

SURVIVAL, INTERDEPENDENCE, AND COMPETITION AMONG THE PHILIPPINE RURAL POOR

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Introduction

By any measure, at least 45 percent of all households in the Philippines are poor. That is 3.5 million families. While these households share in common some problems and owe their poverty to the same underlying causes, households differ significantly in how they cope and the degree to which they are afflicted by poverty. Farmers are invariably identified as poor, yet marginal rice and corn farmers on 3 has. of upland pursue a very different survival strategy with different outcomes than efficient paddy farmers on 1.5 has. of fully-irrigated land. Location clearly accounts for poverty differentials. Farmers in Cagayan Valley are more vulnerable to typhoons and have less access to technology, inputs and markets than farmers in Nueva Ecija. Poverty has a seasonal dimension as well. Upland farmers may only grow one crop a year, with very little farm income accruing in the off-season, which may last six months. Compare this to certain farmers who are so busy raising two and even three crops a year on irrigated land, they must hire on laborers to meet the workload. As one group pursues its strategy for economic survival it may affect other groups' success in attaining a minimum livelihood. The double crop farmer's demand for labor may open up jobs for upland farmers in their off-season. On the other hand, certain forest squatters who clear fragile lands for agriculture may help precipitate soil erosion, floods and siltation which undermine productivity among farmers farther down the watershed and even fishermen whose catch may ultimately decline. Survival strategies revolve around access to resources and jobs. In the scramble, these poor groups are not only

in competition with the wealthy and powerful but with each other as well. In the sugar fields of Negros, the seasonally migrant *sacada* workers compete with the permanent *dumaan* workers.

Such diversity suggests that efforts to devise appropriate rural development programs must begin by identifying who these various groups are and what kinds of survival strategies they adopt, keeping in mind their interdependence and recognizing they may be in direct competition.

This paper proposes to explore these concepts drawing from the impressive body of poverty research undertaken in the Philippines over the past decade.

Who are the poor?

It is no easy task to come up with a precise answer to this question. The normal methodological problems and measurement difficulties are further complicated by the fact that poor households engage in a variety of activities. What is a principal occupation for one group may be a sideline for another. Nevertheless, it is possible to begin to categorize households in a rough but yet meaningful manner with reference to their resource base, how they manage it, and the income they derive. Analyzed in this fashion three broad groupings emerge as the most disadvantaged among the poor: landless agricultural workers, upland farmers, and sustenance fishermen.

These groups encompass nearly two-thirds of all poor households found in rural areas. Rural poor are also found among lowland rice

farmers, especially in rainfed areas, but the degree of poverty does not appear to be as acute or its incidence as prevalent. For this reason I shall not explore their condition in this paper.

Survival strategies

The overriding goal of the low income household is to produce or earn enough to eat. In a real sense malnutrition is a basic indicator of how successful a household's strategy is. A food income in kind provides a certain security. Access to land for one's production partially insulates the household from rising food costs. If for any reason a crop is damaged, the producer may at least be able to salvage some food. Yet marginal producers cannot grow enough food to last the year. The landless agricultural wage earner is most vulnerable to seasonal income dips, food shortages, and other outside factors.

If food needs are not being adequately met there are a number of ways households cope. One is for household members to diversify their employment activities. Even the most demeaning jobs are taken, despite low pay. Provision of food makes a job especially attractive. Women may take up basket-making, sewing, weaving, and other types of crafts that can be produced at home and in the off-season.

If these activities are still insufficient, they will turn to the village support system. A wealthier relative may provide credit or a little land to grow vegetables. Feasts and holidays offer occasions to supplement the diet. By providing food and festivities to one's barriomates, the provider's own social currency increases. The village system of kinship ties and reciprocal arrangements provides security. This security, along with the strong emotional ties to the community, underscores why income levels alone are not the major determinants of occupation or place of residence. Indeed income stability and security are the overriding considerations. Even in the

face of declining income and opportunity, the very poorest persist with the knowledge that one's friends and family will share whatever relative excess they may possess. The value of family and community makes up for some of the shortfalls. This may hamper economic progress, but it helps the poor survive.

