayas Region VI	190,704	21.7	1.0	0.7	2.1	3.3	0.3	10.2	4.1
Leyte	89,236	16.2	0.6	0.4	1.8	3.5	0.2	5.8	4.0
S. Leyte	23,326	28.2	0.7	1.0	2.5	8.1	0.2	12.0	3.7
E. Samar	23,707	15.5	1.3	0.6	2.5	3.6	0.2	4.2	3.0
N. Samar	26,798	16.3	0.9	1.0	2.4	4.5	0.2	5.1	2.2
W. Samar	37,080	15.7	0.4	0.4	2.5	5.1	0.1	4.0	3.1
E. Visayas Region VII	200,147	17.4	0.7	0.6	2.2	4.5	0.2	5.9	3.4
Philippines	2,354,469	17.9	0.6	0.6	2.3	3.4	0.5	7.3	3.3

^{1/} Miners, quarrymen, service, sports, stevedores, military & workers not elsewhere classified or not classified.

Source: Calculated from 1971 Census of Agriculture, NCSO, Table 47.

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Table 38. Households by Main Source of Income by Province, Bicol (Region V), 1975^{p/}

<u>Income Source</u>	<u>Albay</u>	<u>Cam. Norte</u>	<u>Cam. Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Total Region V</u>
Total Number of Households	<u>120,978</u>	<u>40,876</u>	<u>159,983</u>	<u>28,180</u>	<u>89,921</u>	<u>71,648</u>	<u>511,586</u>
A. Own Household Operated Activities	<u>68,958</u>	<u>24,150</u>	<u>108,511</u>	<u>21,699</u>	<u>75,881</u>	<u>50,338</u>	<u>349,537</u>
1. Farming/Gardening	<u>40,866</u>	<u>14,097</u>	<u>70,695</u>	<u>15,600</u>	<u>46,822</u>	<u>34,005</u>	<u>222,085</u>
2. Livestock/Poultry	<u>11,784</u>	<u>3,804</u>	<u>19,412</u>	<u>3,855</u>	<u>17,057</u>	<u>5,884</u>	<u>61,796</u>
3. Fishing	<u>3,009</u>	<u>2,238</u>	<u>6,803</u>	<u>722</u>	<u>7,429</u>	<u>3,906</u>	<u>24,107</u>
4. Manufacturing	<u>7,276</u>	<u>662</u>	<u>2,929</u>	<u>256</u>	<u>728</u>	<u>2,894</u>	<u>14,745</u>
5. Retail Trade	<u>3,818</u>	<u>2,137</u>	<u>5,616</u>	<u>591</u>	<u>2,698</u>	<u>2,355</u>	<u>17,215</u>
6. Other	<u>2,205</u>	<u>1,212</u>	<u>3,056</u>	<u>675</u>	<u>1,147</u>	<u>1,294</u>	<u>9,589</u>
B. Activities Not Operated by Household	<u>52,020</u>	<u>16,726</u>	<u>51,472</u>	<u>6,481</u>	<u>14,040</u>	<u>21,310</u>	<u>162,049</u>
1. Agriculture, Hunting, Forestry and Fishing	<u>16,536</u>	<u>4,639</u>	<u>15,797</u>	<u>563</u>	<u>4,999</u>	<u>6,911</u>	<u>49,445</u>
2. Mining & Quarrying	<u>60</u>	<u>1,065</u>	<u>211</u>	<u>-</u>	<u>50</u>	<u>-</u>	<u>1,386</u>
3. Manufacturing	<u>10,020</u>	<u>1,719</u>	<u>5,384</u>	<u>432</u>	<u>873</u>	<u>1,901</u>	<u>20,329</u>
4. Electricity, Gas, Water & Sanitary Services	<u>148</u>	<u>129</u>	<u>334</u>	<u>124</u>	<u>58</u>	<u>56</u>	<u>849</u>
5. Construction	<u>3,515</u>	<u>1,553</u>	<u>5,326</u>	<u>861</u>	<u>1,360</u>	<u>1,590</u>	<u>14,205</u>
6. Commerce	<u>2,317</u>	<u>902</u>	<u>2,551</u>	<u>84</u>	<u>583</u>	<u>1,166</u>	<u>7,603</u>
7. Transport, Communication & Storage	<u>3,600</u>	<u>1,493</u>	<u>4,507</u>	<u>391</u>	<u>771</u>	<u>1,866</u>	<u>12,628</u>
8. Services	<u>13,340</u>	<u>4,039</u>	<u>14,202</u>	<u>3,596</u>	<u>4,677</u>	<u>6,385</u>	<u>46,240</u>
9. Activities Not Adequately Described	<u>2,484</u>	<u>1,187</u>	<u>3,160</u>	<u>430</u>	<u>669</u>	<u>1,434</u>	<u>9,364</u>

p/ Preliminary

Note: Sample consists of every 10th household for urban areas and every 20th household for rural areas. The figures presented in this table are already weighted.

