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THE LOGICAL FRAMEWORK APPROACH TO EVALUATION

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THE PHILIPPINE LAND REFORM PROGRAM
UNDER THE NEW SOCIETY:
THE LOGICAL FRAMEWORK APPROACH TO EVALUATION

by

Warren Wong, B.A.

© September 1981 by W. Wong

A thesis submitted to the Faculty of
Graduate Studies and Research in partial
fulfillment of the requirements for the degree of
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The undersigned recommend to the Faculty of Graduate Studies acceptance of the thesis "The Philippine Land Reform Program Under the New Society: the Logical Framework Approach to Evaluation" submitted by Warren Wong, B.A. Hons. in partial fulfilment of the requirements for the degree of Master of Arts.

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ABSTRACT

President Marcos imposed martial law in the Philippines in 1972, which ushered in the era of the "New Society". Land reform is a development strategy which has been given exceedingly high priority in the New Society. A Logical Framework Approach (LFA) was utilized to evaluate the land reform. The LFA assesses a program in terms of its inputs (design of the program), outputs (immediate and intermediate effects), purpose (further effects), and its goal (final impacts and effects).

Most of the effort appears to have been directed at achieving two of the objectives - strengthening the middle class (e.g., small landlords) and reducing the threat of agrarian unrest - while neglecting the other objectives of increasing rice and corn production and uplifting the rural masses from poverty and stagnation. In general, the land reform has had a negligible impact on the countryside. The exception to this general rule is the Central Luzon region (an area with a history of agrarian unrest).

MAP OF THE PHILIPPINES

ACRONYMS

ACCFA	-	Agricultural Credit and Cooperative Financing Administration
AMC	-	Area Marketing Cooperative
ARI	-	Agrarian Reform Institute
BCLP	-	Barrio Committee on Land Production
BGF	-	Barrio Guarantee Fund
BL	-	Bureau of Lands
BSF	-	Barrio Savings Fund
CLT	-	Certificate of Land Transfer
CRB	-	Cooperative Rural Bank
DAR	-	Department of Agrarian Reform (Changed to MAR)
DLGCD	-	Department of Local Government and Community Development
FACOMA	-	Farmers' Cooperative Marketing Associations
HYV	-	High-Yielding Varieties
IPC	-	Institute of Philippine Culture
LB	-	Land Bank
LOI	-	Letter of Instruction
LTC	-	Land Transfer Certificate
LTPA	-	Landlord-Tenant Production Agreement
M99	-	Masagana 99
MAR	-	Ministry of Agrarian Reform (See DAR)
NCC	-	National Computer Center
OLT	-	Operation Land Transfer
PD	-	Presidential Decree
RB	-	Rural Bank
SN	-	Samahang Nayan

GLOSSARY

Amortization*: The periodic payment on the total cost of the land, to be paid in fifteen years of fifteen equal annual installments.

Amortizer: A farmer who has complied with all of the regulations of Operation Land Transfer, and is making amortization payments. An amortizer is also referred to as an "amortizing owner."

Barrio: Village, or rural community in the Philippines.

Cavan: A sack of unmilled rice, weighing approximately 50 kilograms. This can also be referred to as "cavans of palay."

Certificate of Land Transfer*: Evidence that the tenant whose name appears in the CLT has been listed and identified by DAR and his cultivation has been sketched by the Bureau of Lands and upon compliance with the government requirements he may be issued an emancipation patent.

Department of Agrarian Reform: The main department charged with the responsibility for directing land reform operations.

Emancipation Patent*: The title issued to the tenant upon compliance with all requirements of the government. It represents the full emancipation of the tenant from the bondage of the soil.

Lessee (Leaseholder): A farmer who pays a fixed rental to the landlord, for the right to till the land. Since 1972, this has been about 10 cavans per hectare.

Owner-Cultivator: A farmer who owns the land that he tills; usually a small farmer. The ultimate goal of land reform is to convert all tenants to owner-cultivators. An owner-cultivator is sometimes referred to as an "owner-operator."

Reform Leaseholder: A share tenant who converted to a leasehold system (lessee) prior to the imposition of martial law.

Share Tenant: A farmer who pays a certain percentage of his harvest to the landlord, for the right to till the land; they are sharecroppers. The predominant percentage, in the Philippines, is 50 percent of the harvest. A share tenant is frequently referred to as a "tenant."

Shiftee: A farmer who has changed his tenurial status as a result of land reform; e.g., a farmer who changes from a share tenant to a lessee, is referred to as a shiftee.

Sub-Tenancy: A form of tenure, where a leaseholder rents out part of the land he tills to another farmer.

Tenant-Beneficiary*: A tenant-farmer entitled to own the land he tills, pursuant to the provision of PD 27.

*Mario M. Reinoso, et al., "An Evaluation of Operation Land Transfer Procedures," Agrarian Reform Institute, Department of Agrarian Legislation and Administration, Los Banos, 27 January 1977, pp. xv-xvi.

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CHAPTER I

INTRODUCTION

I. INTRODUCTION

The alleviation of poverty, or a direct attack on poverty, has become the current focus of attention in "development circles", and rightly so. We have become concerned with meeting the minimum requirements to satisfy a dignified human existence, for all people in the world. The poor, or those who are poverty-stricken, lack these minimum requirements. We have called these minimum requirements "basic needs". The basic needs approach to development is a conceptual framework of strategies with a direct attack on poverty at their core. Their objective is to meet the basic needs of the poor within the shortest possible period.

The attractiveness of the basic needs approach stems from the disillusionment with national and international development patterns over the last 30 years. Growth in many developing countries has been rapid, as is the case with the Philippines which grew at an average annual rate of 6.4 percent in real terms, over the last decade.¹ Generally, the growth has been unevenly distributed, both within and across nations. Few developing countries have

¹Philippines, NEDA, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979).

managed to obtain growth while simultaneously benefiting the poor. In fact, in many developing countries, "growth has not only failed to bring about any tangible improvements in the living standards of the poverty groups (usually but often inaccurately defined as the bottom 40 percent) but it has even often led to their absolute impoverishment."²

This is now, perhaps, conventional wisdom in "development circles". It has resulted in an interest in "new" development approaches, such as "development from below", "integrated rural development", "redistribution with growth" and so forth.

The new approaches - whether called growth-with-equity or basic human needs or minimum needs - are development policy coming full circle. The slogans "rural development", "integrated development", and "participation" all have been heard before. It is not important how these ideas have emerged or resurfaced. It is not even important whether there is a coherent conception of the objectives of the mechanism. What does matter is the recognition that equity and the satisfaction of basic or minimum human needs have an exceedingly high priority.³

²D.P. Ghai, et al., The Basic-Needs Approach to Development: Some Issues Regarding Concepts and Methodology (Geneva: International Labour Office, 1977), p.2.

³Morris David Morris, Measuring the Condition of the World's Poor: The Physical Quality of Life Index (New York: Pergamon Press, 1979), p. 2.

Poverty, in the broadest sense of the term, is a reflection of a maldistribution of assets. In the Third World, the majority of the poor are located in the rural areas where the principle asset is land.⁴ In general, the rural poor either do not have adequate access to or control of this vital asset. A strategy which attempts to provide more equitable access to and control of land can be seen as a direct attack on poverty or basic needs approach...

Land reform is a strategy for meeting basic needs by providing more equitable access to and control of land. It alters the pattern of land ownership. The strategy may also incorporate reforms of other important resources, such as water (irrigation) or other agricultural inputs.

In 1972, President Ferdinand E. Marcos imposed martial law in the Republic of the Philippines. This, according to Marcos, ushered in the era of the New Society. Land reform is a strategy which has been given exceedingly high priority in the New Society. It would appear that the Philippine agrarian (or land) reform program incorporates a

⁴See D.P. Ghai, et al., op.cit.; and Harald Kunert, "Criteria for the Evaluation of Agrarian Reform and Rural Development, "Land Reform, Land Settlement and Cooperatives, No. 1 (1976): 89-94.

direct attack on poverty⁵, as noted by the following excerpt by Marcos:

Agrarian reform as the cornerstone of reforms in the New Society has been adopted as a major strategy for rural development. As such the program is designed to uplift the members of the agricultural sector from poverty and stagnation and make them more dignified, self-reliant, responsible and progressive partners in nation-building.⁶

The primary objective of this paper is to evaluate the Philippine land reform program in the New Society.

Program evaluation has become an increasingly important tool used by governments in developed and developing countries, and by multilateral organizations. In this paper, program evaluation is defined as the retrospective analysis of the program to see if the stated (intended) objectives have been achieved, how and why they were achieved, and an investigation into what has happened in terms of the unintended impacts and effects.

The purpose of program evaluation, for government and multilateral agencies, according to Turner, are several:

⁵An elaboration on the difference between land reform and agrarian reform will be provided in the following chapter.

⁶Excerpt from a speech made by Marcos, in Philippines, Ministry of Agrarian Reform, Annual Report 1978 (Quezon City: Ministry of Agrarian Reform, 1978), p. 3.

1. As an integral element in project management, evaluation is concerned with current project performance or effectiveness, and should include regular periodic evaluations of all ongoing projects on a decentralized basis for purposes of redesign and improved execution.
2. As a device for improving resource allocation and management of the projects within a program, evaluation would be concerned with impact or significance.
3. As a means of policy formulation, evaluation is concerned with the retrospective examination of more general program issues.⁷

The type of evaluation that will be utilized by this paper is referred to as Comprehensive Evaluation.⁸ A comprehensive evaluation of a program is subdivided into two parts; a "process" component and an "impact" component. First, the process component will attempt to answer two main questions:

- 1) Were the various practices and intervention efforts undertaken as specified in the program design, or derived from the principles explicated in the design?

⁷Herbert D. Turner, "Program Evaluation in AID: Some Lessons Learned," Development Digest, Vol. XVII, No. 3 (July 1979): 72.

⁸See Howard E. Freeman, The Present Status of Evaluation Research, SS-76/WS/10 (Paris: UNESCO, 1976).

This assumes that if the program were implemented properly, is it possible to obtain the objectives? Given the design of the program, is it likely that we will "uplift the members of the agricultural sector from poverty and stagnation"?

- 2) Has the program been directed at the appropriate and specified target population or target area?

This issue looks at whether or not we are reaching the right people. Are we affecting the population who do not have adequate access to and control of land? Is the program affecting the appropriate areas in the Philippines?

The second component requires a design, "that allows the investigator, in a persuasive way, to demonstrate that the changes which occur are a function of the particular program, intervention or treatment and cannot be accounted for in other ways."⁹ Basically, it will attempt to answer the following question:

⁹Ibid. p. 16

- 3) What is the nature and extent of the impact of the program in terms of the intended and unintended effects?

This evaluation will look at the direct impacts and effects - events or results that occur primarily because of the program. It will also look at all other events, results and occurrences that can be attributed to the program whether directly or indirectly, intended or unintended, desired or undesired.

The approach adopted by this paper will be to tailor the evaluation design to the Philippine situation. One of the primary prerequisites for an evaluation is the availability of pertinent information (data), before and after the implementation of the program. According to Overholt, past attempts at land reform in the Philippines have failed because there has been a general lack of adequate information. In short, the feed-back loop has been virtually non-existent.

Philippine land reform has experienced all the difficulties one would expect in a poor society of immense inequality. Laws and decrees have been passed over three

decades... Implementation has repeatedly been hindered by informational inadequacies.¹⁰

There appears to be more data associated with this reform than any previous reforms, but "informational inadequacies" still exist. Hence, a secondary objective of this paper, next to the evaluation objective, will be to develop various techniques to overcome these "informational inadequacies".

The data used in this paper has primarily been gathered from published and unpublished government documents. Limitations to the data, given these "informational inadequacies," should be kept in mind. In the social sciences where there are often numerous forces at work, it is difficult to prove (if not impossible) a cause and effect relationship. Quantitative data is used to provide some indication of what is likely happening in light of our assumptions which are based on a causal model. It is also difficult when using macro data, to determine or obtain some indication of distribution. For example, many developing nations have experienced high real growth rates in GNP per

¹⁰William H. Overholt, "Land Reform in the Philippines," Asian Survey, Vol. XVI, No. 5 (May 1976): 433.

capita while the poor have not experienced any improvements in their standard of living.

A Logical Framework Approach (LFA) has been used in this comprehensive program evaluation of the Philippine land reform. The LFA, as shown in Figure 1-1, assesses not only the design of the program (input) but also the outputs of the program and the downstream impacts and effects. It is often difficult to establish a causal relationship from the inputs to the outputs and on up to the goal. Based on our assumptions we choose data that we think are likely to show some indication of the cause and effects. The LFA states that if we have the Land Reform Program (input) then we expect certain outputs. These outputs in turn should be satisfying some basic purpose. If this is the purpose then we should be striving for a particular goal (figure 1-1).

The evaluation design is as follows:

- An overview of the theoretical aspects of land reform will be provided in Chapter 2. The issues undertaken in this chapter will be to provide a definition of land reform, its objectives, an examination of similar types of reforms, and how land reform can be considered a

Figure 1-1

LOGICAL FRAMEWORK APPROACH*

*Canadian International Development Agency, Project Evaluation: Perspective and Methodology (Ottawa: Supply and Services Canada, 1977), pp. 7-14.

basic needs strategy. Wherever possible, Philippine examples will be used to help illustrate various points. Finally, a brief examination of the evolution of land reform in the Philippines will be undertaken.

- Chapter 3 will provide an overview of the Philippine land reform program in the New Society. The essential characteristics and objectives of the program will be presented. This chapter will also assess the design of the program, or the input.
- As land reform is agricultural in nature, Chapter 4 will analyze the program in terms of its agricultural impact. The predominant aspects addressed in this chapter will refer to the expected outputs.
- Chapter 5 will assess the program in regards to its socio-economic impact. An attempt will also be made to evaluate the program along the criteria outlined by a basic needs approach. The predominant aspect undertaken in this

chapter will attempt to determine if the outputs are satisfying the purpose of the program.

- The sixth and final chapter will attempt to combine all of the findings, draw some conclusions, and see if the general goal is being met.

CHAPTER II

LAND REFORM AND LAND TENURE

II. LAND REFORM AND LAND TENURE

The relationship between man and land represents one of the foremost issues in the Third World today. Asia has the lowest ratio of cropland area per rural person in the world, averaging at 0.35 hectare per person.¹ Over 70 percent of the world's rural population are in Asia, on roughly 32 percent of the world's cropland. Although the Philippines (at 0.34 hectare per person) is not nearly as bad as Bangladesh (0.16 hectare) or Indonesia (0.22 hectare), population pressures upon the existing arable land are still considerable. Land, therefore, is an extremely scarce resource. If the pattern of land ownership is skewed towards a small minority, as is the case in the Philippines, then land becomes even scarcer. In the Philippines, 0.1 percent of the population on rice and corn lands own 15 percent of the land. These lands constitute estates of 100 hectares or larger. Or, 53.3 percent of the rice and corn land is owned by only 3.0 percent of the population.²

¹The world average is 0.78 hectare per person; Africa (0.90 hectare); South America (1.14 hectares); North and Central America (5.02 hectares); USSR (3.01 hectares); and Europe (1.63 hectares), in World Bank, Land Reform: Sector Policy Paper (Washington, D.C.: The World Bank, 1975), p. 49.

²Figures from table 3-3. The reason for restricting these figures to rice and corn lands only is because, as we shall see in the following chapter, the Philippine land reform has been confined to rice and corn lands.

In this chapter we will examine the theoretical issues with respect to land reform. Since the topic is so broad and complex, we will deal largely with those issues which are directly relevant to the Philippines. The theory behind land reform used in this paper is taken largely from the World Bank.

2.1 Scope of Land Reform

Land reform constitutes a policy of intervening and changing the institutional structure governing the relationship between man and land. Land is the principal factor of production for food and other agricultural products. Generally speaking, there is an adequate supply of food; the problem lies in its distribution. The assumption is that if the inputs (e.g., land, credit, etc.) are distributed equally then it would have a positive effect on the distribution. Transferring the ownership of the land is one strategy which attempts to redistribute the inputs equitably. Land productivity (output per hectare) is also presumed to increase because smaller farms tend to be more productive than larger farms. Since the concern for promoting greater equality is an important aspect of land reform, in practice, therefore, land reform is often highly political with important ramifications for overall development.³

³World Bank, op. cit., pp. 15-25.