Another coping mechanism is simply to do more with less. Basically this means cutting down on food consumption and other essentials.

Ultimately, if the possibilities for surviving in the village decline to the breaking point, the household faces the stark choice of leaving. The decision is probably not abrupt. In practice, a son or a daughter is sent to the city or a husband begins seasonal migration to other areas. In this way the household is able to diversify its income sources beyond the village, while avoiding a break and the accompanying risk of total failure. Remittances from household members who have migrated often permit a family to reestablish a minimum livelihood within the village. On the other hand, if a migrant is successful in establishing a firm footing in the new areas, the entire family may join him.

Within this general pattern each of the three groups we have identified pursue a variety of strategies depending on their specific resources and constraint patterns. Again wide diversity is apparent but sub-groups of households with similar decision calculus and tactics are discernible.

Landless agricultural workers

The landless agricultural rural worker can be defined "as one who works in agriculture but possesses neither ownership nor recognized rights to farm the land and who earns 50% or more of his total income from wages or payment in kind."¹ Essentially this definition encompasses farm laborers on rice and corn lands and hired workers on sugar and coconut lands. It is not entirely adequate

since it can include seasonal migrants who may have land elsewhere and are simply looking for work in the off-season. While statistics on this type of worker vary, it is estimated that *at least* 1,150,000 or 7.5 per cent of the total labor force and 14.3 percent of the total number of persons employed in agriculture fall into this group.² It is hard to determine the number of households this entails, but a fair estimate would be between 500,000 and 700,000 considering that no more than one-third of all agricultural workers are women and that on average landless households have at most one child who is a laborer. At least half of these households engage in rice farming, while about one-third work in sugar fields and the remaining sixth grow coconuts and other crops.

Household income varies widely between farm laborers and plantation workers. Among farm laborers, those receiving a share of the crop tend to be better off than the wage earners. Among plantation workers, coconut laborers do better than sugar laborers and permanent laborers receive more income than casual workers. This diversity complicates the task of estimating income. One estimate suggests annual income for agricultural laborers ranged in 1974 between 1400 and 2400 pesos depending on the payment arrangement followed and on the crops produced. Rice farming provides for one-sixth share of the harvest to the landless within the village, it also offers higher mean wages (6.98 pesos a day) than plantation farming for laborers, often migrants from outside the village, who undertake specific operations. Opportunities for women laborers to work in the paddy are ample (though at lower wage rates). But employment in paddy production is highly competitive and seasonal. Coconut growing offers somewhat lower wages (6.95 pesos a day) but with steadier employment throughout the year and easier work and with opportunities for women laborers and intercropping.³ Sugar plantation work tends to be the least remunerative since the minimum wage of 7-8 pesos is not always paid

especially to the casual or temporary worker. Opportunities for women are limited. Employment is more seasonal than in coconut production and subject to wide fluctuations in demand in response to international price swings.⁴ Productivity and cropping intensity are also important variables in the landless laborer's earnings. Irrigated paddy production provides much more rice income to the worker receiving a fixed share of each crop. At the other extreme, as sugar lands are taken out of production in response to plummeting international prices, sugar workers are locked out of jobs. Most landless workers derive up to one-fourth of their total income from secondary sources. A survey of three barangays suggests earnings from secondary sources may amount to less than 500 pesos a year.⁵ Duck raising and piggery are the most prevalent supplementary income activities followed by handicraft manufacturing, vending, fishing and carpentry. Opportunities for supplementary income appear greater for farm laborers and secondly for coconut workers than for sugar plantation laborers. Thus total household income for landless agricultural workers may be estimated between 2,000 and 3,000 pesos for the vast majority. This represents around half the income required for a minimally adequate diet for a family of six.

The landless are not completely without assets. Their possessions are mostly limited to a temporary house on usually a rent-free plot. Few own their house lot. They may have some livestock, a few farm implements and perhaps a radio.⁶ Ownership of a carabao is an important asset as it increases significantly a laborer's wage rate or crop share. Finally given heavy competition for available employment, the worker's health becomes a tangible asset (or liability).