Source: Table 25 of the 1975 Integrated Census of the Population and Its Economic Activities Phase II (ICPEA II), Agriculture and Fisheries Division, National Census and Statistics Office.

Editor's Note: These data became available in April 1982 and are included here for information purposes, although they are not used in the text.

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Table 39. Number of Farms Planting Major Crops by Province, Bicol (Region V), 1975^{p/}

<u>Crop</u>	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Total Region V</u>
<u>All Farms</u>	<u>68,483</u>	<u>21,355</u>	<u>106,626</u>	<u>23,026</u>	<u>69,031</u>	<u>47,233</u>	<u>355,754</u>
Palay	44,467	10,508	72,887	11,171	23,230	23,441	185,704
Corn	10,930	628	15,480	1,959	47,016	1,653	77,666
Coconut (nuts)	11,525	12,345	16,389	4,370	26,979	16,883	88,491
Copra	11,423	2,292	18,338	1,696	7,795	8,527	50,071
Sugarcane	2,061	251	2,049	440	177	124	5,102
Banana	4,643	2,430	12,115	3,571	5,016	2,078	29,853
Tuber, Root & Bulb	15,213	6,571	21,801	17,076	21,056	11,648	93,365

p/ Preliminary

Note: Sample consists of every 10th household for urban areas and every 20th household for rural areas. The figures presented in this table are already weighted. Many farms are counted more than once, since they plant more than one crop.

Source: Table 14, 1975 Integrated Census of the Population and Its Economic Activities Phase II (ICPEA II), Agriculture and Fisheries Division, National Census and Statistics Office.

Editor's Note: These data became available in April 1982 and are included here for information purposes, although they are not used in the text.

Table 40. Physical Hectarage of Farms Planted to Major Crops by Province, Bicol (Region V), 1975^{p/}

<u>Crop</u>	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Total Region V</u>
<u>All Farms</u>	<u>242,620</u>	<u>156,867</u>	<u>452,955</u>	<u>76,971</u>	<u>309,862</u>	<u>182,194</u>	<u>1,421,469</u>
Palay	105,483	41,115	205,857	19,656	56,059	60,781	488,951
Corn	21,911	1,805	33,393	2,668	96,080	2,427	158,284
Coconut (nuts)	28,411	68,633	56,695	6,002	74,670	54,155	288,566
Copra	35,084	12,339	78,711	2,950	21,806	25,986	176,876
Sugarcane	2,689	226	2,273	199	161	78	5,626
Banana	5,691	4,822	14,729	3,396	5,158	1,643	35,439
Tuber, Root and Bulb	23,677	15,077	36,125	24,860	49,001	20,933	169,673
Other Crops	19,674	12,850	25,172	17,240	6,927	16,191	98,054

p/ Preliminary

Note: Sample consists of every 10th household for urban areas and every 20th household for rural areas. The figures presented in this table are already weighted. Other crops' physical hectarage is determined residually.

Source: Table 14, 1975 Integrated Census of the Population and Its Economic Activities Phase II (ICPEA II), Agriculture and Fisheries Division, National Census and Statistics Office.

Editor's Note: These data became available in April 1982 and are included here for information purposes, although they are not used in the text.

Table 41. Scope and Progress of Operations Land Transfer and Leasehold in Bicol, by Province, as of October 1980

	<u>Albay</u>	<u>Camarines Norte</u>	<u>Camarines Sur</u>	<u>Catanduanes</u>	<u>Masbate</u>	<u>Sorsogon</u>	<u>Total Region V</u>
<u>1976 Identification:</u>							
No. of Tenants	19,888	3,940	41,061	2,285	9,502	14,846	91,522
Area tenanted (ha.)	18,284	4,778	47,025	3,405	14,395	11,106	98,993
<u>Eligible for CLT's:</u>							
No. of Tenants	9,137	2,211	25,398	606	5,747	6,353	49,452
No. of lots	14,753	4,268	38,608	738	8,888	9,257	76,512
Area (ha.)	10,834	3,352	33,117	2,127	9,535	6,213	65,178
<u>CLT's Distributed by 10/81:</u>							
No. of recipients	6,848	849	15,190	208	1,658	2,874	27,627
No. of lots	9,313	1,154	20,658	283	2,255	3,908	37,571
Area (ha.)	11,548	1,431	25,616	351	2,796	4,846	46,588
<u>Leasehold Contracts Signed by 10/81:</u>							
No. of tenants	10,751	1,729	15,063	1,679	3,755	8,493	42,070
No. of lots	13,455	2,648	20,449	2,483	4,818	9,654	53,507
Area (ha.)	7,451	1,426	13,908	1,277	4,860	4,893	33,815

Source: Director Salvador Pejo, CESO II, "8 Years of Agrarian Reform in Region V," Region V, Ministry of Agrarian Reform, Legaspi, Oct. 1980.

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