Land reform involves intervention in the prevailing pattern of land-ownership, control and usage in order to change the structure of holdings, improve land productivity and broaden the distribution of benefits. In practice, land reform is pursued in response to political pressures for socioeconomic change arising from factors such as increased population, pressure on limited land base or an ideology of egalitarianism based on more even distribution of land or income. Land reform, by its very context, has interlinked political, economic and social dimensions which in turn have significant implications for development.⁴

The pattern of land ownership in the Philippines, according to Golay, has been characterized by: a) low productivity of both land and labour, b) concentration of land ownership, widespread absentee landlordism; and high rates of tenancy, c) organization of production into small-scale technologically backward units, and d) relatively high land values.⁵

A feudalistic landlord-tenant system dominates the pattern of land tenure in the Philippines, of which there are two major types: 1) a sharecropping system, and 2) a leasehold system. The sharecropping system, or share tenancy, is the more prevalent form of land tenure in the

⁴World Bank, The Assault on World Poverty: Problems of Rural Development, Education and Health (Baltimore: The John Hopkins University Press, 1975), p. 193.

⁵Frank H. Golay, The Philippines: Public Policy and National Economic Development (Ithaca: Cornell University Press, 1961), p. 266.

Philippines. The tenant, or farmer who actually tills the land, gives roughly 50 percent of his harvest to the landlord, or the person who "owns" the land. In return the landlord will share roughly 50 percent of total farm input costs. The amount of rental (share of the crop) ranges from the predominant 50-50 to 70-30 (for tenant-landlord respectively).

In a leasehold system, a farmer (tenant) gives a fixed rental to the landlord for the "right" to till the land. This ranges from 5 to 30 cavans of palay (sack of unmilled rice weighing 44 kilograms) per hectare, depending upon the productivity of the land. In percentage terms, this tends to work out to 25 percent of the harvest.

Land reform can involve varying degrees of change because the system of land tenure differs from farm to farm. According to the World Bank, land reform can include some or all of the following changes:

1. Redistribution of public or private land in order to change the patterns of land distribution and size of holdings. Usually, this involves an increase in the number of small- or medium-sized farms and a reduction in the number of large holdings. Alternatively, all land can be nationalized and regrouped into state-owned holdings all of which might be large.

2. Consolidation of individual holdings, thereby reorganizing the physical pattern of control. Fragmented holdings can be regrouped into contiguous blocks of land. This can be done with or without changing the distribution of landownership in terms of acreage or value belonging to each individual.
3. Changes in landownership and tenurial rights, with or without physical redistribution of land. Redistributed land can be allocated to new owners or to farmers working on the land. Alternatively, land need not be redistributed but tenants or workers can be made owners of the land they work. In that case, the result is generally a redistribution of income away from the former owners of the land to the new owners. The new owners may farm cooperatively or as individuals.
4. Changes in conditions or tenure without changing ownership or redistributing land. The rights of those working on the land can be safeguarded by law without a change in ownership. Changes in conditions of tenure would include providing security of tenure, introducing equitable crop-sharing arrangements, cooperative land management, and so forth. These changes would also include the conversion from customary to legal rights to land.⁶

The system of land tenure characterizes the relationship between man and land. It follows then, that a successful land reform must incorporate some type of tenurial reform. It is thought that the most effective type of tenancy reform is when the tenants become the owners of the land they till. This element has been characteristic of the successful land reforms in Japan or Taiwan, for example.

⁶World Bank, Land Reform, pp. 20-21.

With the transfer of land ownership, security of tenure is greatly enhanced, which subsequently encourages increased savings,⁷ greater on-farm investment, higher land productivity, and more equitable distribution of output.⁷

Tenurial reforms, however, may stop short of a complete transfer of land ownership. The reform may provide for greater security of tenure with respect to rent paid, prohibiting any evictions of tenants, replacing usurious credit practices with institutionalized credit, and so forth.

Many observers feel that a fixed cash-rent contract, or leasehold system, is superior to the prevalent share tenancy system because the total income from the land in excess of the fixed rent accrues entirely to the actual farmer. The advantage to sharecropping, however, is that it provides the tenant with risk insurance. Crop sharing becomes more equitable and efficient if considered in the context of cost sharing. In the Philippines, for example, it would appear that the introduction of the Green Revolution was facilitated by landlords and tenants engaging simultaneously in cost

⁷Ibid. p. 34. For a summary of land reforms in other areas of the world, see Dharam Ghai, et al, Agrarian Systems and Rural Development (Geneva: International Labour Office, 1979).

sharing and crop sharing because the combination was profitable to both.⁸

2.2 Land Reform and Productivity

It would appear that, under normal circumstances, land reform can improve productivity. The most appropriate test would be to compare productivity in a given area before and after land reform. Unfortunately, there is no such case where one variable - size of farm - has changed over time. The second best alternative is to compare different sized farms in a particular area with respect to productivity (output per hectare). According to a World Bank study, "a smaller average size of holdings and a lower concentration of landownership were associated with an increase in output per hectare."⁹

In the Philippines a similar trend is appearing. Output per hectare tends to increase as one moves to smaller farms. In fact, Berry and Cline found the 0.1 to 1.0 hectare category to have the highest output per hectare in the Philippines. They found a statistically negative relationship between farm size and output per land area.¹⁰

⁸World Bank, Land Reform, p. 34.

⁹Ibid. p. 27.

¹⁰R. Albert Berry and William R. Cline, Agrarian Structure and Productivity in Developing Countries (The John Hopkins University Press, 1979), pp. 72-78. Berry and Cline's analysis is restricted to rice land only.

According to the World Bank, "small farms in the Philippines - that is, less than two hectares - produced 2.9 tons of paddy per hectare, while farms of more than four hectares produced 2.2 tons per hectare."¹¹

Although the average Philippine rice and corn farm is already fairly small, 2.7 and 2.9 hectares respectively in 1971, there are still a significant number of large farms.¹² "In the case of rice farms, 90% are less than 5 ha., but 35% of rice lands are cultivated in farms of 5 ha. or more. For corn farms, 87% are less than 5 ha., but 42% of corn lands are in farms of 5 ha. or more."¹³ It is these larger farms that the Philippine land reform program is primarily aimed at.

The evidence tends to indicate that, under normal circumstances, productivity will not decline by redistributing land to create smaller holdings. In fact, it would appear that under controlled circumstances, output per

¹¹World Bank, Land Reform, p. 27.

¹²Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979), p. 245.

¹³Gelia T. Castillo, Beyond Manila: Philippine Rural Problems in Perspective (Ottawa: International Development Research Centre, 1979), p. 38.

hectare might even be higher. There are two associated reasons for this assumption, according to the World Bank. First, in most agricultural production there are limited economies of scale. Secondly, "small-scale producers tend to maximize output by applying labour intensively, while large-scale operators tend to maximize profits by using hired labour only until incremental production covers incremental costs. This is usually short of the output per hectare that would be produced if the goal were maximization of output."¹⁴

Land reform can be consistent with development objectives, with output per hectare as the relevant criterion. Labour productivity, however, that is output per worker, will probably decline as smaller farms tend to employ more labour. It would also mean that the increased income from the land would be shared by an even greater number of people. Thus, the decline in labour productivity only reflects the employment and equity benefits of land reform. The same land would employ more people and the income generated would be shared by a greater number of people.¹⁵

¹⁴World Bank, Land Reform, p. 28.

¹⁵Ibid. pp. 28-29.

Closely connected with the productivity aspect of land reform is the impact on employment. As noted above, smaller farms tend to employ labour more intensively and therefore, produce more per hectare than larger farms. A policy of land redistribution creates a greater number of small holdings, which in turn means a greater demand for labour, and which might even result in increased output per hectare.¹⁶

2.3 Land Reform and Equity

In the rural areas, agricultural land frequently forms the principal basis for total wealth. In many cases, land also forms the basis for political power. Hence, land reform may not only redistribute total wealth, but also power. "Land reform is in practice predominantly a question of equity and, therefore, one that is often highly political."¹⁷ The equity effect of land reform, according to the World Bank, will be significant only if:

¹⁶Gunnar Myrdal, The Challenge of World Poverty: A World Anti-Poverty Program in Outline (New York: Vintage Books, 1970), p. 86.

¹⁷World Bank, Land Reform, p. 25.

(1) the effective ceiling is low (size of the parcels); (2) the beneficiaries belong to the poorer groups; (3) the extension and (nonland) input distribution system favours the beneficiaries; and (4) owned and self-operated land as well as leased land is redistributed.¹⁸

In many developing countries, particularly in Asia, population density may act as an inhibiting factor with respect to the impact of land reform on equity. In some Asian countries, farm population densities are so high that even if the effective ceiling for holdings were low, there would not be enough land for all tenants to own a tolerable minimum size farm and provide for the landless.¹⁹

The solution to the population density problem quite clearly rests in non-farm policies, such as massive rural works programs or rural industrialization. This does not, however, imply that a land reform program should not be implemented in those areas where a population density problem exists. On the contrary, it would appear that increments in

¹⁸Ibid. p. 30.

¹⁹Ibid. p. 31. Central Luzon is the most densely populated area in the Philippines. Prior to land reform, the average farm size has been estimated at roughly 1 hectare.

rural small-holder incomes may have greater multiplier effects than comparable increments in incomes of larger farms. According to the World Bank, detailed micro studies of small-holder farm households show that increases in their income has a greater effect on "the demand for non-agricultural goods and services, and hence the incomes of those providing the goods and services." This suggests that "a small-holder-oriented agricultural development strategy would enhance the expansion of a domestic market for industry."²⁰ Thus, particularly where a population density problem exists, a land reform program should be implemented because of its far reaching beneficial impact on equity and overall development.

2.4 The Role of Supporting Services

Small farms will quite clearly need more than just a redistribution of land and an increase in employment for output per hectare to increase. An increase in non-labour inputs, such as fertilizer, will be necessary to raise productivity.

²⁰World Bank, World Development Report 1979 (Washington, D.C.: The World Bank, 1979), p. 61.

Therefore, the organization of an effective extension-cum-input supply system for small farmers must accompany land reform. Where there is such a system - as in Japan, the Republic of Korea and the Republic of China - the absorptive capacity of agriculture tends to be high even though holdings are small; at the same time, output per hectare is high. Small holdings can yield high returns to labour provided output per hectare is high - a condition that can only be fulfilled by the application of high-yielding labour-intensive technologies.²¹

In many cases landlords provide their tenants with support services such as credit or access to irrigation. With the implementation of a land reform, the landlord in many cases will withdraw his support to the tenant. In such cases, the role of supporting services may be crucial in order to replace the loss of landlord services. Cooperatives, for example, are frequently seen as an important support service in such areas as credit, marketing; improving farm management systems, and so forth.

Land reform, therefore, is a much more complex concept than simply a redistribution of land. The control over the production of the land, distribution of power, water and other resources, for example, are important components of land reform. This is because land is such an important basis for wealth and power in the rural areas, that to redistribute land also implies a redistribution of not only wealth but

²¹World Bank, Land Reform, pp. 29-30.

also power. Thus, land reform can be defined, according to the United Nations, as "integral reforms of tenure, production and supporting services structure to eliminate obstacles to economic and social development arising out of defects in the agrarian structure, by redistribution of wealth, opportunity and power, as manifest in the ownership and control of land, water and other resources."22

Agrarian reform is a much more comprehensive concept than land reform because it embraces a wider range of policies and conditions that affect the agricultural sector. Agrarian reform, according to the World Bank, consists of modifying the agricultural sector through measures that might include "changing price policies so as to turn the terms of trade in favor of the agricultural sector; increasing allocations to the agricultural sector in order to expand research, extension, training and storage facilities; making physical supplies, such as fertilizers, available and increasing credit for their purchase; or providing infrastructure to facilitate agricultural production."23

22United Nations, Progress in Land Reform - Fifth Report (New York: United Nations, 1970), p. 303.

23World Bank, Land Reform, p. 22.

To put it another way, what land reform considers "peripheral" to its policy (i.e., supporting services), agrarian reform takes as its "core". The two concepts can be thought of as being on a spectrum. On one side there is land reform, in the middle lies agrarian reform, and on the other side lies rural development (which is concerned with improvements to the entire rural area). Agrarian reform, in theory, may not include land reform if for some unlikely circumstance that the land is already evenly distributed. "The point is that land reform may be a necessary condition for agrarian reform, but it is seldom a sufficient condition for increasing agricultural output, since land is only one factor of production."²⁴

An important point should be made in relation to the Philippines, on the distinction between agrarian reform and land reform. In the Philippines, an agrarian reform program has been implemented, but the emphasis according to government rhetoric is on land reform. Thus, in many cases, references have been made to the Philippine "agrarian" reform and then switched to using "land" reform. Both references are correct. The Philippine program is essentially a land reform program with some aspects of agrarian reform. For this reason, this paper will concentrate on land reform in

²⁴Ibid. p. 23.

the Philippines, but will also include agrarian reform in its evaluation.

2.5 Land Reform and Basic Needs

How does land reform fit into the basic needs concept? Some indication of this has already been provided in the introductory chapter. To make the connection between land reform and basic needs we must first derive a definition of basic needs, which we will adapt from the International Labour Organization. The central theme running through Employment, Growth and Basic Needs is the objective of satisfying basic needs (or minimum requirements) of the poor through national and international development efforts. Basic needs, according to the International Labour Office (ILO), include several elements:

First, they include certain minimum requirements of a family for private consumption: adequate food, shelter and clothing are obviously included, as would be certain household equipment and furniture.

Second, they include essential services provided by and for the community at large, such as safe drinking water, sanitation, public transport, and health and educational facilities.

A basic-needs oriented policy implies the participation of the people in making the decisions which affect them. Participation interacts with the two main elements of a basic-needs strategy.

For example, education and good health will facilitate participation, and participation in turn will strengthen the claim for the material basic needs.

The satisfaction of an absolute level of basic needs as so defined should be placed within a broader framework - namely the fulfilment of basic human rights, which are not only ends in themselves but also contribute to the attainment of other goals.

In all countries employment enters into a basic-needs strategy both as a means and as an end. Employment yields an output. It provides an income to the employed, and it gives a person the recognition of being engaged in something worth his while.²⁵

Another important aspect which the report considers is "making employment more humane and satisfying ... an element of a basic needs strategy." In addition, "basic needs constitute the minimum objectives of society, not the full range of desirable attributes, many of which will inevitably take longer to attain."²⁶

The major thrust underlying the basic needs approach is to meet the minimum requirements of the poor. The poor, or those who are poverty-stricken, lack the minimum requirements (as outlined above) for a dignified human

²⁵International Labour Office, Employment, Growth and Basic Needs: A One-World Problem (New York: Praeger Publishers, 1976), p. 32.

²⁶Ibid. p. 33.

existence. Meeting the basic needs of those who do not even have these minimum requirements, within the shortest possible period, forms the underlying objective of the basic needs approach. The basic needs approach, therefore, is an approach which constitutes a direct attack on poverty. It is also a conceptual framework of what development strategies should or ought to be striving for.

There are two general methods to indicate the extent of poverty. First, in terms of absolute poverty ("defined by income levels below which even minimum standards of nutrition, shelter and personal amenities cannot be maintained") and secondly, in terms of relative poverty ("reflecting extreme differences in levels of living between the top and bottom strata of society").²⁷ Perhaps the most startling figure, according to the World Bank, is that roughly 85 percent of all absolute poverty in the Third World is in the rural areas, and moreover, the extent of relative poverty is also equally significant.

One of the primary causes of inequality, in the broadest sense of the term, is due to a maldistribution of assets. In the rural areas, where one finds the major proportion of absolute and relative poverty, the major asset

²⁷World Bank, The Assault on World, p. 19.

is land. Most of the rural poor either do not have adequate access to or control of this vital asset, and what it produces. Land reform is a development strategy which incorporates a direct attack on poverty and, subsequently, one which also contains the principles of a basic needs approach. Land reform concentrates on those areas where poverty is the most prevalent, it attacks one of the principal causes of poverty in the Third World (i.e., maldistribution of land), and attempts to make "employment more humane and satisfying". If viewed in a wider context, land reform, like basic needs, constitute the minimum "objectives of society, not the full range of desirable attributes many of which will inevitably take longer to attain."²⁸

The basic needs approach also considers the "participation of the people in making the decisions which affect them", to be important. Land reform is one of the few development strategies where popular participation can be legislated. A policy of land redistribution involves the tenants, or tillers of the land, to a greater extent into the production process and in making decisions which affect their lives.

²⁸See footnotes 25 and 26.