Survey after survey suggests a high rate of dissaving permitted by regular indebtedness to relatives, friends, employers and local money-lenders. The heterogeneity and powerlessness of landless sub-groups precludes

their organizing into effective economic groups. Only plantation workers show any inclination to join organizations such as unions. But these tend to be controlled by plantation owners.⁷

The social make-up of the landless further confirms their disadvantaged condition. The majority of household heads though younger than farmers still only have between 4-6 grades of schooling, and a significant number have no schooling. The chances for their 4 children going beyond the sixth grade are limited by the household's need for the child's earnings and its inability to shoulder the costs of further schooling. Nutrition levels are very low especially among sugar plantation workers where three meals a day are not always possible, where rice and fish are not eaten daily, and where meat is not seen but once or twice a month.⁸ Access to basic health and family planning services is infrequent.

Landlessness in the Philippines is a function of population growth, land fragmentation, the spread of large commercial plantations, eviction of tenants by landowners opposed to land reform, and the fixing of land tenure in rice and corn areas.⁹ The growing number of landless are in effect precluded from acquiring land and largely dependent on family, communal or plantation ties for employment which is poorly paid and for a majority, seasonal. Two examples will serve to illustrate this dependence: the *sagod* system of labor in lowland rice areas and the *pakyaw* system in the sugar cane plantation of Negros Oriental.

The *sagod* system, also known as *gamâ*, is a labor arrangement that has emerged since 1973 whereby landless workers (and small farmers) contract to do the weeding for free in exchange for exclusive rights to harvest the weeded portion. This guarantees the laborer a rice income. The high yielding rice technology has nearly doubled the man days required in rice cultivation. Weeding has become a major operation for which small and larger farmers alike hire in. This system provides more stable

employment and security for more laborers within the village to the exclusion of outside competitors. The major drawback is that the laborers must work harder than before without pay. This represents not only a decline in real wages but deprives the laborer from income at weeding time often forcing him to go into debt to carry his family through to harvest. It also has the effect of freezing out landless laborers from outside the village.¹⁰ This is indicative of the trend of small farmers, often former tenants, becoming owner operators leaving most of the tilling to the landless who have become the "farmer's laborers."¹¹ While these patterns serve to absorb labor and cushion the plight of the landless in one sense, in another they impoverish him by depressing wages and spreading underemployment. At the same time the owner operators are beginning to adopt labor saving techniques that further reduce returns to labor. Now that weeding is not a cost to the farmer, he is able to plant by broadcasting rather than transplanting for which he formerly had to pay outside laborers. Likewise, the farmer is introducing mechanical threshing at harvest time and deducting the cost of the operator from the laborer's share. At the same time laborers are threshing less but harvesting more plots. This tends to accentuate competition.

The *pakyaw* system which is found in many areas and crops, governs 80 percent of the work on sugarcane haciendas in Negros and consists in setting a flat rate per hectare for a given operation (e.g. plowing, weeding). The most difficult work is assigning a higher rate, but since it requires more laborers or longer time to complete it may in fact provide no more pay and sometimes even less pay than a flat daily rate.

The system is a legal way of undercutting the minimum wage law to the detriment of the sugar worker.¹² The widespread practice of hiring laborers on a temporary basis is another way of paying lower wages and keeping workers in line. The workers'

ignorance, lack of organization, and the absence of alternative employment opportunities leave them little recourse for opposing this system.

The seasonality of most employment open to the landless helps explain the patterns of rural-to-rural migration as members of landless households move between rice, sugar, and fishing in search of supplemental work. Competition is heavy especially in the more productive areas where upland farmers, fishermen, and even lowland farmers make their labor available for a share of the rice harvest or supplemental cash.