The current land reform program in the Philippines, as we shall see in the following chapter, is an agrarian reform program with an emphasis on land reform. It incorporates the basic needs approach, and has as its core a direct attack on poverty. According to President Marcos, "the program is designed to uplift the members of the agricultural sector from poverty and stagnation..."²⁹

2.6 The Evolution of Land Tenure

In this section the evolution of land tenure in the Philippines will be examined. This will help to put the theoretical issues of land reform into perspective as they relate to the Philippines. In other words, it will provide some insight into the importance that Marcos has given land reform in the New Society.

The existing problem of land ownership in the Philippines dates back to the pre-Spanish, or pre-colonial, era. Flores and Clemente suggest that the current preoccupation with land reform stems from the realization that nothing much has happened in regards to development in

²⁹Philippines, Ministry of Agrarian Reform, Annual Report 1978 (Quezon City: Ministry of Agrarian Reform, 1978), p. 3.

the countryside for over four centuries. "It is unfortunate, -but it would seem that what is being produced is not an abundance of agricultural commodities, but heightened revolutionary fervor."³⁰ Filipinos can rightfully condemn the Spanish, the Americans, and government leaders, according to Huke, for failing to correct the system. It should be noted, however, that the land tenure conditions of today had their beginnings in pre-Spanish times.

In the pre-colonial era, a feudalistic form of land tenure existed in the Philippine archipelago. People lived in small villages known as "barangays" (named after the boats in which settlers of the Philippines traveled from Indonesia and Malaysia), which roughly correspond to the "barrios" of today.³¹ Huke identified three classes in pre-colonial Philippines - nobles (maharliku), freemen or serfs (timawa), and slaves (alpin) - all of which were under the power of the chief (datu):

³⁰Thomas G. Flores and Francisco A. Clemente, "Scio-Economic Profile of Tenants and Landowners in the Philippines," final report submitted to the Philippine Council for Agricultural Research, Los Banos, November 1975, p. 1.

³¹Robert E. Huke, Shadows on the Land: An Economic Geography of the Philippines (Manila: The Bookmark, Inc., 1963), p. 192.

- Nobles were free from tribute, but were ready to do battle for the chief.
- Serfs lived in their own houses and could own property; their children were free men. They paid tribute representing half the yield of their cultivated land and thus were the ancient equivalent of today's tenants.
- Slaves existed to serve the chief and could be sold.³²

In the pre-colonial period, there was a maldistribution of land. The "datu" had control over the land and power over the life and death of his subordinates. Two characteristics of pre-colonial land tenure developed and have been in existence ever since. First, sharecropping existed, where a person of higher status would claim a certain proportion of the harvest from the actual tiller of the land. Secondly, "debt.peonage" existed, which refers to the dependence that farmers have upon their "superiors" (e.g., datu), because they are deeply in debt to them. Murray aptly notes that "the elimination of these two

³²Ibid.

patterns is still one of the principal problems facing land reform legislation in the Philippines."³³

Agoncillo and Alfonso describe the pre-Spanish system of land holding as being public and private. Private lands were the best cultivable land in the area and were owned by the chiefs and nobles. Public lands consisted of lower quality arable land and were freely available to anyone.³⁴

The arrival of the Spanish "conquistadores" in 1565 marked the beginning of the colonial era. They further reinforced the feudalistic land tenure system by imposing the "encomienda". An "encomienda" consisted of a piece of land, including the inhabitants and resources. "Encomiendas" were land grants from the Spanish king to loyal civil and military servants and to friars. The nobles and chiefs fitted into the encomienda system by acting as a liaison between the ecclesiastical and civil authorities on one hand and the

³³Francis J. Murray, Jr., "Land Reform in the Philippines: An Overview," in View from the Paddy: Empirical Studies of Rice Farming and Tenancy, ed. Frank Lynch (Manila: Philippine Sociological Review, 1973), p. 152. See also Teodoro A. Agoncillo and Oscar M. Alfonso, History of the Filipino People (Quezon City: Malaya Books, 1967), p. 55.

³⁴Agoncillo and Alfonso, op. cit., p. 55.

average person on the other. In short, they collected taxes from the serfs and slaves and passed it on to the Spanish authorities, but they were not required to pay taxes themselves. Apparently, nobles and chiefs were allowed to own some of the land which they controlled prior to 1565 so long as they continued to collect the taxes.³⁵ The encomiendas later evolved into the haciendas (large estates) of the nineteenth and twentieth centuries.

In the latter part of the nineteenth century, two royal decrees were issued urging everyone to obtain a title to the land they owned. These legal titles to the land, introduced by the Spanish, were only known amongst the "caciques" (landowners). Caciques laid claim to more land than they were entitled to because of their knowledge of the "law". To the tillers of the "public land" (as it was known in pre-colonial times), as long as they cultivated it then they owned it. From the perspective of the Spanish and later the Americans, however, one did not own the land unless he had acquired the "legal" title to it.

The comparatively few people who acquired legal titles were mostly persons belonging to the cacique group, and these often laid claim to more land than they had a right to. Thus, in many cases peasants who had felt secure in the

³⁵Huke, op. cit., pp. 192-194.

possession of their land and had not known or cared about titles were suddenly confronted with the fact that a wealthy person, with the law behind him, was claiming their land. These peasants were then driven from it or forced to become tenants.³⁶

At the turn of the century, the Americans replaced the Spanish and essentially reinforced the prevailing pattern of land ownership. Spanish land titles were re-processed and authenticated by the U.S. administration. The Americans did, however, attempt to break up large landholdings, including friar lands. Most of this redistributed land tended to end up in the hands of the already landed elite. This occurred despite the enforcement of the Australian Torrens System (Act 496, Nov. 6, 1902). In theory, the Torrens system allowed for landowners and tillers to legally formalize their ownership. In practice, it was the cacique class with higher education, greater political influence, and greater access to information who ended up with the titles to the land.³⁷

³⁶Karl J. Pelzer, Pioneer Settlements in the Asiatic Tropics (New York: American Geographical Society, 1945), p. 90.

³⁷Flore's and Clemente, op. cit., p. 6.

These decades of social inequity were years of tranquility. The history of the Philippines is a history of agrarian oppression and struggle. The oppression suffered by the peasants resulted in the awakening of political consciousness culminating in periods of violent confrontations.³⁸

Philippine agrarian unrest started to grow during the Spanish colonial period. Grievances as early as the 18th century have been recorded in the Tagalog area near Manila. These stemmed from the tributes (taxes) and forced labour associated with the encomienda. Farmers complained that the encomienda estates (haciendas) violated native property rights and traditional forms of tenure.³⁹

Some of the recipients of Spanish land grants were from three religious orders: the Dominicans, the Agustinians, and the Recoletos. These particular grants were known as friar lands. Although friar lands amounted to only 172,000 hectares, they were a major source of agrarian unrest. This is primarily because friar lands happened to be located in some of the most densely populated farm areas.⁴⁰

³⁸Ibid., pp. 6-7.

³⁹Agoncillo and Alfonso, op. cit., pp. 129-130.

⁴⁰Huke, op. cit., pp. 193-194.

In the early years of American colonial rule, labour and peasant unions emerged as a result of increased political consciousness. One of the most powerful unions (in regards to size of membership) was the "Katipunang Pambansa ng mga Magbubukid ng Pilipinas" (National Peasants Union of the Philippines). The "Katipunang Pambansa ng mga Magbubukid ng Pilipinas" (KPMP) attempted to: a) improve landlord-tenant relations; b) provide protection from wealthy caciques; c) extension of bank credit facilities in favour of small farmers; d) purchase of haciendas for resale to tenants; and, e) halting the practice of land grabbing by caciques.⁴¹

In the late 1920's, a rural organization consisting of tenants and labourers known as the Tangulans, was formed. Its main strength was in Central Luzon, and in 1934, the Tangulans rebelled against caciquism and agrarian oppression (commonly known as the Colorum rebellion).⁴²

Four years later, an organization known as the Sakdalistas forced the break-up of large estates, particularly land owned by the Church. Like the Tangulans, this uprising was a result of tenant discontent in the Central Luzon area. According to Flores and Clemente, these

⁴¹Flores and Clemente, op. cit., pp. 7-8.

⁴²Ibid., p. 8.

uprisings in the 1930's "produced the first Philippines Reform Laws which sought to create new farms through government purchase and resale of land and to provide protection to tenants."⁴³

The "Hukbo ng Bayan Laban sa Hapon" (People's Army against the Japanese) emerged with the outbreak of World War II. After the war, and with the granting of Philippine independence in 1946, the organization was changed to "Hukbong Mapagpalaya ng Bayan" (People's Army to Liberate the Countryside). This uprising in the Central Luzon area, known as the Huk movement, was originally directed at the Japanese but later became a war against the government and the landlords.⁴⁴

Like any other uprising the Huk movement is not an isolated armed uprising against duly constituted authority. Having its roots in the encomienda system which was characterized by greed, brutality, and corruption, the Huk mass movement is the culmination of centuries of peasant degradation, loss of self-respect, and abject poverty.⁴⁵

Another aspect to land reform and land tenure, encouraged by the Americans, were migration and resettlement

⁴³Ibid., p. 9.

⁴⁴Agoncillo and Alfonso, op. cit., p. 542.

⁴⁵Flores and Clemente, op. cit., p. 10.

schemes into the "promised land". The "promised land" was Mindanao, the southern part of the Philippines which is predominantly Muslim; the Philippines in general is largely Christian. The current Muslim/Christian conflict can be traced back to the Spanish colonial era. Muslims fought the Spanish and cacique Filipino in order to preserve their religion, life-style, and resources. Under the American administration, and in the 1950's and 1960's, many Christian Filipinos migrated or resettled in Mindanao. Among these resettled tenants, were former Huk sympathizers. The Christian migration coincided with an increasing Islamic consciousness. Gradually, Christian Filipino migrants dominated the schools, the court system, the military, the professions, large-scale economic enterprises, cities and (in some provinces) voting rolls and small-scale farming.⁴⁶

Muslims tended to regard the entire territory as theirs by right and by their own legal system, but seldom had Philippine legal documents to prove their rights to any of it, and because Christians generally controlled the governmental agencies making and enforcing land decisions.⁴⁷

⁴⁶Lela Garner Noble, "The Moro National Liberation Front in the Philippines," Pacific Affairs, Vol. 49, No. 3 (Fall 1976): 405-407.

⁴⁷Ibid.

Various attempts at land reform have been made under various administrations since Philippine independence. The Rural Progress Administration which existed from 1939 to 1950, was largely ineffective and has been described by Golay as being "dormant".⁴⁸ The Land Reform Act of 1955 which was implemented by the Land Tenure Administration had as its policy to affect only those lands over 300 hectares. Only one estate, worked by 187 tenants, was purchased by the government.⁴⁹

In 1963, Republic Act 3844 (the Agrarian Land Reform Code) was passed by the Macapagal administration. Five agencies, concerned with land acquisition, extension work, credit, finance, and legal services, were coordinated by a central Land Reform Council. The Council suffered from political problems in the form of interagency competition and lack of clear authority. In 1971, the Agrarian Land Reform Code was modified by Marcos, who created a central Departmental Agrarian Reform (DAR). A year later, Marcos implemented martial law in the Philippines. It seems that one of the primary reasons for attaching so much importance to land reform in the New Society was a perceived threat of

⁴⁸Frank H. Golay, The Philippines: Public Policy and National Economic Development (Ithaca: Cornell University, 1961), p. 274.

⁴⁹Ibid., p. 276.

an aroused peasantry. It is also interesting to note that "the (current) war between Muslims and the government is frequently dated from October 1972, approximately one month after Marcos' declaration of martial law."⁵⁰

2.7 Summary

In general, this chapter has touched on the theoretical aspects of land reform, while including some examples from the Philippines. The major points can be summarized as follows:

- 1) Land reform constitutes a policy of intervening and changing the institutional structure governing the relationship between man and land. Altering the system of land tenure is one of the principal objectives underlying a policy of land redistribution. Tenurial reforms can vary and do not necessarily include a change in landownership. The most successful land reforms, however, are ones which contain such tenurial reforms (i.e., a change in landownership), such as in Japan or Taiwan.

- 2) It would appear that output per hectare will not decline as a result of land reform. In fact, smaller farms

⁵⁰Noble, op. cit., p. 405.

tend to be more productive in terms of output per hectare, than larger farms. Output per worker, however, will likely decline as a result of land reform, because smaller farms tend to employ more labour. This represents the employment and equity effects of land reform.

3) The equity effect of land reform will not be realized unless: a) the effective ceiling (of holdings) is low; b) the poorer groups benefit; c) the input distribution system favours these groups, and, d) all land is redistributed. Population densities may pose a threat to the equity effects of land reform. However, this can be offset because it would appear that increments in small farm household income may have a greater multiplier effect than comparable increments in incomes of larger farm households.

4) The role of supporting services is an important aspect of land reform, because land represents only one factor of production. Land reform seeks not only to redistribute land, but also to redistribute water and other resources. In many rural areas land also forms the basis for power, in addition to wealth. Since land reform is predominantly a question of equity, it is also often highly political.

5) What land reform takes as its "periphery" (i.e. supporting services) agrarian reform takes as its "core". At the same time, however, supporting services are an important aspect of land reform, and land reform may be an integral part of agrarian reform.

6) Land reform can be likened to a basic needs strategy because it concentrates on areas where poverty is most prevalent, it attempts to attack one of the primary causes of poverty (a maldistribution of land), attempts to make employment more humane, and increase the participation of the tillers of the land into the production process and in making decisions which concern their own lives.

7) The existing problem of land ownership in the Philippines can be traced back to the pre-colonial era. In the pre-colonial period, there was a maldistribution of land. Spanish and American policies had the effect of strengthening the wealth and power of the "caciques" (landowners). In the twentieth century, outbreaks of agrarian unrest in the Central Luzon area can be traced back to the encomienda system. The Muslim/Christian conflict seems to have been heightened by Christian migration into Mindanao. Marcos implemented a land reform program in the New Society apparently because of a perceived threat of an aroused peasantry.

CHAPTER III

THE PHILIPPINE LAND REFORM PROGRAM

III. THE PHILIPPINE LAND REFORM PROGRAM

This chapter will provide an overview of the Philippine land reform program, as well as some initial assessments concerning the design of the program.

3.1 The Agricultural Setting

The Philippines has from an early stage looked to the promotion of industrial development as its main engine of modernization, through a policy of import substitution.¹ The Philippines according to conventional indicators of development, is a dynamic developing economy with a real growth rate in its GNP of 6.2 percent per annum from 1970-78, combined with a steady increase in per capita GNP of 3.2 percent per annum for the same period (see table 3-1). Although the Philippines has subsequently been characterized as one of the better-off nations in Southeast Asia, it has neglected the agricultural sector. About 60 percent of the Filipino work-force is engaged in agricultural pursuits, while only a little more than 30 per cent of national product is generated. Low productivity is a characteristic

¹See Geoffrey B. Hainsworth, "Economic Growth and Poverty in Southeast Asia: Malaysia, Indonesia and the Philippines," Pacific Affairs, Vol. 52, No. 1 (Spring 1979): 18; and for a discussion of Philippine industrial policies, see John Wong, ASEAN Economies in Perspective: A Comparative Study of Indonesia, Malaysia, the Philippines, Singapore and Thailand (Philadelphia: Institute for the Study of Human Issues, 1979), pp. 67-71.

Table 3-1

GROSS NATIONAL PRODUCT, POPULATION, AND GNP PER CAPITA, 1970-78

	1970	1971	1972	1973	1974	1975	1976	1977	1978
G.N.P. ^a	51,014	53,526	56,075	60,931	64,139	68,361	73,585	78,163	82,681
Per cent Increase	4.9	4.8	8.7	5.3	6.6	7.6	6.2	5.8	
Pop. ^b	36,684	37,703 ^c	38,751 ^c	39,827 ^c	40,934 ^c	42,071	43,398 ^d	44,767 ^d	46,178 ^d
G.N.P./Capita	1,390	1,420	1,450	1,530	1,570	1,620	1,700	1,750	1,790
Per cent Increase	2.2	2.1	5.5	2.6	3.2	4.9	2.9	2.3	

^aAt constant 1972 prices in million (000,000) pesos, P7 roughly equals US\$1.

^bPopulation of the Philippines in thousands (000).

^cEstimates based on 1970 and 1975 population figures.

^dEstimates based on 1975 & 1980 figures, using 1980 medium projection by NEDA, p.36.