Upland farmers

Upland farmers are mostly subsistence farmers of marginal land on rolling hills and steep mountain slopes. At least three main categories of farmers are found in upland areas: indigenous kaingineros, marginal kaingineros, and upland rice/corn farmers.¹³ The indigenous kainginero is generally an illiterate non-Christian farmer who subsists on various crops suitable for annually shifting cultivation, produced on remote, illegally-occupied tropical rain forest.¹⁴ Marginal kaingineros are mostly literate, Christian farmers who have migrated from the lowlands. They derive about 70 percent of their income from annual and perennial crops produced by slash-and-burn/weed-and-burn operations on marginal accessible forest, bush and grasslands, generally recognized as agricultural rather than forest reserves. Upland rice/corn farmers rely on plowed, rolling-slope land to produce generally corn in the dry season and rice in the wet season. In the dry areas of the Visayas and Northern and Eastern Mindanao, most upland farming is limited to white corn for home consumption. In addition, one can distinguish upland coconut farmers and mixed crop farmers, but I have not broken these groups out separately. By one estimate there are a total of 500,000 kainginero households.¹⁵ Marginal kaingineros make up over half the total and

are growing at a faster rate than indigenous kaingineros owing to migration from lowlanders in search of land, as access routes to the uplands expand.¹⁶

Little data is available on the total number of upland rice/corn farming households. A rough estimate can be calculated by dividing the 3.5 million has. planted to corn and upland rice in 1977 by the average holding of 3.5 has.¹⁷ This suggests a figure of around one million households for upland rice and corn farmers.

Estimated household income for kaingineros in one pilot size averaged P2,180 in 1974.¹⁸ Other estimates point to incomes in the P2,000-3,000 range, but measurement of "in-kind" income is always tricky. Most of their income is in the form of root crops (e.g. camote and cassava) and some upland rice which is consumed largely within the household.¹⁹ A few fruit trees, two pigs and/or a few chickens provide additional subsistence income. Marginal kaingineros tend to have somewhat higher income to the extent they have greater access to markets for cash crops. For example, Benguet, Bontoc, and Ifugao offer the climate and markets for profitable production of vegetables, fruits and coffee. Average annual income for upland rice/corn farmers was estimated at approximately P3,500 in 1974 with lower incomes for tenants and subsistence white corn farmers as compared to mixed rice and cash corn farmers. This represents about three-fourths the income needed to meet minimum food requirements. Corn farmers generally use traditional varieties especially of white corn, as high yielding varieties are mostly available for yellow corn and require higher input levels. Yields for traditional varieties average only 0.4 M.T. per ha., largely due to the prevalence of downy mildew and low soil fertility. Low farmgate prices, market isolation and limited knowledge hamper adoption of higher yielding technology.²⁰ Corn farmers consequently have relatively little need to borrow for production purposes. A majority,

however, use hired labor in addition to unpaid family labor. Where land and rainfall permit upland farmers prefer rice production over corn because (a) the level of technology in rice production is much higher than corn; (b) price ratios and yield differentials per unit of land favor rice; and (c) there is greater cash market demand for rice.²¹ Many rice and corn farmers also engage in mixed cropping of coconuts, bananas, fruit trees and vegetables. For additional cash income, upland rice and corn farmers along with the less isolated marginal kaingineros look to secondary sources. Income from off-farm agricultural as well as non-agricultural employment ranges as high as 70 percent of the total income for some households, attesting to the inadequacy of their marginal lands to provide enough production for subsistence needs. These income sources include rattan gathering, firewood and hand-sown timber, gum copal, abaca (hemp) stripping, piece-work on lowland farms and copra-making.²² Housewives and other household members contribute about 25 percent to total household income from off-farm sources. Indigenous kaingineros on the other hand earn no more than 10 percent from off-farm sources which is more a reflection of limited opportunities than less need.

Women play an important role in upland production. They plant the roots and vegetables and manage the poultry and pig raising while caring for the children. They often market these products. Women also contribute substantially to the planting and harvesting of rice and corn. They know the best species of wood for cooking, though the men help in the collecting. As in most Filipino households, the woman administers the purse and shares in the making of household purchasing decisions.

Most kaingineros exercise squatter's rights on the land they cultivate and are essentially transient. Indigenous kaingineros clear and farm an average of one hectare at a time, while marginal kaingineros farm from one to two hectares. Most kaingineros own some

farm implements and livestock. Upland rice/corn farmers farm an average of three hectares of marginal land, though 20 percent farm five or more hectares. At least two-thirds own their land. Upland rice/corn farmers also have more non-land capital assets than kaingineros including small scale capital goods such as hand tractors and hand threshers.

Population pressure and more intensive land use (and abuse) is upsetting the delicate eco-balance in the uplands and is further limiting the farmers' already low returns. Given an adequate fallow cycle after the first three crops, soil fertility and land productivity, may, remain relatively stable. As the kaingin plot is replanted sooner, because of competing pressure on the land, soil quality rapidly declines. Marginal kaingineros are often the most destructive of land fertility because of their inherited, inappropriate lowland farming practices and the more permanent nature of their crops.²³ The plow-method practices used by rice/corn farmers on rolling hills worsen leaching and soil erosion contributing to low soil fertility. The declining fertility and productivity of the uplands helps explain the seasonal migration of upland farmers to the lowlands in search of supplementary income.

In general, education/health/nutrition services are limited. The low nutritional content of upland subsistence crops and limited cash for food purchase result in nutritional deficiencies. Although there is little data or research available on the nutritional status of upland rice/corn farmers, they probably are somewhat better off than the kaingineros because of their greater access to lowland services and relatively greater opportunities for cash earnings which ensures greater quantity of food. Kainginero diets may be qualitatively better owing to greater diversity. Indigenous kaingineros have the least formal education. Most marginal kaingineros have three years or less while upland rice/corn farmers show an average of four years of formal education. A lack of teachers and

schools coupled with the irregular demands of slash and burn agriculture in the case of kaingineros and off-farm employment in that of upland rice/corn farmer households will continue to limit educational opportunities for their children and thus upward social mobility.

Upland farmers are found throughout the country in the mountainous provinces of Ilocos, Cagayan Valley, Southern Tagalog, Bicol, Eastern, Central and Western Visayas and Northern, Central and Eastern Mindanao.

One may expect a growing degree of competition among the three groups of uplanders as their resource base degenerates. This has already happened in Mindanao.

The potential for competition seems greatest between kaingineros and entities concerned with maintaining forests as perennially renewable sources of economic, environmental and social benefits. Kaingineros desire unrestricted access to land for slash-and-burn farming. This places them in direct conflict with:

- government agencies attempting to maintain an environmental balance between forested lands, pasture lands and lands cleared for agriculture; and
- loggers that practice sound forest management methods including selective logging, sustained yield cutting cycles, reforestation and protection of logged over/regenerating forest lands.

Illegal loggers or legally established but irresponsible loggers, whose tenure in the forest is transitory, are generally not in conflict with kaingineros. These loggers treat forests as immediate but temporary sources of income. Once they have removed all marketable sized logs of commercially acceptable species they abandon the area and pose no threat to the kainginero. Kaingineros enter to cut and burn the remaining immature, unmarketable sized trees and brush which would over time mature and re-establish

dense vegetative cover on the uplands.²⁴ Indigenous kaingineros from cultural minority tribal groups are particularly sensitive to conflict. Minority tribes often perceive forest areas as their own personal ancestral lands and may not recognize government authority to alienate, control or regulate the exploitation of timber, minerals, water and other resources — and particularly the land itself. Though slash-and-burn farming is declared illegal by government, tribal groups consider it essential to sustain life. Log production supplies building materials, taxes and foreign exchange — and so is licensed by government. Minority groups resent established loggers cutting trees on their ancestral lands. Violence is all too often the result, as kaingineros attempt to assert supremacy and uphold their ancestral rights over the logger's attempts to exercise their legally granted (by government) rights to exploit timber. Yet, ultimately, the result is further displacement of the minorities to more and more remote areas.

In a broader sense, the main competition is between the long term need to maintain the health of a fragile ecosystem and the extent to which varying degrees and types of exploitation are either compatible or in direct conflict with this need. Loggers and uplanders both accelerate the rate of deforestation and environmental degradation when their activities exceed the capacity of the ecosystem to repair damage caused by human intervention.