Source: Philippines, National Economic and Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

feature of Filipino agriculture, and this applies to food crop, industrial crop and livestock production alike.² The performance of the agricultural sector is poor even when compared to other Asian countries, and even more so when one considers that over half of its rice land is using HYV's (high-yielding varieties).

The Philippines has the highest proportion of the rice land planted to HYV's among all the so-called Less Developed Nations (*italics mine*). More than half (56.3 percent) of its rice hectareage use these "miracle" varieties ... Thailand which realizes a higher yield per hectare than the Philippines has only 4.9 percent of its rice area planted to HYV's. This means that despite the Philippine advantage in the use of HYV's, many "disadvantaged" Asian farmers continue to harvest more from their farms than Filipino farmers.³

At first blush, there are two possible factors, in the context of the Green Revolution, which could account for this low productivity. First, among Asian nations, the Philippines uses relatively small levels of fertilizer per hectare. "However, Thailand uses only 9.3 kg/ha. or less

²Donald W. Fryer, Emerging Southeast Asia: A Study in Growth and Stagnation (New York: McGraw-Hill Book Co., 1970), p. 174. These rough figures are applicable to the Philippines up to 1978 (the latest year for statistical data), and one would presume that not much has changed from 1978 to 1980, see Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979), p. 55 and p. 161.

³Thomas G. Flores and Francisco A. Clemente, "Socio-Economic Profile of Tenants and Landowners in the Philippines," final report submitted to the Philippine Council for Agricultural Research, Nov. 1975, Los Banos, University of the Philippines at Los Banos, College, Laguna, 1975, p. 32.

than half of that of the Philippines. Yet it has a higher output than the latter."⁴ Thus low fertilizer use alone cannot account for low productivity.

Secondly, the Philippines does not have a large proportion of its rice farms under irrigation; only 9 percent of all farms are irrigated. "It is worthy to note that the countries which have high rice production capabilities have large irrigated areas."⁵ As Flores and Clemente note, however, Malaysia has a lower percentage of irrigated land, but produced one metric ton more per hectare than the Philippines. "Burma, Nepal, and Pakistan also have proportionately less irrigated lands than the Philippines but are also better rice producers."⁶

The findings from Flores and Clemente have been summarized in table 3-2. Each country has been assigned a rank from 1 to 9; where 1 designates the most within that category. For example, the Philippines ranks first on use of HYV's, fourth on use of fertilizer, sixth in terms of irrigation, but ninth in terms of yield per hectare, in this sample of nine Asian countries. It is interesting to note that Nepal and Burma rank considerably lower than the

⁴Ibid. p. 34.

⁵Ibid. p. 35.

⁶Ibid. p. 36.

Table 3-2

USE OF HYV'S, IRRIGATION, FERTILIZER, AND YIELDS IN SOME ASIAN STATES, 1970

Country	Percent of rice area planted to HYV's	Rank	Amount of fertilizer used (kg. NPK/Ha.)*	Rank	Percent of Farms with irri- gation**	Rank	Yield, metric ton per hectare	Rank
Philippines	56.3	1	22.6	4	9	6	1.5	9
Pakistan	43.4	2	15.0	5	65	1	2.4	3
Malaysia	38.0	3	37.7	3	7	7	2.5	2
Sri Lanka	38.0	4	41.5	2	23	3	2.2	4
India	24.7	5	12.1	6	17	5	1.7	7
Korea (S.)	15.6	6	231.3	1	33	2	4.7	1
Nepal	14.8	7	2.3	8	6	8	2.0	5
Thailand	4.9	8	9.2	7	28	4	1.9	6
Burma	4.2	9	1.9	9	4	9	1.7	8

*Kilograms of NPK (nitrogen, phosphorous and potassium) per hectare of arable land.

**I assume that these figures refer to the proportion of "farms" and not "land"; but this is not clearly indicated.

Source: Thomas G. Flores and Francisco A. Clemente, "Socio-Economic Profile of Tenants and Landowners in the Philippines," final report submitted to the Philippine Council for Agricultural Research, Los Banos, November 1975, pp. 29-37.

Philippines within all categories, but obtain higher yields per hectare (1970 figures).⁷

Flores and Clemente have analyzed three factors - HYV's, fertilizer use, and irrigation - which have apparently affected Philippine productivity. These factors are important to productivity, but the success of the Green Revolution depends upon the interaction of HYV's along with proper use of fertilizers and adequate irrigation.

The Revolution is also dependent on the intensive application of the latest developments in modern agricultural technology, which is not an unmixed blessing. Irrigation is essential to the success of the new seeds. Without irrigation the miracle grains are no better than local varieties ... Fertilizers and pesticides are another set of inputs necessary for the success of the Revolution ... Not only must the farmer finance a high input of agricultural chemicals to maintain his yield, but he must learn how to use them. Without the proper applications in terms of amounts, timing, and synchronizing with watering procedures, the chemicals can be rendered useless or possibly detrimental to crop production.⁸

The Philippines uses the highest proportion of HYV's along with relatively low levels of fertilizer and irrigation, compared to other Asian nations. This paradox between a high use of HYV's along with a low use of

⁷Since the imposition of martial law in 1972, there has been some improvements, such as increased use of fertilizer, which will be discussed later on in this paper. The purpose of these figures is to indicate a neglect of the agricultural sector up to 1970.

⁸James F. Metress, "The Myth of the Green Revolution," Social Science, Vol. 51, No. 2 (Spring 1976): 2.

fertilizer and irrigation greatly influences levels of productivity in the Philippines. It may also tend to indicate a lack of investment in agricultural infrastructure.

3.2 The Objectives of the Program

On September 24, 1972, President Marcos imposed martial law in the Republic of the Philippines, which ushered in the era of the "New Society". The cornerstone of the New Society, according to Marcos, is premised upon land reform. One cannot disagree with Marcos concerning the importance of a land reform program in the Philippines, given the state of the agricultural sector and past history of reform attempts.

Government officials have repeatedly emphasized the importance of this reform program for Marcos' "New Society". On the first anniversary of its proclamation Marcos himself asserted, "The land reform program is the only gauge for the success or failure of the New Society. If land reform fails, there is no New Society."⁹

Marcos issued Presidential Decree No. 2 (see Appendix A) on 26 September 1972, declaring the entire country as a land reform area. Presidential Decree No. 2 (PD. 2), "reaffirmed the application of Republic Act 3844 of 1962,

⁹Benedict J. Kerkvliet, "Land Reform in the Philippines Since the Marcos Coup," Pacific Affairs, Vol. 47, No. 3 (1974): 287.

as amended by RA 6389 (1971), called the Code of Agrarian Reforms"¹⁰ (see Appendix B). PD 2 is simply a re-statement of the Code of Agrarian Reforms, but under the New Society national priority has officially been given to land reform.¹¹ The objectives of increasing productivity and reducing agrarian unrest¹² are implicitly stated in PD 2:

WHEREAS, among such objectives is to achieve dignified existence for the small farmers free from pernicious institutional restraints and practices which have not only retarded the agricultural development of the country but have also produced widespread discontent and unrest among our farmers, one of the causes of the existing national emergency.¹³

One month later, Marcos issued Presidential Decree No. 27 (see Appendix C) on 21 October 1972, declaring that

¹⁰Duncan A. Harkin, "Strengths and Weaknesses of the Philippine Land Reform," SEADAG papers, Baguio, April 1975, p. 1.

¹¹See Philippines, Land Reform Task Force, "Land Reform Analysis," Ref: W.P. II/TF. D/3, Manila, 6 July 1973, p. 4.

¹²Some observers contend that the major reason for a land reform program in the Philippines has been in response to agrarian unrest. See Francis J. Murray, Jr., "Land Reform in the Philippines: An Overview," in View from the Paddy: Empirical Studies of Philippine Rice Farming and Tenancy, edited by Frank Lynch (Manila: Philippine Sociological Review, Vol. 20: 1 & 2, 1972), p. 155; and see Gerita T. Castillo, All in a Grain of Rice (Los Banos: Southeast Asian Regional Center for Graduate Study and Research in Agriculture, 1975), pp. 262-264.

¹³Philippines, Department of Agrarian Reform, Public Information Division, Vital Documents on Agrarian Reforms in the New Society (Diliman, Quezon City: Department of Agrarian Reform, 1977) PD 2, p. 1.

all tenants on rice and corn lands to be owners of the land on which they till. The goals of increasing equity, or what has sometimes been called "social justice", and reducing agrarian unrest are quite clearly stated in Presidential Decree No. 27 (PD 27):

Decreeing the Emancipation of Tenants From the Bondage of the Soil Transferring to Them the Ownership of the Land They Till and Providing The Instruments and Mechanism Therefor. Inasmuch as the old concept of land ownership by a few has spawned valid and legitimate grievances that gave rise to violent conflict and social tension. The redress of such legitimate grievances being one of the fundamental objectives of the New Society. Since Reformation must start with the emancipation of the tiller of the soil from his bondage.¹⁴

There are apparently three objectives to the Philippine land reform - social unrest, equity, and productivity. In addition, several features of PD 27, the main legislative basis for land reform under the New Society, deserve mentioning:

The tenant-farmer, whether in land classified as landed estate or not, shall be deemed owner of a portion constituting a family-size farm of five (5) hectares if not irrigated and three (3) hectares if irrigated.

In all cases, the landowner may retain an area of not more than seven (7) hectares if such landowner is cultivating such area or will now cultivate it.

For the purpose of determining the cost of the land to be transferred to the tenant-farmer pursuant to this Decree, the value of the land shall be equivalent to two and

¹⁴Ibid. PD 27, p.2.

one half (2 1/2) times the average harvest of three normal crop years immediately preceding the promulgation of this Decree.

The total cost of the land, including interest at the rate of six (6) percentum per annum, shall be paid by the tenant in fifteen (15) years of fifteen (15) equal annum amortizations.

No title to the land owned by the tenant-farmers under this Decree shall be actually issued to a tenant-farmer unless and until the tenant-farmer has become a full-fledged member of a duly recognized farmer's cooperative.¹⁵

Presidential Decree 27 is different from previous Philippine legislation on land reform. Previous legislation attempted to convert share tenants to lessees, however, PD 27 seeks to go a step further by converting lessees into amortizing owners, and eventually all tenants will become owner-operators. In essence, land reform in the Philippines since 1972 confirms ownership of the land by its current operator, the tenant-farmer.

In summary, the land reform decree can be regarded as progressive because it provides a substantial redistribution of wealth and a form of tenure that requires less policing than leasehold tenancy in order to assure the farmer the benefits intended; it also preserves the labor absorptive capacity of the small family farm - a critical consideration in an economy where land is the employer of last resort for many.¹⁶

The Philippine land reform program under the New Society consists of one central program - Operation Land

¹⁵Philippines, Department of Agrarian Reform, op.cit., PD 27, pp 2-3.

¹⁶Harkin, op.cit., pp. 2-3.

Transfer - and two support programs - the Samahang Nayan (cooperative movement) and the Masagana 99 (credit) program. The current land reform is an integrated package of reforms, which conforms to the definition of land reform provided in the previous chapter.¹⁷ Three interrelated programs have been introduced by presidential decrees:

- 1) Operation Land Transfer stresses the land-to-the-tiller principle and has been designed to distribute certificates of land transfer to all eligible tenant farmers on rice and corn lands;
- 2) The Samahang Nayan (Barrio-Association) program, which organizes potential reform beneficiaries in the barrios into pre-cooperatives, eventually leading toward an integrated network of area-wide cooperatives servicing the various needs of its members; and
- 3) The Masagana 99 Program, designed to increase productivity by providing the credit and input requirements

¹⁷For a government perspective on land reform, see Philippines, Department of Agrarian Reform, Public Information Division, Basic Facts on Agrarian Reforms (Diliman, Quezon City: Department of Agrarian Reform, 1973). This document discusses the Code of Agrarian Reforms, and the policies behind the current land reform program.

of small farmers in relation to the green revolution.¹⁸

3.3 Operation Land Transfer

Operation Land Transfer (OLT) started on November 13, 1972, in Nueva Ecija, and is mainly the responsibility of the Department of Agrarian Reform (DAR) and the Bureau of Lands. There are five basic steps involved in transferring the ownership of the land to the tenant. First, the DAR field teams identify actual tenants and their respective landlords. A production survey is made, and other basic statistical information is gathered through personal interviews.¹⁹ Second, the Bureau of Lands conducts parcellary mapping and sketching of the plots operated by the tenants. All of the above information is then fed into the National Computer Centre (NCC). Third, the NCC issues a land transfer certificate to the tenant farmer (also known as a

¹⁸Antonio J. Ledesma, Land Reform Programs in East and Southeast Asia: A Comparative Approach, Land Tenure Center, No. 69, No. V, 1976 (Madison, Wisconsin: University of Wisconsin-Madison, 1976) p. 13.

¹⁹An empirical investigation by Reinoso et al., found that most of this basic statistical information (in particular, output per hectare) had not been gathered. See Reinoso et al., "An Analysis of Land Reform Grievances and Resolving Procedures," Department of Agrarian Legislation and Administration, Agrarian Reform Institute, University of the Philippines at Los Banos, College, Laguna, 1 March 1976.

Certificate of Land Transfer - CLT). This simply authenticates procedures one and two. Fourth, the value of the land is determined by the Barrio Committee on Land Production (BCLP). The price of the land is set at 2.5 times the average harvest for three "normal" crop years. Fifth, landlords are compensated.²⁰

Once all of the five basic steps of Operation Land Transfer have been completed, the tenant becomes an amortizer. Since the landlord is compensated by the Land Bank, the Bank becomes the interim owner of the land during the amortization period. The tiller makes fifteen equal annual payments to the Land Bank (in a sense paying the Bank back), with interest at six percent a year. If the tenant defaults on his payments to the Land Bank he may lose his right to own the land, or the Bank in cooperation with the Department of Local Government and Community Development (DLGCD) will appoint a new amortizer.

Under the 1973 charter the main functions of the Land Bank were three: financing the transfer of ownership of farm land covered by the government's agrarian reform program; directing landlord investment into industry or other productive endeavors; and extending financial and technical assistance to the agricultural sector. The Land Bank is

²⁰Geremelino Bautista, "Philippine Rural Anti-Poverty Programs," preliminary report submitted to the Economic and Social Commission for Asia and the Pacific by the Institute of Philippine Culture, Quezon City, 12 July 1976, p. 12; and see Philippines, Department of Agrarian Reform, Public Information Division, Procedures and Forms on Operation Land Transfer (Diliman, Quezon City: Department of Agrarian Reform, 1973).

currently responsible for collecting amortization payments from about 425,000 tenants and financing compensation for some 57,000 landlords. As of December 1, 1975, the bank had begun compensation payments in the amount of about P202 million (pesos) to 593 landlords on behalf of some 16,400 former tenants. The most immediate problem facing the bank is the collection of amortization payments.²¹

Finally, after the amortization period has ended, the tenant is deemed owner of the land and is issued an "Emancipation Patent": the "title issued to the tenant upon compliance with all requirements of the government. It represents the full emancipation of the tenant from the bondage of the soil."²²

At the end of the amortization period, the farmer receives a title that is limited in transferability to one inheritant or the government. These title limitations are a desirable discouragement to further fragmentation of the farm management unit, although it is unlikely that they will prevent fragmentation of the income from the land.²³

Although the Philippine land reform program appears to be a comprehensive one, there are a couple of problems

²¹World Bank, Country Economic Report, The Philippines: Priorities and Prospects for Development (Washington, D.C.: The World Bank, 1976), pp. 486-487. This is perhaps an encouraging sign, as it indicates that at least some tenants are being converted to amortizing owners.

²²Mario M. Reinoso, et al., "An Evaluation of Operation Land Transfer Procedures," Agrarian Reform Institute, Department of Agrarian Legislation and Administration, Los Banos, 27 January 1977, p. xy.

²³Duncan A. Harkin, Strengths and Weaknesses of the Philippine Land Reform, Agrarian Reform Institute, Occasional Papers No. 3, 15 January 1976 (Los Banos: University of the Philippines at Los Banos, College, Laguna, 1976), p. 3.

with Operation Land Transfer in relation to the goals and objectives laid down by the Philippine government. First, according to Presidential Decree No. 27, the tiller shall own a parcel of land three hectares if irrigated and five hectares if it is rainfed; which constitutes a "family-size" farm. According to the ILO, since the present average tenant farm plots are only 1.8 hectares, attainment of "family-size farm" standards are mathematically unfeasible unless vast new areas are opened up for resettlement.²⁴ There are two possible areas in regards to this population-land ratio problem: a) resettle people in Mindanao, and b) extend land reform to other lands besides rice and corn lands:

- a) Mindanao has already experienced voluntary migration and attempted resettlement schemes prior to 1972, and this migration is seen as one of the causes for the current Muslim/Christian conflict. Any further resettlement schemes in Mindanao, without first addressing the conflict, could result in increased political disruptions and guerilla warfare.

²⁴International Labour Office, Sharing in Development: A Program of Employment, Equity and Growth for the Philippines (Geneva: ILO Publications, 1974), p. 478.

b) It seems unlikely that other lands, such as pineapple, sugar, coconut or banana, would ever fall under a land reform program in the New Society, due to their importance in terms of export earnings.²⁵ This exclusion of other than rice/corn lands from any land transfer essentially means that the government objective for every tenant-farmer to own a "family-size" farm is unattainable.²⁶ Subsequently "the plots transferred by the certificates are the plots actually occupied, with no adjustments, upwards or downwards, toward the 3 or 5 hectare norms."²⁷

Secondly, the amount of available land diminishes even further when one takes into account the retention right of the landlord. To cite Presidential Decree No. 27 once more, it states that a landlord "may retain an area of not more than seven (7) hectares if such landowner is cultivating

²⁵Sugar, pineapple, coconut and banana are among the ten most important export commodities for the Philippines. See Philippines, NEDA, Statistical Yearbook, pp. 520-523.

²⁶Gerald C. Hickey and John L. Wilkinson, "Agrarian Reform in the Philippines," report of a Seminar at the Rand Corporation, Washington, D.C., Dec. 16-17, 1977, p. 24.

²⁷ILO, op.cit., p. 478.

such area or will now cultivate it."²⁸ In other words, this means that a landlord owning less than seven hectares of land is essentially exempt from land reform. If one considers that 90 percent of all landlords and 57 percent of all tenants fall under this 7 hectare category (see table 3-3), this retention right of the landlord becomes known as the "dilemma of the seven hectare retention limit".²⁹

The land reform decree, although generally well conceived, contains some troublesome ambiguities which still remain unresolved. There is an apparent conflict between the right of the tenant farmer to own the land he tills and the right of the landlord to retain up to seven hectares for his personal cultivation. Perhaps the wording of the decree which states that the farmer "shall" be deemed owner of the land he tills, while saying that the owner "may" retain up to seven hectares, should imply precedence of the farmer over the owner because of the stronger word used. However, no rule has been adopted to clarify this point.³⁰

This retention limit has important ramifications for equity concerns. Under land reform, the share tenant is to be converted to a leaseholder, and then to an amortizing owner and subsequently to an owner-operator. Tenants on

²⁸Philippines, DAR, Vital Documents, p. 2.

²⁹These proportions have been found in other areas as well, see Conrado F. Estrella, The Philippine Agrarian Reform Program: Three Years After the Issuance of the Tenant's Emancipation Decree - A Report to the President (Quezon City: Department of Agrarian Reform, 21 October 1975), p. 2; Bautista, op.cit., pp. 20-21; and Philippines, Land Reform Task Force, op.cit., pp. 7-8.

³⁰Harkin, Strengths and Weaknesses, SEADAG papers, p. 3.

Table 3-3

OWNERSHIP AND TENANCY IN RICE AND CORN LAND, APRIL 1975^a

Size of land ownership	Number of tenants	%	Landowners	%	Area (ha.)	%
100 ha. & over	93,921	10.2	2,159	.5	213,329	15.0
50 - 100 ha.	44,735	4.9	1,450	.3	86,007	6.0
24 - 50 ha.	57,262	6.2	3,685	.9	97,994	6.9
SUB-TOTAL OVER 24 ha.	195,228	21.3	7,294	1.7	397,380	27.9
7 - 24 ha.	198,490	21.7	32,256	7.9	361,695	25.4
SUB-TOTAL 7 ha. & OVER	393,778	43.0	39,550	9.6	759,015	53.3
Less than 7 ha.	521,136	57.0	371,129	90.4	663,973	46.7
TOTAL	914,914 ^a	100.0	410,679 ^a	100.0	1,422,988 ^a	100.0

^aThe absolute numbers reported in this table should actually be doubled, or even tripled, given that rice land alone accounts for 3.5 million hectares.

Source: Department of Agrarian Reform.

holdings below seven hectares will be converted to lessees, but that is as far as they will go. Meanwhile, other tenants on holdings above seven hectares will be converted to amortizing owners and theoretically, after fifteen years, to owner-operators. Why should roughly 60 percent of rice and corn tenants be exempt from land reform simply because their landlords happen to be small? On the other side of the picture, we must realize that 90 percent of all landlords are not affected by land reform, and therefore, "the reform leaves the institution of property in land largely unchanged. To the extent that it remains unchanged, then it seems likely that the problems of tenancy and landlordism will reappear because of the continuing population growth and the absence of employment expansion in the urban sector sufficient to relieve the pressures on the land."³¹ With a retention limit of seven, greater equality will not be promoted; but with a retention limit of zero, greater equality could be promoted.

If, according to PD 27, we wish to "emancipate the tenant from the bondage of the soil by transferring to them the ownership of the land they till," then the retention limit should be moved to zero. The stated objective of the Philippine land reform program to promote equality and social justice cannot be achieved with a seven hectare retention limit.

³¹Duncan A. Harkin, "The Nature of the Problem of Land Tenure in the Philippines," Manila, 1974, p. 2.

Here is a clear-cut dilemma. It is a plain logical impossibility to (a) grant each and every tenant the opportunity to own the land he tills and simultaneously (b) allow the landowner to retain a portion, however small, of presently tenanted land. If (a) is of higher priority, then the retention rate must be zero. If (b) is of higher priority, then some tenants will wind up either ejected or converted into hired farm labor; thus tenancy might be abolished by eliminating tenants but not providing them with land.³²

The government, in fact, appears to have another objective than those originally stated in PD's 27 and 2. Land reform has been largely restricted to land holdings in the above 24 hectare category. This category constitutes the larger holdings in the Philippines, representing roughly 28 percent of the total rice and corn area (table 3-4). The reason for concentrating on larger holdings, according to Wurfel, is that "since 1972, President Marcos seems to have been most interested in destroying the mass support - feudal in character - of his elite competitors."³³ Some government officials, however, have argued that landholdings above 24 hectares constitute the backbone of feudalism and should therefore rightly be eliminated; by contrast, the owners of landholdings up to 24 hectares make up the emerging

³²Mahar Mangahas, "Economic Aspects of Agrarian Reform Under the New Society," Institute of Economic Development and Research, University of the Philippines, Discussion Paper No. 74-20, Quezon City, 4 December 1974, pp. 19-20.

³³David Wurfel, Philippine Agrarian Policy Today: Implementation and Political Impact, Occasional Paper No. 46 (Singapore: Institute of Southeast Asian Studies, 1977), p. 2.

middle class which the New Society must strengthen.³⁴

Letter of Instruction No. 143, by President Marcos, appears to agree with this opinion where it states that:

The government, although eager to implement a program of land reform by extending its operations to these small landholdings has been conscious as well of the fact that these landowners holding small parcels of land constitute part of the economic middle class, which we are trying to build and therefore deserve as much consideration as the tenant themselves.³⁵

It is possible, however, to emancipate the tenants from the bondage of the soil and take into account the small landlord with a "Progressive Land Reform Compensation Scheme". This implies that a smaller landlord (under 7 hectares) would be compensated for the full amount per hectare, while a large landlord would receive a fraction of that amount per hectare. For example, to take a hypothetical case, let us suppose that the price of the land is set at (pesos) P1,000 per hectare. A landlord owning five hectares would be compensated at P1,000 per hectare and receive P5,000; whereas, a landlord with fifty hectares might be compensated at half the set price, P500 per hectare, and would be compensated at P25,000 instead of the full compensation rate of P50,000 (see Appendix D for a more

³⁴Bautista, op.cit., p. 19.

³⁵Philippines, DAR, Vital Documents, LOI No. 143, p. 142.

detailed and elaborate explanation). "Just as the poorest farmers (the share tenants) deserve more attention than those relatively well-off (the reform leaseholders and the amortizers), so too do the small landowners deserve relatively greater compensation. This is particularly essential if a zero retention is to be implemented."³⁶

The other apparent objective, next to strengthening the "middle" class, as stated in PD 27 is to reduce agrarian unrest. High tenancy rates, in the Philippines, have always been associated with dissident activities.³⁷ Five provinces of Central Luzon, Isabela and Camarines Sur have the highest rates of tenancy in the Philippines and it is these areas which have been characterized by agrarian unrest. The five provinces of Central Luzon are also characterized by larger landlords, relative to other Philippine provinces. "A result of this landlord-tenant relation is a social tension which has prevailed for many years in at least some parts of the Central Luzon and which once led to an all-out revolt by the Hukbalahap movement."³⁸ If one counts those areas

³⁶Mangahas, op.cit., p. 25.

³⁷See William H. Overholt, "Martial Law, Revolution and Democracy in the Philippines," Southeast Asia, Vol. 11, No. 2 (Spring 1976): 166-167.

³⁸Shigeru Ishikawa, Agricultural Development Strategies in Asia: Case Studies of the Philippines and Thailand (Tokyo: The Asian Development Bank, 1970), p. 17.

which have received the most Certificates of Land Transfers, "it would seem that emphasis was obviously being placed on areas of agrarian unrest and rebellion (Central Luzon and Isabela and Camarines Sur Provinces)."39 These seven provinces, in 1973, accounted for 58 percent of all the CLT's issued by the Department of Agrarian Reform, 57 percent of all tenants who received CLT's, and 62 percent of the land area affected by the program (see table 3-4).

Whether the land reform program has been a possible factor in reducing agrarian unrest is difficult to prove; i.e., to establish a casual relationship. However, from 1972 to the present (1980), agrarian unrest has apparently been virtually non-existent in Central Luzon, Isabela or Camarines Sur. It would appear that the government has obtained its short-term objective of gaining tenant support. Apparently, farmers in these seven provinces are willing to support martial law, the New Society, and thus Marcos himself. They are willing to wait and see if the government will go ahead and implement the land reform program to its conclusion. As long as there appears to be a chance that they might benefit

39ILO, op.cit., p. 478. For a discussion of agrarian unrest and the Huk movement, see Erich H. Jacoby, Agrarian Unrest in Southeast Asia (Bombay: Asia Publishing House, 1961); Benedict J. Kerkvliet, "Peasant Society and Unrest Prior to the Huk Revolution in the Philippines," Asian Studies, Vol. 49, No. 2 (August 1971): 164-213; and Eduardo Lachica, The Huks: Philippine Agrarian Society in Revolt (New York: Praeger Publishers, 1972).

Table 3-4

COVERAGE OF OLT: # OF CLT'S ISSUED, # OF TENANTS AFFECTED, AND AMOUNT OF LAND AFFECTED***

REGION	CLT*	%	Tenants*	%	Area**	%
			1973			
Central Luzon ^a	120,343	58.0	82,423	57.0	159,915	61.7
Cotabato ^b	7,832	3.8	6,157	4.3	12,164	4.7
N.&S. Luzon ^c	32,692	15.8	23,841	16.5	40,279	15.5
Visayas ^d	46,548	22.4	32,117	22.2	46,990	18.1
Philippines	207,415	100.0	144,538	100.0	259,348	100.0
			1974			
Central Luzon ^a	31,470	51.3	22,714	50.7	45,692	58.6
Cotabato ^b	6,282	10.2	5,212	11.6	10,481	13.4
N.&S. Luzon ^c	12,768	20.8	8,732	19.5	11,390	14.6
Visayas ^d	10,824	17.6	8,121	18.1	10,387	13.3
Philippines	61,344	100.0	44,779	100.0	77,950	100.0
			1975			
Central Luzon ^a	13,862	51.9	10,788	54.4	18,291	59.6
Cotabato ^b	1,550	5.8	1,346	6.8	2,790	9.1
N.&S. Luzon ^c	7,078	26.5	4,558	23.0	5,664	18.5
Visayas ^d	4,208	15.8	3,153	15.9	3,926	12.8
Philippines	26,698	100.0	19,845	100.0	30,671	100.0

a Central Luzon includes, those provinces identified by Castillo and the ILO as being generally associated with disident activities, Pangasinan, Isabela, Bulacan, Nueva Ecija, Pampanga, Tarlac, and Camarines Sur.

b To emphasize the neglect of the Muslim Mindanao area, I have enlarged the Cotabato region to include region 9, 10, 11 and 12: North, Western, Southern, and Central Mindanao.

c Includes regions 1, 2, 3, 4 and 5, but excludes Central Luzon as defined by footnote 1: North, South and the remainder of Central Luzon.

d Includes West, East, and Central Visayan Islands: regions 6, 7 and 8.

* Number of CLT's issued, and number of tenants affected. The reason that there are more CLT's than tenants, according to DAR, is due to the fragmentation of the land. For example, if a tenant tilled 2 parcels of land, he would receive 2 CLT's.

** In hectares.

*** See Appendix F for CLT, Area, etc. by province from 1973-75.

Source: DAR

from the land reform, agrarian uprisings will not occur, at least for the moment.⁴⁰ Tenants, by and large, "are supportive of the national government today, and thus, in the short run, the political goal of agrarian reform has been achieved. (Filipino farmers are very tolerant of administrative delay)."⁴¹

As table 3-4 demonstrates, the pace of land reform has diminished from 1973-1975. The primary concern has apparently been to reduce agrarian unrest in Central Luzon, Isabela and Camarines Sur, and to strengthen the middle class.⁴² When the threat of agrarian unrest was no longer regarded as being important or no longer considered a threat, the government began to lose interest in the land reform program.

Judging by the rhetoric used in September 1972, the chief threat to constituted authority was a mobilized and aroused peasantry, capable of posing a serious danger of

⁴⁰Conversation with Dr. Randolph Barker, Professor of Agriculture Economics, Cornell University, Ithica, New York, 27 February 1980. I also received this impression from talking to rice farmers in Pampanga, Philippines, August 1977.

⁴¹Wurfel, op.cit., pp. 33-34

⁴²Landlords owning small parcels of land, who are exempt from land reform because of the 7 hectare retention limit, tend to be "school teachers, supervisors, or owners of small-retail business with few employees," see Castillo, op.cit., p. 275.

revolution. While the threat was exaggerated even at that time, it is now clearly regarded as of less importance. The pace of land reform is slowing and is accompanied by a growing attentiveness to the wishes of smaller landlords. The President and his advisors seem to assume that peasant support has been won by the steps toward land reform already taken, and that as long as expectant tenants do not become secure in the new status of owners, they will continue to feel dependent on the maintenance of martial law for the fulfillment of their dreams.⁴³

Another aspect of Operation Land Transfer, as shown in table 3-4, is the apparent lack of interest in the Cotabato region. This region is on the island of Mindanao, where the Moslem minority reside. "The Cotabato region in Mindanao, however, is also known as a rice granary of the Philippines, second only to Central Luzon."⁴⁴ The government does not appear to want to implement a land reform program in the predominantly Muslim Cotabato region. Hence, Cotabato, the second most important rice producing area, is the least covered region by OLT.

The implementation of Operation Land Transfer appears to have caused a fairly widespread conversion from

⁴³David Wurfel, "Martial Law in the Philippines: The Methods of Regime Survival," Pacific Affairs, Vol. 50, No. 1 (Spring 1977): 13-14.

⁴⁴International Rice Research Institute, Changes in Rice Farming in Selected Areas of Asia (Los Banos: IRRI, 1975), p. 325.

share tenancy to a leasehold system, at least in the Luzon area.⁴⁵ This general improvement in tenure in the Luzon area, characterized by a shift from share tenancy to lease tenancy, could be the reason for the "containment" of agrarian unrest in the northern half of the Philippines.

3.4 Samahang Nayon

The Samahang Nayon (Barrio Association) is a pre-cooperative structure, conceived by Dr. Orlando Sacay, under the Department of Local Government and Community Development (DLGCD), which have provisional co-operative status for purposes of Presidential Decree No. 27. There are three general aspects to the Samahang Nayon approach which are different from previous cooperative efforts in the Philippines.⁴⁶

First, the Samahang Nayon (SN) is much smaller than the municipality based Farmers Cooperative Marketing

⁴⁵See Randolph Barker, "Recent Trends in Labor Utilization and Productivity in Philippine Agriculture," paper presented at the Ninth Annual Conference of the Canadian Council for Southeast Asian Studies, University of British Columbia, Vancouver, November 9-11, 1979, p. 26.