Sustenance fishermen

Sustenance fishermen are small scale, traditional fishermen. Using gear not requiring boats or bancas of three tons or less, these fishermen fish in both inland waters and marine coastal waters within three miles of the coastline. There are approximately 600,000²⁵ municipal fishermen located in 10,000 coastal fishing villages throughout the country with almost 50 percent of the total in the Southern Tagalog, Bicol, Eastern and Central Visayas, and Western Mindanao

regions.²⁶ With the exception of Southern Tagalog region, these same regions contain the greatest population density of sustenance fishermen.

Despite the relative importance of the industry, most traditional fishermen have low incomes and standards of living. Average annual income amounted to about 3,900 pesos in 1975²⁷ for an average family of 6.3 members. This includes income from sources other than fishing. In fact, more than one-third of the families supplement their incomes by working in agricultural and service jobs, especially during the off-season.

Low income levels are mainly a function of the low productivity of the fishermen, which on a national basis averages 1.33 metric tons per fisherman annually, and the relatively low prices received by the fisherman (P1.50-2.50 per kg.).²⁸

Incomes within fishing communities vary, however, depending upon ownership of productive assets. Ownership of a vessel increases income. While 74 percent own fishing gear (including hand-held instruments, barriers and traps, set lines, and nets), the majority of fishermen (60 percent) are not banca owners. Instead they rent bancas, crew for banca owners, hire laborers on larger crafts, raft fish with hooks and lines, or net fish on shorelines. Forty-seven percent of the bancas are motorized, which significantly increases the catch. A sharing system is used to distribute the catch between fishing labor and capital. After expenses are deducted, the remaining income is divided, with the banca owner usually receiving at least half of the share. Though the sharing system is flexible and has traditionally revolved around families and interpersonal ties, and thus around a mutual concern for the welfare of all, the result is generally a low income for the fishing laborer who owns neither vessel nor gear. The traditional systems may in fact, be replaced as resources dwindle and capital costs increase. The nature of social relationships could then

change from obligatory to contractual, and the poorest fishermen with the least resources would be under even greater pressure to find alternative sources of income. However, this would be difficult, given that ownership of other productive assets is minimal. Less than 20 percent of the households own land (average holding of less than two hectares); and, while almost all (90-95 percent) fishermen own homes, few own any household assets.

The fishermen are further dependent for their incomes on those who market their catches. The relationship between the seller and buyer is called *suki*, and there are many variations depending on the degree of the fisherman's involvement in the marketing process. In the complex set of *suki*, the fisherman's wife, mother, sister or eldest daughter is usually the seller. In some instances, she sells directly to the consumer, either in the immediate vicinity or at a nearby market; however, the better grades of fish are usually sold to a wholesaler or middleman (usually female), or to a market vendor. The wholesaler acts as guarantor of purchase and can lend money if requested. While *suki* has mutually beneficial aspects, fishermen often end up indebted to middlemen and banca owners, and have expressed an interest in alternative marketing arrangements.²⁹

Another contributing factor to the sustenance fisherman's low standard of living has been inflation. The decline in real wages has left the fishermen financially worse off in 1979 than they were in 1972, and it is likely that expenses for fishermen will continue to increase at a higher rate than prices as energy costs continue to soar. More than one-third of these fishermen are dependent on 112,000 motorized bancas, each of which consumes on the average 1,200 liters of gasoline annually.³⁰

Traditional fishermen have identified problems/constraints related to resources, technology, marketing, and social conditions. Fish resources are scarce because of

over-fishing, dynamite fishing, use of fine mesh nets, competition with fishermen using more advanced methods, destruction of coral beds and mangroves, and pollution. While limited direct competition between commercial and sustenance fishermen exists for specific resources, particularly shrimp and tuna, the real basis for competition is technological, where different types of gear are being used to catch the same resource. Technological handicaps include lack of gear and motorized bancas, and high prices of fishing gear and fuel. Marketing problems include diminishing availability of fish landings, spoilage, lack of transport to market, price uncertainty, lack of pricing information, and price controls by middlemen. The number of fishing installations found in a fishing community varies, depending on the size of the community and on the percentage of fishermen in the community; however, many fishing villages are without a wharf, cold storage facility, ice plant, fish market or any other facility for fishermen. Unfavorable social conditions include unemployment and underemployment of fishermen, lack of alternative income sources, insufficient potable water, non-ownership of land, theft and damage of gear, and poor nutrition.³¹ With regard to the last, while some families consume a considerable portion of the catch, others sell it all and purchase grains or a lower grade fish for home consumption. The amount consumed depends on household income, quantity and quality of the catch, and on the season.