⁴⁶See Orlando J. Sacay, Samahang Nayon: A New Concept in Cooperative Development (Manila: National Publishing Cooperative Incorporated, 1974); and ILO, op.cit., p. 481.

Associations (FACOMAS), of the 1950's and 1960's. The SN is formed around a barrio (village), and its smaller size is intended to give its "members a sense of belonging, pride and identity because it is something they can call their own".⁴⁷ "That "samahang nayon" should manage to bring to its members a "sense of belonging" is apparently a euphemism for the hope that a small social group will avoid earlier problems of non-repayment by farmers of their obligations to co-operatives, and of corruption among co-operative managers."⁴⁸ Membership in the SN is a requirement for all residents of the barrio, except for farmers holding more than 7 hectares who are excluded from becoming members. According to Sacay:

It will be noted that we disallow direct membership in a cooperative in favor of group membership, at least in the rural areas where communities can be identified. I find it hard to imagine how a single farmer, in a remote barrio, can be served by the cooperative unless he is served together with his neighbors. Therefore, either the whole barrio participates in the cooperative venture, or not at all. The qualification for membership is based on how well barrio residents have manifested the concept of mutual aid and self-reliance by jointly complying with the requirements. And the requirements were so designed that they cannot be met unless residents work together.⁴⁹

Secondly, the Samahang Nayon is organized completely from the top-down, reflected by the tightly

⁴⁷Sacay, op.cit., p. 25.

⁴⁸ILO, op.cit., p. 481.

⁴⁹Sacay, op.cit., p. 25.

controlled government regulations. All tenant-farmers must join the Samahang Nayan otherwise they will forfeit their right to own the land they till. Tenant-farmers must also comply with numerous membership requirements. For an applicant to gain full membership he must complete a membership training course, and also:

- 1) pledge to adopt improved farming practices,
- 2) pledge to comply with a savings program called the Barrio Savings Fund (BSF), which receives from the lending institution 5 percent of any production loan approved for an SN member,
- 3) agree to contribute one cavan of palay per hectare per harvest, or the equivalent in cash, for the Barrio Guarantee Fund (BGF),
- 4) pay the required one-time membership fee of P10.00, and
- 5) contribute P5.00 annually, a fee which goes to the general fund of the SN for operational expenses.⁵⁰

The Samahang Nayan, according to Sacay, has three main functions which the tenant-farmer must comply with: 1) learning, 2) savings, and 3) discipline. The farmer, through learning, must adopt new farming techniques acquired from lessons provided by DLGCD personnel. Secondly, he must contribute a certain portion of his income to the SN savings

⁵⁰Frank Lynch, "Rice-Farm Harvests and Practices in Camarines Sur: Do Compact Farms, Masagana 99, and the Samahang Nayan Make a Difference?" revised version, SSRU Research Report Series, No. 2, Quezon City, 17 September 1974, p. 24.

fund, known as the barrio guarantee fund and the barrio savings fund, in order to learn how to save. Third, he must learn to be responsible (discipline) by paying amortization fees and SN dues on time, otherwise default will result in his parcel of land becoming the property of the Samahang Nayan. According to Sacay:

There are three cardinal rules a member of the Samahang Nayan must observe:

- a) a member must practice improved cultural practices;
- b) he must save; and
- c) he must pay for annual land amortizations on time.

Violations of any of these rules may bring a fine or suspension ... If, for instance, the Samahang Nayan decides to grow a certain crop with a prescribed method of production and the farmer-member refuses, the Samahang Nayan may take over his farm. The same recourse holds for farmer-members who do not comply with the savings requirement.⁵¹

Third, the Samahang Nayan is seen as the initial stage, out of a total of four, towards building a nation-wide cooperative system. A newly formed SN is classified as a Grade "C" pre-cooperative. One which has undergone management training and technical education is Grade "B". And one which has also complied with the savings requirements is Grade "A".⁵² A minimum of ten grade "A" Samahang

⁵¹Sacay, op. cit., pp. 79-80.

⁵²Ibid. p. 25.

Nayons (barrio based) are required before they can create a full cooperative, or "Katipunan ng mga Samahang Nayon" (municipality based). This nation-wide network of full cooperatives is meant to include cooperative rural banks, service, consumers, producers, and area marketing cooperatives. For instance, to form an Area Marketing Cooperative requires: "1. At least 10 Samahang Nayons with grade A status participating; 2. An accumulation in each SN of at least P1,000, representing the 30 percent of the Barrio Guarantee Fund and General Fund minus P250; and 3. The ability to raise P100,000 as their minimum paid-up capital."⁵³ "Finally, the associations are to continue to perform the functions expected of earlier co-operatives - to promote modern farm practices and to engage in the collective purchasing of inputs and marketing of output."⁵⁴ In short, the Samahang Nayon pre-cooperative attempts to: 1) help with the processing of certificates of land transfer, 2) ensure the accumulation of savings by the farmers, 3) organize and direct various services for the barrio, 4) train the farmer in new farming techniques, formal organization and self-government, and 5) to educate the farmers in cooperative principles and practices.⁵⁵ According to Sacay:

⁵³Bautista, op.cit., p. 37,

⁵⁴ILO, op.cit., p. 482.

⁵⁵Lynch, op.cit., p. 5.

The farmer must practice improved culture to increase production. He must learn to save for future investment on his farm. He must meet his obligations, such as paying for yearly land amortizations on time. These responsibilities are the very same requirements a Samahang Nasyon member must observe. The Samahang Nasyon, therefore, prepares the farmer for eventual land ownership.⁵⁶

The concept of a pre-cooperative based on the barrio as its organizational unit is interesting because it uses a small and familiar unit to the people in the rural areas. The concept itself perhaps is not a bad one, but when considered in the context of the seven hectare retention limit (of Operation Land Transfer), a number of undesirable attributes emerge. First, a tenant-farmer must join the Samahang Nasyon otherwise he will not receive his certificate of land transfer, and would subsequently be denied the possible benefits from land reform. This is stated in Presidential Decree No. 27: "No title to the land owned by the tenant-farmer under this Decree shall be actually issued to a tenant-farmer unless and until the tenant-farmer has become a full-fledged member of a duly recognized farmers' cooperative."⁵⁷ In practice, this "recognized" farmers' cooperative is the Samahang Nasyon. Although the SN is officially a "voluntary" organization, Reinoso, et al.,

⁵⁶Sacay, op.cit., p. 29.

⁵⁷Philippines, DAR, Vital Documents, PD 27,

found that only 24 percent joined the Samahang Nayan voluntarily.⁵⁸ As one farmer said to me, "I joined the Samahang Nayan because it is the law." Or, as another more eloquent farmer said, "the reason I joined the Samahang Nayan is because it has been decreed by the President."⁵⁹ This aspect of required membership may not be bad in itself, but when a major function of the SN is to assist in the processing of CLT's and over half the tenants are on parcels of land of less than 7 hectares and will not own the land they till, then this purpose of the SN becomes meaningless. Why should a farmer who, because of legislative loopholes, will not become the owner of the land he is tilling wish to join the SN with its strict regulations and membership dues? Perhaps this is the feeling of some tenants, as indicated by the following newspaper clipping:

Some 40,000 tenant farmers may lose the opportunity to own part of the rice and corn lands they are tilling if they fail to become members of the Samahang Nayan on or before June 30 this year. Top officials of the Department of Agrarian Reform decided yesterday on the June 30 deadline for tenant farmers to join the Samahang Nayan in their respective communities. As provided by the presidential decree on land reform, membership in the Samahang Nayan is a requirement a tenant farmer should comply with before he is awarded a certificate of land transfer (CLT).⁶⁰

⁵⁸Reinoso, et al., An Evaluation of Operation, p. 63.

⁵⁹Interview with farmers in Barrios San Miguel and San Simon, Pampanga, Philippines, August 1977.

⁶⁰"June 30 Deadline for Farmers to Join Samahang Nayan," Bulletin Today, 27 April 1976, p. 24.

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Secondly, the ILO claims that the pre-cooperatives are moving too quickly towards full cooperatives, and are therefore taking on too many tasks. "The associations should keep to their primary role, which is to serve as an extension of the Government as far as land transfer and repayment are concerned, but should add to it, step by step, such additional communal services as the dissemination of information on supervised credit, markets and technology".⁶¹ This question of when to add services may not necessarily be the fault of the Samahang Nayan, however, when one considers that less than half of the tenants are eligible for land transfer. One cannot disagree with the contention that the SN should, first and foremost, assist in land transfer procedures. The problem of services lies in the general problem of not implementing the land reform fully. The Samahang Nayan and the services it offers are perhaps ideally suited for a tenant-farmer who's former landlord had a parcel of land over 2 hectares in size. For the remainder of the tenant farmers, who still have ties with their landlord, the services may or may not be applicable. The result is a pre-cooperative, whose membership has different interests, and which may be unable to respond to these divergent interests.

⁶¹ILO, op.cit., p. 482.

After two years of existence, the Samahang Nayons of one Pampanga municipality were found to be weak. Almost without exception, their members were poorly informed about the SN program and were inactive or resistant to it; their leadership was equally ineffective. Little organizational discipline existed. Collection of membership fees, annual dues, and contributions to the Barrio Guarantee Fund were poor. Some SNs had held only one meeting, primarily for the election of officers. On the whole, the Samahang Nayons were generally unresponsive to the needs of their membership.⁶²

Another problem with services in relation to cooperatives are the rural banks. Rural banks "became so profitable that 1974 saw the largest number of new banks opened in the system's history, 76 in all. These were often owned by the very same families that were supposed to be "victims" of land reform."⁶³

Some of the problems with the Samahang Nayan are externally created, such as problems associated with Operation Land Transfer. Perhaps the best evaluation of the Samahang Nayan program, which reflects the internal problems, is from the tenant-farmers themselves. Bautistia found several reasons for the reluctance of farmers to participate and contribute money to the Samahang Nayan, in Central Luzon. First, many farmers do not understand or are not informed of the purpose of the SN program. Second, they believe that the

⁶²Bautista, op.cit., p. 38.

⁶³Wurfel, Philippine Agrarian, p. 21.

SN leaders will simply appropriate their money for personal gain; which is what happened with the Facoma's (the farmer's cooperative in the 1950's and 1960's). Third, farmers oppose the concept of a social equity fund (Barrio Guarantee Fund), because it becomes the property of the SN and is to be used for pre-established purposes (e.g., community development projects), and are consequently unable to withdraw their money in the event of an emergency. Finally, they do not believe that the SN program is working in their best interest. "Too often have they been subjected to government programs that promise much, require complex procedures, and in the end collapse at their expense."⁶⁴

The Samahang Nayan is not likely to improve its performance owing to low contribution rates from its already financially hard-pressed or distrustful members, lack of cooperation from the associated rural banks, and the stringent regulations that limit severely the prospect of undertaking business ventures to generate new funds. Unless these problems are remedied and soon, the tenant's emancipation on a large scale may remain an elusive dream.⁶⁵

⁶⁴Bautista, op.cit., p. 35.

⁶⁵Ibid. p. 36.

3.5 Masagana 99

The Masagana 99 program is a supervised rice credit scheme, which officially began on 21 May 1973, with the objective of increasing overall rice production. "Masagana", in Filipino means "bountiful", and the "99" refers to the objective of achieving a yield of 99 cavans of palay per hectare (approximately 4.5 metric tons per hectare). The outstanding feature of the Masagana 99 program, however, is that it "constitutes the most massive government scheme for agricultural credit in Philippine history."⁶⁶ By 31 January 1974, 425.6 million pesos (equivalent to roughly US \$63.5 million) of loans had been approved by the Masagana 99 program, and covered roughly 600,000 hectares.⁶⁷

The Masagana 99 (M99) program involves four aspects with respect to the implementation of the scheme. First, President Marcos gave the M99 program national priority. Technical knowledge involved with the Green Revolution was to be disseminated through village M99 action committees, under the central direction of the National Food and Agricultural Council (NFAC). Second, brochures were disseminated to illustrate the M99's 16-step package of production

⁶⁶Wurfel, Philippine Agrarian, p. 18.

⁶⁷Marlin Van der Veen, "The Philippine Masagana 99 Rice Production Program of 1973: A cursory View from Cavite Rice Paddies," n.p., July 1974, p. 4.

technology. This essentially contained the steps already in practice with the emphasis, however, on supervised farming.⁶⁸ The third aspect consists of credit. Loans are granted by the Rural Banks, which are branches of the Philippine National Bank and the Agricultural Credit Administration. M99 loan recipients are required to form "Seldas", which were informal groups of 5 to 15 farmers (currently 3 to 7 farmers) who agree to be jointly liable for each others' production loans. Fourth, a price support system was implemented by the National Grains Authority. At the start of the program, the support price was 70 centavos (Peso 0.70) per kilo of palay and increased to P1.10 per kilo of palay in 1978.⁶⁹

Fertilizer and irrigation policies are being implemented in conjunction with the Masagana 99 program. In

⁶⁸A schedule is drawn up, by the extension worker, for the duration of the crop season. If the farmer wants to obtain a M99 loan he must comply with this schedule. The extension worker is close by in the event of a problem and to ensure that the farmer is complying with the schedule.

⁶⁹These four points represent the official perspective on the M99 program, see E.C. Quisumbing (Executive Director of NFAC), et al., "An Evaluation of the Masagana 99 Program," an update (May 1978) of a paper first presented at the Conference on Strategic Factors in Rural Development in East and Southeast Asia held in Manila, Dec. 18-23, 1976, and sponsored by the Council for Asian Manpower Studies, May 1978, p. 2.

1974, due to a sharp rise in the price of fertilizer, a subsidized fertilizer price for rice production was implemented. In addition, the government has also attempted to increase the availability of irrigation to rice farmers.

The Masagana-99 rice production program had two general objectives: 1) to offset the temporary setback in rice production caused by typhoons and floods (crop year 1970-71) in central and southern Luzon, by a drought in Mindanao, and an outbreak of tungro in 1971-72 that reduced rice production across the nation, and 2) to anticipate the critical rice-supply shortage that normally occurs during the early months of every cropping year.⁷⁰ The duration of the program was intended to be one year, and covered 500,000 hectares of irrigated land and 100,000 hectares of rainfed land, but due to the reportedly high loan repayment rate (78 percent), President Marcos extended the life of the program in May 1974.

The government's desire to increase overall rice production may have produced greater inequities. Van der Veen found that all 104 farmers in the sample from the province of Cavite "were predominantly rice farmers whose

⁷⁰Lynch, op.cit., p. 4.

lands were officially classified as irrigated by N.I.A. (National Irrigation Administration)."⁷¹ In the province of Camarines Sur, Lynch found that official priority¹ was being given to irrigated farms. "Support was given to 29,154 hectares, of which all but 4,680 (16 percent) were irrigated. As of 1973, rainfed riceland represented about 40 percent of the total rice area of Camarines Sur."⁷² Government evaluations of the M99 program admit that priority has also been given to farmers with larger parcels. The reason for favouring larger farmers, according to the government, makes sense from a loan repayment viewpoint."⁷³

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This perception of the inability of farmers with rainfed lands to repay their loans may be false. It would appear that irrigated farmers do repay their loans faster than rainfed farmers, however, rainfed farmers apparently do repay them. In the first year of the M99 program, the repayment rates would tend to confirm the belief that a higher proportion of irrigated farmers repay their loans (see table 3-5). If we were to extend the repayment period to 3 years, however, then we might find that the differences between irrigated and rainfed farmers would be slight, in

⁷¹Van der Veen, op.cit., p. 5.

⁷²Lynch, op.cit., p. 35.

⁷³Quisumbing, op.cit., p. 5.

Table 3-5

M99 LOAN STATUS AS OF SEPTEMBER 30, 1974^a

<u>Riceland type</u>	<u>Fully paid</u>	<u>Partly paid</u>	<u>Unpaid</u>	<u>Total</u>
Irrigated	60 (75%)	14 (17%)	6 (8%)	80 (100%)
Rainfed	25 (51%)	11 (22%)	13 (26%)	49 (100%)

a Loans were for Phase I (May-October 1973).

df = 2 Chi-square = 10.499 p = 0.01

Source: National Food and Agricultural Council

terms of loan repayment. "Rainfed farmers repay their loans less quickly than others, it is true, but they do repay them."⁷⁴

Aside from the official policy of favouring better-off, larger, irrigated farmers, the design of the program itself seems to be suited to these better-off farmers. Rural banks will generally not lend to farmers, under the New Society: 1) who had outstanding loans with other institutionalized credit agencies, 2) those who would not join a Selda, and 3) those who would not agree to follow the recommended cultural practices."⁷⁵ If we consider the

⁷⁴Lynch, op.cit., p. 36.