These reported problems, however, are merely symptoms of the underlying dependence of fishermen on a common-property, open-access resource (with finite limits of natural production) which is highly perishable once caught, and of the insufficient opportunities for alternative sources of income and food. Evidence indicates that municipal fisheries have most probably reached, if not surpassed, the maximum sustainable yield; thus, it can be predicted that the average productivity of

municipal fishermen will continue to decline.

Cycles undermining survival

The preceding discussion points up the resourcefulness of poor households in managing very limited productive assets and exploiting available opportunities for securing and stabilizing family income streams. That they should not have more success is not surprising given the constellation of mutually reinforcing vicious cycles that undermine their survival strategies. Indeed, the surprise is that they survive at all.

The first and most familiar cycle is that of *population pressure*. While for the individual poor household children represent wealth and security, in the aggregate, rapid population growth presses in upon the natural resource base. In 1900 there were seven million Filipinos. Today the population approaches 47 million. By 2000 there will be between 70-75 million Filipinos, even with the expectation of achieving a replacement fertility rate by then. Yet the physical resources will certainly not have increased. In fact, they are likely to evidence degradation and depletion, in part owing to accelerated use by large numbers of people. Population pressures also limit the poor's access to land, lead to increasing competition for available jobs, overburden available social services compounding health and nutrition problems.

The second and perhaps least recognized cycle is the serious and rapid environmental decline threatening the future of the Philippines.³² Deterioration of the resource base inevitably results in corresponding decreases of food, cash income and the goods and services the poor depend upon for survival. Ironically, the poor in their desperate efforts to survive add to the degradation.

This relationship is most evident in the rapid loss of forest cover over large areas of the country. Slash-and-burn farming,³³ excessive logging and pasturing have depleted

vegetative cover leading to heavy run-off of tropical rains that has resulted in serious erosion of the soil. The upland farmer's productivity suffers first. When soil fertility deteriorates to the point that it will not sustain a food crop, he must move on to other upland areas if available, or join the ranks of the landless agricultural workers or urban squatters. Most of the five million hectares (one-sixth of the total land mass of the Philippines) classified as denuded and degraded areas have been abandoned and have reverted to unproductive *imperata* grasslands.³⁴

Forest destruction is beginning to affect the supply of cooking fuel. Some 70 percent of all households in the country are dependent on wood to cook the food they consume.³⁵ As the sources of wood diminish and population increases, the cost of firewood is bound to rise. With rising costs forest exploitation will accelerate further. If incomes do not increase, funds available to buy food or other essentials will be lessened and diets adversely affected.

Forests are also a source of proteins obtainable from wild game that is hunted or trapped for consumption. Forest products such as rattan, honey and beeswax are often the only sources of cash income for indigenous kaingineros. Many forest plants are used directly as herbal medicines, food sources, thatch for housing, tool handles and other household or farm needs for upland farmers. As forests diminish these freely gathered goods have to be purchased in cash, once again reducing the amount of money available to buy food, educate children and meet other requirements.

Forests are nature's main reservoir for water storage. As more forest lands are denuded, streams, rivers and lakes supply proportionately less water during the dry season. Man-made reservoirs fill up with silt and irrigation water supplies are reduced. Lowland farmers are forced to decrease the

amount of land they can plant in the dry season, which results in lower yields, less employment and smaller incomes.