⁷⁵Van der Veen, op.cit., pp. 12-13.

second and third criteria, then the farmer must choose other farmers whom he thinks will have the capability to pay back the production loan, and he must also adopt "modern" farming practices. The key factor, in terms of the third criterion, appears to be irrigation. In Cavite, Van der Veen found evidence to support the hypothesis "that those who applied for loans would generally have fairly good water conditions."⁷⁶ By stipulating that a loan will only be granted if the farmer follows recommended cultural practices (i.e., the Green Revolution), and he wishes to pay back the loan, then this implicitly limits the M99 program to irrigated lands or "good" rainfed lands (those with a steady and adequate supply of water). If we now consider the second criterion, a farmer will only form a Selda with other farmers who can effectively meet this Green Revolution component, in other words, generally another farmer with irrigated land. The M99 policies which explicitly and implicitly help the better-off irrigated farmers has meant that "the M99 program widens the very income gap which the government has vowed to close."⁷⁷

Another problem, in addition to the equity aspect, is the productivity aspect of the M99 program. The goal of

⁷⁶Ibid. p. 19.

⁷⁷Lynch, op.cit., p. 35.

increasing overall rice production, according to government sources, is being met. Quisumbing claims that M99 participants obtained a higher yield per hectare than non-participants; comparing irrigated lands only.⁷⁸ Lynch, from evidence in Camarines Sur, found that there appears to be a difference in yields between M99 participants and non-M99 participants, but the difference is not statistically significant.⁷⁹ Van der Veen reaches a similar conclusion, based on findings in Cavite, that although M99 participants appear to have slightly higher yields, the difference is also not statistically significant. (It) is far removed from the probability level of .05 or .10 which one generally uses in order to reject a hypothesis. Thus our data does not confirm dependency between M99 and yields."⁸⁰

The objective of increasing overall rice production, according to Lynch, could in fact be better served by giving preferential treatment to rainfed farms. Both Lynch and Van der Veen have found relatively small differences between M99 and non-M99 participants on irrigated lands, but the differences on rainfed farms are much greater.

⁷⁸Quisumbing, op.cit., pp. 4-6.

⁷⁹Lynch, op.cit., pp. 28-29.

⁸⁰Van der Veen, op.cit., pp. 8-9.

"While the M99/non-M99 difference is only three cavans per hectare for irrigated parcels (60 vs. 57), it is 11 cavans (55 vs. 44) for rainfed."⁸¹ In marginal terms, supporting rainfed farms can contribute more to the increase in rice production than by supporting irrigated farms; an average increment of 11 vs. 3 cavans per hectare respectively. Lynch contends that by helping rainfed farms, it not only increases total rice production to a greater extent, but it does it at a lower cost. Rainfed farms should, therefore, be giving preference in terms of receiving M99 loans.⁸²

⁸¹Lynch, op.cit., p. 36.

⁸²"A hypothetical example may help. Suppose we have 1000 hectares of riceland, 500 of which are irrigated and 500, rainfed. Assume that the productivity of all farms follows the average figures we derived from our study, and that loans are given twice a year for irrigated farms or once a year for rainfed, always at P700 per hectare.

If we give no loans at all, the total production for the 1000 hectares over a six-year period (say, 1974-80) will be 474,000 cavans (342,000 from the irrigated hectares and 132,000 from the rainfed). Now, if we give loans twice a year for the irrigated parcels, this will up the total six-year production figure to 492,000 cavans, an increase of only 18,000 cavans. Further we will have done this at a cost in loans of P4,200,000. In other words, we will have paid for this increment in production at a rate of P243 per cavan.

However, if we support the rainfed parcels only once a year for the six-year period, the total production figure will be 507,000, an addition of 33,000 cavans. Further this will have been accomplished at a loan cost of only P2,100,000, or P64 per added cavan. Clearly, supporting rainfed parcels adds more to the total harvest than supporting irrigated parcels, and does it more cheaply." Lynch, op.cit., pp. 36-37.

There is no doubt that in the long run both the nation and the individual farmer will be better served by the multiplication of irrigated parcels. But we should be careful not to confuse growing more rice (with the present distribution of irrigated and rainfed farms) and creating more irrigated rice-land. The first involves a small-loan program aimed at increased rice production here and now; the second is a long-term infrastructure program aimed at gradual land conversion. Both are important, and both are underway. But, they call for quite different approaches.⁸³

The Masagana 99 program, despite its problems in terms of equity and productivity, may have had unforeseen beneficial side-effects for non-M99 farmers. The International Rice Research Institute found that there did not appear to be a significant difference in the amount of fertilizer used between non-M99 and M99 participants. The question then arises as to how the loan is being spent. It was found that in "the wet season 13% of the increase in expenditures is being spent on fertilizer and 72% on hired labor, and in the dry season 51% of the total increase is being spent on fertilizer and 47% on labor."⁸⁴ The largest part of this increase is apparently being spent on the harvesting portion of rice production, if one breaks down the increases by labour components (see tables 3-6 and 3-7). It would therefore seem that landless labourers could be

⁸³Ibid. p. 37 (*Italics in the original*).

⁸⁴Bruce A. Best, "Some Socioeconomic Causes for Low Repayment rates of Noncollateral Institutional Rice Loans in the Philippines," Paper No. 77-6, paper presented at IRRI Saturday Seminar, Los Banos, May 21, 1977, p. 5.

Table 3-6

Increased expenditures on labor components for sample farmers with institutional credit compared to those without: Bulacan, Nueva Ecija, Pangasinan, wet season 1974.

Variables	Increased expenditures (P/ha)	% change from ave.	% of total change
Seedling care	25	58	5
Dike repair	22	102	5
Transplanting	39	31	8
Weeding/Insecticide	10	27	2
Plowing	13	46	3
Harrowing	42	42	9
Harvesting	322	70	68
Total hired labor	473	64	100

Table 3-7

Increased expenditures on labor components for sample farmers with institutional credit compared to those without: Bulacan, Nueva Ecija, Pangasinan, dry season 1974.

Variables	Increased expenditures (P/ha)	% change from ave.	% of total change
Harrowing	14	80	8
Plowing	44	47	25
Transplanting	22	13	13
Weeding/Insecticide	42	126	24
Harvesting	52	12	30
Total hired labor	174	174	100

Source: Bruce A. Best, IRRI paper No. 77-6, Tables 7 and 8.

benefiting due to the increased demand for labour by M99 participants, in the harvesting period. As for the small differences in fertilizer use, one possible reason could be that institutional credit is not the only source for loans (e.g., landlords, moneylenders, relatives, etc.). In other words, non-M99 farmers could be purchasing larger amounts of fertilizer by taking advantage of the fertilizer subsidy. This explanation seems likely given the fact that those with loans generally use more fertilizer than they did before, and yet are not much different from non-M99 farmers, in terms of fertilizer use.⁸⁵

Finally, an underlying objective of the Masagana 99 program has apparently been to reduce agrarian unrest. This supervised rice credit scheme was intended to provide large-scale noncollateral credit and extension services to the vast majority of small-scale rice farmers in the Philippines. After 1974, when the M99 program was extended, the repayment rate apparently decreased. "The main reason for this low repayment rate is the lack of incentives for

⁸⁵For an examination of the fertilizer subsidy policy, see International Rice Research Institute, "Masagana 99 Fertilizer Price Policy," paper No. 75-16, Los Banos, IRRI, November 1975.

farmers to repay, which is due mostly to the noncollateral aspect of the loan."⁸⁶ Barker contends that the government never expected M99 loans to be repaid in those provinces with histories of agrarian unrest. The apparent intention of the government was to transfer money, through the M99 program, to those farmers in Central Luzon, Isabela and Camarines Sur. These "transfer payments" were intended to help reduce agrarian unrest, and apparently it has worked. As long as capital continues to flow into these areas, according to Barker, agrarian unrest will be contained.⁸⁷ The geographic distribution of the CLT's which have been issued in the Philippines tends to support this contention (i.e., a majority of CLT's have been issued to farmers in Central Luzon, Isabela and Camarines Sur).

3.6 Summary

According to "conventional" indicators of development, the Philippines is apparently a developing economy well on its way towards a developed state. Changes

⁸⁶Best, op.cit., p. 13.

⁸⁷Conversation with Dr. Randolph Barker, Professor of Agriculture Economics, Cornell University, Ithica, New York, 27 February 1980.

in GNP and per capita GNP were two indicators of this. Even according to "conventional" indicators, however, the agricultural sector has not fared well. A productivity indicator, yields per hectare, was used against the use of HYV seeds, fertilizer, and irrigation vis-a-vis other Asian nations. These indicators alone can perhaps give us an appreciation of the Philippine agriculture sector in relation to the rest of the economy.

President Marcos implemented a land reform program in 1972, supposedly to develop the agricultural sector. Three main objectives were identified from the land reform legislation: promote equity and social justice, increase productivity, and reduce agrarian unrest. The land reform program consists of Operation Land Transfer, and the Samahong Nayan and Masagana 99 support programs. The following is a summary of an evaluation of the intervention efforts undertaken as specified in the program design:

- 1) It seems highly unlikely that every tenant-farmer can own a "family-size" farm. The amount of available rice land, given the scope of the program, is insufficient. Land resettlement schemes also seem unlikely, as they have not proved to be successful in the past, nor would they likely be in the near future given the current Moslem/Christian conflict in Mindanao.

2) Over half of all tenant-farmers cannot become owners of the land they till, under this land reform, because of the seven hectare retention limit.

3) One possible motive behind the 7 hectare retention limit is the government's desire to develop the middle class. It would seem that, as the land reform progressed and as the perceived threat of agrarian unrest diminished, preference was given to small landlords.

4) Emphasis is being placed on those provinces with histories of agrarian unrest, indicated by the geographic distribution of CLT's. Operation Land Transfer is also neglecting the Cotabato region, the rice granary of the Philippines, second to Central Luzon.

5) All tenant-farmers must join the Samahang Nayan, otherwise they will not be covered by the land reform program. Due to the seven hectare retention limit, over half of the tenant-farmers must join the Samahang Nayan and pay membership dues, yet they cannot become owners of the land they till.

6) Everyone in the barrio is required to join the Samahang Nayan, provided they are not landowners owning more than 7 hectares of land. The Samahang Nayan may not act in

the best interest of the tenant-farmers, therefore, and the danger lies in the SN being diverted from its principal "land reform" purpose. There is also the additional problem in dealing with the interests of those tenants from lands above 7 hectares, and those below 7 hectares.

7) Some of the problems with the Samahang Nayan are not the fault of the cooperative but are externally caused, such as the 7 hectare retention limit of Operation Land Transfer.

8) The Masagana 99 program explicitly and implicitly favours farmers with irrigated lands.

9) Increases in overall production could be better served, and at lower cost, by giving preference to rainfed lands.

10) Non-M99 participants have benefited from the credit program in the area of subsidized prices for farm inputs.

11) In Central Luzon, the M99 program is apparently being used as a means to transfer money to farmers in those areas of agrarian unrest. This "transfer payment" aspect may be the reason for the successful attainment of the short-term

political goal of the government - to reduce agrarian unrest.

Legislative loopholes, notably the 7 hectare retention limit, have meant that the intervention efforts have not been implemented as explicated in the original design. The government is not implementing the program to increase rice production to its greatest potential, or to improve equity; but it has apparently reduced agrarian unrest.

The program has, however, resulted in some positive changes, at least for Central Luzon, Isabela, and Camarines Sur. There has seemingly been a widespread shift from share tenancy to lease tenancy, and the "transfer payments" through M99 may have increased incomes in real terms. One could then expect inequities to occur or widen between Central Luzon and other regions in the Philippines.

CHAPTER IV
AGRICULTURAL IMPACT

IV. AGRICULTURAL IMPACT

In the last chapter, an overview of the Philippine land reform program was undertaken. In this chapter, the land reform will be evaluated in terms of its agricultural impact. The following criteria have been selected to determine the extent of the impact on rice and corn lands:

- 1) The relative importance of agriculture;
- 2) The scope of the land reform program;
- 3) Agricultural and labour productivity; and,
- 4) Impact on supporting services.

4.1 The Relative Importance of Agriculture

Agriculture, in the Philippines, continues to be the major employer for most people. In 1976, over half of the nation's labour force was employed in agriculture. In Mindano (regions 9-12), agriculture employs over 70 percent of the regional work-force, while in Central Luzon and Southern Tagalog (regions 3-4), agriculture employs less than 40 percent of the total work-force (table 4-1A).

Table 4-1A
EMPLOYED POPULATION 10 YEARS AND OVER IN AGRICULTURE, 1976
(Thousands)

Region	Total Pop. Employed	No. of Persons in Agriculture	% of Total Employed	No. of Persons in Non-Agric. Industries	% of Total Employed
Region I	1,194	723	60.6	471	39.4
Region II	662	461	69.6	201	30.4
Region III	1,531	596	38.9	935	61.1
Region IV	3,766	920	24.4	2,846	75.6
Region V	1,166	713	61.1	453	38.9
Region VI	1,397	832	59.6	565	40.4
Region VII	1,321	710	53.7	611	46.3
Region VIII	932	644	69.1	288	39.9
Region IX	716	498	69.6	218	30.4
Region X	964	747	77.5	217	22.5
Region XI	943	699	74.1	244	25.9
Region XII	833	584	70.1	249	29.9
Philippines	15,427	8,126	52.7	7,301	47.3

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979).

As shown in tables 4-1A and 4-1B, the unemployment rate is higher where agriculture (in employment terms) is not as important. In regions 3 and 4 (Central Luzon, Southern Tagalog) the unemployment rate is around 7 percent, while in the Cotabato area (region 12) unemployment is 3.9 percent, under the national average of 5 percent. These figures have undoubtedly been affected by the capital city of Manila, which is included in region 4 and which borders region 3. In short, where agriculture employs over 60 percent of the work-force, the overall unemployment rate is less than the national average (tables 4-1A and B). This seems to suggest that either agricultural regions are more successful in reaching full employment, or else these figures do not reflect the state of underemployment. It would seem that the latter is a truer picture of the employment situation. In fact, the nature of agricultural employment lends itself to a higher degree of disguised underemployment. According to Myrdal:

Contrary to the conception, work practices in agriculture are not labor intensive, but, instead, labor extensive. The labor input per worker is generally low in terms of man hours and is of low efficiency. The low yields per acre are therefore largely a consequence of an under-utilization of labor.¹

¹Gunnar Myrdal; The Challenge of World Poverty: A World Anti-Poverty Program in Outline (New York: Vintage Books, 1970), 86.

Table 4-1B
POPULATION 10 YEARS AND OVER BY EMPLOYMENT STATUS, 1976
(Thousands)

Region	Total Pop. 10 yrs. & over	Labour Force Pop. ^a	% of Total Pop.	Total Employed	Total Unemployed	% of Labour Force Pop.
Region I	2,368	1,235	52.2	1,194	41	3.3
Region II	1,359	697	51.3	662	35	5.0
Region III	3,470	1,645	47.4	1,531	114	6.9
Region IV	8,184	4,059	49.6	3,766	293	7.2
Region V	2,256	1,194	52.9	1,166	28	2.3
Region VI	2,830	1,477	52.2	1,397	80	5.4
Region VII	2,387	1,398	58.6	1,321	77	5.5
Region VIII	1,719	949	55.2	932	17	1.8
Region IX	1,571	761	48.4	716	45	5.9
Region X	1,685	997	59.2	964	33	3.3
Region XI	1,994	964	49.6	943	21	2.2
Region XII	1,602	867	54.1	833	34	3.9
Philippines	31,376	16,244	51.8	15,427	817	5.0

^aExcludes people whose labor force status is unknown.

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979).

Although agriculture is the major employer, it has not fared well in relation to the rest of the economy. Gross Domestic Product (GDP) per employed person, in the agricultural sector, has remained more or less the same from 1971 to 1978, in constant 1972 pesos, at P2,400 (table 4-2). During the first few years of the New Society, GDP/capita declined to Pesos 2,190 in the agricultural sector, and oddly enough, as the land reform program began to lose steam in the middle to late 1970's, GDP/capita gradually returned to the pre-New Society level. Could this mean that the land reform program was actually detrimental to the agricultural sector? The industrial and service sectors of the economy have experienced steady increases in real GDP/capita in the seventies, while the agricultural sector has experienced little change (table 4-2).