Forest destruction is also responsible for the silt that ultimately enters the coastal eco-systems, destroying coral reefs that feed many species of fish and other marine life. Meanwhile mangrove ecosystems are being cleared for housing, fishponds and industrial sites. Both processes disrupt the food chains that supply marine life and the spawning grounds of important commercial species of marine life. The sustenance fishermen operating in shallow coastal waters are directly affected. Siltation of coral reefs, destruction of mangrove eco-systems, and illegal fishing methods such as dynamiting reduce fish population and fish catches. The National Environmental Protection Council (NEPC) considers the coastal waters already fully exploited. Consequently there is little prospect for improving the incomes of fishermen from increased fish production.

The last cycle I want to touch upon is the most perverse, and that is the growth cycle itself. In the Philippines, as in most developing countries and even in the industrialized countries, the pressing needs of industrialization and export promotion engender accelerated exploitation of natural resources. The irony is that in generating national economic benefits, the very resources required for sustained growth are depleted. But the tragedy is that the pattern of growth in many respects undercuts the poor's efforts to survive. For example, commercial logging to sustain expanded timber exports competes with upland agriculture and contributes to the rapid forest denudation with its adverse effects on upland soil fertility, lowland irrigation systems and coastal fishing grounds. Sugar, coconut, banana and coffee export expansion favor plantation agriculture and ties up substantial land assets in the hands of the few to the detriment of the landless agricultural workers who receive a small share of the returns while suffering prolonged

unemployment during periods of over-supply and periodically depressed prices. Efforts to develop agricultural alternatives such as alcosgas to imported, oil-based energy tend to promote further plantation expansion. Commercial fisheries have been encouraged to adopt the latest technology to contribute to export balances. In the process the coastal waters have been overexploited and sustenance fishermen have seen their livelihoods threatened. While the poorer households are the major producers of these primary products, the returns accrue disproportionately to marketing and banking concerns. The profits are not even reinvested in the expansion of rural employment and productivity. Instead they go to finance Manila-based capital-intensive industry in which few jobs are created.

Meanwhile, the poor are becoming increasingly dependent on the sale of their labor services as a source of income. The current labor force is growing at an annual rate of about 3.5 percent, with an estimated 500,000 new entrants added yearly to an already substantially underemployed labor force, especially in the rural sector.³⁶ Current labor absorption patterns fail to provide anywhere near adequate employment opportunities for all those seeking jobs. This heightens competition for jobs which are available and generally aggravates the poor's problems by depressing wages and fostering underemployment. It is no surprise that

income distribution should be skewed. The "invisible hand" of the relatively laissez-faire economy shaped by colonial trade patterns and private investment choices of a small economic elite channels profits toward Manila and impedes balanced development. The greed of the growth machine all too often trades off long-term equitable development for quick economic returns. Benefits for the poor majority are left to trickle down.

Conclusion

Unless these cycles can be broken, increasing numbers of poor people will be displaced, abandoning their current strategies, ultimately making their way to the large cities. Action is required on two fronts simultaneously. First, initiation or strengthening of policies to encourage slower population growth, sound management of the environment, and balanced, equitable development. Second, specific attention to the needs of the various landless, upland and fishermen groups with a view to helping them improve upon their survival strategies and begin to remove the obstacles in the way to a more successful standard of living. There are few if any universal answers to the problems of the rural poor. It all depends on the locally specific conditions of each defined group. The challenge is tailoring programs to each group using impact rather than administrative expediency as the guiding principle for interventions.

Notes

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¹Definition is borrowed from Philippine Council for Agriculture and Resources Research (PCARR) sponsored Workshop on Landless Rural Workers (WLRW) Los Banos, December 8-9, 1978.

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⁵Staff of the Technical Board of Agricultural Credit (TBAC), *op. cit.*

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²³*Ibid.*

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²⁷This figure is derived from a mean of P4,500 based on results from 16 small socio-economic barrio studies completed in 1976/77. Using food indices, the P4,500 equates to a household income of P3,900 in mid-1975. We have adjusted the figure to facilitate comparison among the poor groups.

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³⁰*Farming Today*, "How the Fuel Price Increases Will Affect the Fishing Industry," Vol. 5, No. 9, September 1979.

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