On another indicator of the performance of the agricultural sector, as shown below in table 4-3, the situation has gradually worsened. In 1971, the agricultural sector accounted for 50 percent of the total labour force, and represented 29 percent of GDP. In 1976, however, the sector represented a larger proportion of the work-force (54 percent) but accounted for a lower percentage (26 percent) of GDP.

Table 4-2
GDP PER EMPLOYED PERSON BY ECONOMIC SECTOR, 1970-1978

Sector	1970	1971	1972	1973	1974	1975	1976	1977	1978
Agric., Fishery, & Forestry									
GDPa	14,734	15,457	16,040	17,026	17,465	18,218	19,671	20,646	21,541
Employed Pop. b	6,082d	6,321	6,863	7,766	7,684	7,768	8,126	8,545d	8,985d
GDP/capita c	2,420	2,450	2,340	2,190	2,270	2,350	2,420	2,420	2,400
Industry									
GDPa	15,048	16,222	17,442	19,586	20,710	22,690	24,904	26,821	28,559
Employed Pop. b	1,886d	1,994	1,840	1,864	1,937	2,246	2,317	2,388d	2,460d
GDP/capita c	7,980	8,140	9,480	10,510	10,690	10,100	10,570	11,230	11,610
Service									
GDPa	21,232	21,847	22,593	24,319	25,964	27,453	29,010	30,696	32,581
Employed Pop. b	3,833d	4,228	3,879	4,235	4,205	4,504	4,984	5,153d	5,323d
GDP/capita c	5,540	5,170	5,820	5,740	6,170	6,100	5,820	5,960	6,120
Philippines									
GDPa	51,014	53,526	56,075	60,931	64,139	68,361	73,585	78,163	82,681
Employed Pop. b	11,810d	12,543	12,582	13,865	13,826	14,518	15,427	16,079d	16,758d
GDP/capita c	4,320	4,270	4,460	4,390	4,640	4,710	4,770	4,860	4,930

aGross Domestic Product by Industrial Origin, at constant 1972 prices, million (000,000) pesos.
bEmployed Persons by Major Industry Group, in thousands (000).
cGDP per employed person, pesos.
dEstimates based on 1968-1971 and 1971-1976 figures (see appendix E for calculations).

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979).

Table 4-3

AGRICULTURE'S SHARE OF GDP, 1971 to 1978								
	1971	1972	1973	1974	1975	1976	1977	1978
% of work-force	50.4	54.5	56.0	55.6	53.5	52.7	53.1	53.6
% of GDP	28.9	28.6	27.9	27.2	26.6	26.7	26.4	26.1

Source: Philippines, NEDA; 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979).

4.2 The Scope of the Land Reform Program

According to figures provided by the Ministry of Agrarian Reform, the total scope of Operation Land Transfer would only affect 23 percent of all rice and corn lands (see table 4-4). Thus, if the current land reform was fully implemented, according to the legislative guidelines laid down by the government, only 1.5 million hectares would be affected out of a total area of 6.6 million hectares (table 4-4). If the land reform were fully implemented, then 68 percent of Central Luzon's rice and corn lands would be affected. No other region comes close to that proportion (table 4-4). It seems likely that attention is being given to Central Luzon because the region has a history of agrarian unrest. Hence, the objective of the Government to reduce agrarian unrest appears to be reflected in the scope of Operation Land Transfer. In other words, the program has

Table 4-4

SCOPE OF OPERATION LAND TRANSFER, BY REGION (Hectares)

Region ^d	Total Scope ^a of OLI	Total Rice Area ^b	Corn Area ^b	Total Rice & Corn Area ^b	OLI Scope as % of Total Area ^c
Ilocos	126,452	338,500	63,070	401,570	31.5
Cagayan Valley	143,021	414,810	345,950	760,760	18.8
Central Luzon	376,354	500,640	53,980	554,620	67.9
S. Tagalog	114,810	447,040	246,530	693,570	16.6
Bicol	97,496	347,780	155,560	503,340	19.4
E. Visayas	112,470	266,860	587,970	854,830	13.2
W. Visayas	115,087	438,910	204,710	643,620	17.9
N. & E. Mindanao	152,531	294,050	334,040	628,090	24.3
S. & W. Mindanao	272,829	490,250	1,070,640	1,560,890	17.5
Philippines	1,511,044	3,538,840	3,062,450	6,601,290	22.9

^aFigures are for rice and corn lands combined. No further disaggregation into separate categories of rice and corn lands are available.

^bFor crop year 1975.

^cTotal area equals total rice and corn area.

^dSee Appendix I.

Source: Philippines, Ministry of Agrarian Reform, Annual Report 1978 (Quezon City: Ministry of Agrarian Reform, 1978).

been designed to meet the objective of reducing agrarian unrest, as demonstrated by the intentional emphasis on Central Luzon.

If one looks at the accomplishments of Operation Land Transfer as of 1978 a similar picture emerges.

According to government figures, as of 1978, only 7.4 percent of the total rice and corn lands have been affected; or roughly half a million hectares (see table 4-5). Central Luzon, however, is once again in a class by itself, with 38 percent of its land being affected by the land reform.

Southern and Western Mindanao (which includes Cotabato) has been the region least affected by the program, at 1.8 percent (table 4-5). This tends to substantiate the proposition that one of the major objectives of the Philippine land reform was to reduce agrarian unrest. The figures also lend support to the contention that the Government did not intend to implement the program in the predominantly Muslim area of Mindanao.

Since only 7 percent of all rice and corn lands have been affected by land reform, it would seem that the pattern of land ownership has in fact remained virtually intact. The implication being that the rights of the landlord are stronger than the rights of the tenants. The middle class, which includes small landlords, has apparently

Table 4-5

ACCOMPLISHMENT OF OPERATION LAND TRANSFER, BY REGION, AS OF 1978*

Region**	OLT Accomplishment as of 1975 (Hectares)	OLT Accomplishment as of 1978 (Hectares)	1978 Accomplishment as a Percent of Total OLT Scope (Percent)	1978 Accomplishment as a Percent of Total Area (Percent)
Ilocos	16,706	24,021	19.0	6.0
Cagayan Valley	35,462	60,310	42.2	7.9
Central Luzon	176,216	209,808	55.7	37.8
S. Tagalog	22,057	24,593	21.4	3.5
Bicol	30,790	41,688	42.8	8.3
E. Visayas	31,176	35,557	31.6	4.2
W. Visayas	30,127	35,865	31.2	5.6
N. & E. Mindanao	16,450	31,311	20.5	5.0
S. & W. Mindanao	8,985	28,556	10.5	1.8
Philippines	367,969	491,709	32.5	7.4

*See Appendix F for the number of CLT's issued, the number of tenants affected, and the amount of land affected by OLT, by province, for the years 1973 to 1975.

**See Appendix I.

Source: Table 4-4; Department of Agrarian Reform, unpublished tables; and Philippines, Ministry of Agrarian Reform, Annual Report 1978 (Quezon City: Ministry of Agrarian Reform, 1978).

been strengthened, or at least has not been weakened, with the possible exception of Central Luzon. The figures presented in table 4-5, therefore, implicitly reflect the Government's objective to strengthen the middle class.

4.3 Agricultural and Labour Productivity

In 1960, the average rice farm was 2.9 hectares which declined to 2.7 hectares in 1971. Corn farms increased from 2.5 hectares in 1960 to 2.9 hectares in 1971. The — average farm size for rice and corn lands combined was 2.8 hectares in 1960 and 1971.² As shown in table 4-6, however, the average rice and corn farm affected by OLT was reported to be only 1.8 hectares in size. Assuming that this data is more or less correct, one possible explanation is that the government did attempt to assist the smaller farmers. In other words, the average size farm affected by OLT was 1.8 hectares, compared to the national average of 2.8 hectares. These figures (table 4-6) represent the first detailed sampling of actual farm area per farmer, number of parcels (CLT's) per farmer, and average size of each parcel in the Philippines. Yet, these figures do not conform to

²See Philippines, NEDA, 1979 Philippine Statistical Yearbook (Manila: National Economic Development Authority, 1979), p. 245:

Table 4-6

AVERAGE FARM AREA PER CLT AND PER FARMER, AND NUMBER OF CLT'S PER FARMER*

Region	CLT's (Number)	Area (Hectare)	Tenant-tillers (Number)	Farm Area per CLT (Hectare)	Farm Area per Farmer (Hectare)	CLT's per Farmer
Region I	27,945	16,706	15,636	.6	1.1	1.8
Region II	28,034	35,462	19,393	1.3	1.8	1.4
Region III	116,940	176,216	81,974	1.5	2.1	1.4
Region IV	17,441	22,057	13,699	1.3	1.6	1.3
Region V	27,853	30,790	22,354	1.1	1.4	1.2
Region VI	24,310	30,127	18,839	1.2	1.6	1.3
Region VII	15,713	11,627	10,764	.7	1.1	1.5
Region VIII	21,557	19,549	13,788	.9	1.4	1.6
Region IX	1,075	1,313	813	1.2	1.6	1.3
Region X	6,042	10,064	4,771	1.7	2.1	1.3
Region XI	4,001	6,386	3,329	1.6	1.9	1.2
Region XII	4,546	7,672	3,802	1.7	2.0	1.2
Philippines	295,457	367,969	209,162	1.2	1.8	1.4

*Using 1975 data. Total accomplishments of the OLT program as of 1975.

Source: Ministry of Agrarian Reform, unpublished tables.

earlier estimates or our general conception of the Philippines. One would expect the average farm size in Central Luzon to be the smallest in the Philippines, given the population pressures upon the arable land. Some estimates put the average farm size in Central Luzon at 1 hectare, compared to the national average of 2.8 hectares.³ In regards to OLT coverage, however, Central Luzon (region III) has the largest farms at 2.1 hectares (table 4-6). This is precisely the reverse of what one might expect. Another possible explanation, again assuming that all estimates are more or less correct, is that the government has actually attempted to assist medium, or larger, size farmers in the Central Luzon area. Independent estimates put the average farm in Central Luzon at 1 hectare, compared to 2.1 hectare size farms as reported by OLT. In the Central Luzon region, a 2.1 hectare farm size would probably represent a medium size farmer. Could this be a conscious effort, on the part of the government, to strengthen the middle class in this particular region?

Unfortunately, no other figures have been given along with the above CLT figures, such as yields per hectare of CLT recipients, to allow a more precise evaluation of the agricultural impact. We must therefore, evaluate the impact of the program in terms of overall changes in agricultural

³Ibid.

and labour productivity. For instance, one would expect the Central Luzon area to experience higher rates of change in agricultural and labour productivity, relative to other regions, due to the stronger presence of land reform in that area. The goal, according to the government, is to attain "self-sufficiency in staple food crops, particularly in rice."⁴ According to the National Economic Development Authority:

There is a growing tendency to decrease farm sizes due to the growth of agricultural population and the land reform program of the government. In order to increase farm incomes and meet the growing urban demand for staple food, the agricultural strategy will rest on intensification of production through an expanded irrigation program particularly on major river basins. Cagayan Valley is therefore envisioned to gradually supplement Central Luzon as the country's major rice producing region. Region XII will also become a major rice surplus area and Region XI will continue to meet a high proportion of national requirements of corn for human and livestock consumption.⁵

The Central Luzon region is the most productive area in the Philippines, in terms of yields per hectare. In 1975, Central Luzon realized an average of 45.5 cavans of palay per hectare, compared to the national average of 36.3 cavans of palay. The second most productive area was the Cagayan Valley area at 39 cavans of palay (see table 4-7).

⁴Philippines, NEDA, Regional Development: Issues and Strategies (Manila: National Economic Development Authority, 1978), p. 83.

⁵Ibid. pp. 83-84.

Table 4-7

RICE YIELD PER HECTARE BY REGION, 1960-1975 (Cavans of Palay)

Region*	1960-65	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Ilocos	28.4	32.9	34.9	40.5	44.5	36.0	35.9	37.8	30.3	34.9	28.3
Cagayan Valley	26.9	34.5	32.0	36.8	37.7	37.2	44.1	40.1	36.4	38.7	39.0
Central Luzon	40.3	45.1	39.2	42.0	42.2	50.5	51.9	36.2	39.6	49.3	45.5
S. Tagalog	25.4	26.9	29.3	28.8	26.2	40.5	37.6	32.3	32.6	36.1	36.8
Bicol	26.2	34.1	30.1	31.3	34.0	35.2	28.8	45.3	32.5	36.5	38.2
E. Visayas	19.9	15.8	18.4	19.3	19.7	24.8	30.0	26.7	26.3	30.4	28.1
W. Visayas	27.9	24.8	34.8	33.3	29.8	34.3	35.8	32.2	31.9	35.9	35.8
N. & E. Mindanao	19.6	19.2	20.8	20.3	22.6	32.6	36.3	33.2	21.5	27.2	29.1
S. & W. Mindanao	27.3	23.9	25.2	26.2	26.8	36.4	34.3	37.6	31.6	35.0	37.8
Philippines	27.9	29.8	30.0	31.4	30.3	38.2	39.0	35.7	32.2	37.0	36.3
Asia	40.5	39.0	42.5	43.5	44.1	45.2	52.4	51.2	54.7	53.7	56.2
World	46.3	45.9	48.8	49.1	49.7	51.5	52.1	51.2	54.3	53.6	55.8

*See Appendix I.

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics: Philippines," statistical tables prepared by the Department of Agricultural Economics of the International Rice Research Institute and the Philippine Council for Agriculture and Resources Research, revised version, Los Banos, December 1976; and Food and Agriculture Organization of the United Nations, 1976 FAO Production Yearbook, Vol. 30 (Rome: FAO, 1979).

This does not mean that the stronger presence of land reform in Central Luzon has meant greater productivity for the area, or that the objective to make Cagayan Valley another major rice producing area has been attained either. One must look at changes in productivity (yields per hectare) over time in order to ascertain if there has been some positive change as a result of the intervention efforts.

Testing the effectiveness of the land reform in bringing about higher yields is carried out in tables 4-8 to 4-10. Table 4-8 is a "production index" which compares Philippine productivity against Asian productivity.⁶ The index is compiled by taking the Philippine yield and dividing it by the Asian yield. For example, in 1975, the Philippine average of 36.3 cavans of palay is divided by the Asian yield of 56.2 cavans ($36.3/56.2$) gives an index of .65. Or, in other words, the Philippine yield was roughly 65 percent of the Asian yield. If the index is less than 1, then the Philippines has not fared as well compared to other Asian nations. If it equals 1, then the Philippine yield is equal to the Asian yield for that year. If it is greater than 1,

⁶The Asian countries include all Asian nations except for the Soviet Union, see the Food and Agriculture Organization of the United Nations, 1978 FAO Production Yearbook, Vol. 32 (Rome: FAO, 1979). I chose an Asian average as the basis for comparison, over a world average, on the assumption that Asian productivity averages would be a better reflection of Philippine agricultural and climatic conditions, from year to year, compared to an average world productivity level.

Table 4-8

PRODUCTION INDEX OF DIFFERENCE BETWEEN PHILIPPINE AND ASIAN YIELDS, 1960-1975

Region*	1960-65	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Ilocos	.70	.84	.82	.93	1.01	.80	.68	.74	.55	.65	.50
Cagayan Valley	.66	.88	.75	.85	.85	.82	.84	.78	.66	.72	.69
Central Luzon	.99	1.16	.92	.97	.96	1.12	.99	.71	.72	.92	.81
S. Tagalog	.63	.69	.69	.66	.59	.90	.72	.63	.60	.67	.65
Bicol	.65	.87	.71	.72	.77	.78	.55	.88	.59	.68	.68
E. Visayas	.49	.40	.43	.44	.45	.55	.57	.52	.48	.57	.50
W. Visayas	.69	.64	.82	.77	.68	.76	.68	.63	.58	.67	.64
N. & E. Mindanao	.48	.49	.49	.47	.51	.72	.69	.65	.39	.51	.52
S. & W. Mindanao	.67	.61	.59	.60	.61	.80	.65	.73	.58	.65	.67
Philippines	.69	.76	.71	.72	.69	.84	.74	.70	.59	.69	.65

*See Appendix I.

Source: Table 4-7.

then the Philippine yield is greater than the Asian yield. As table 4-8 shows, only the Ilocos and Central Luzon regions have achieved a production index greater than 1. Unfortunately, that level of productivity has not been maintained. This production index tells us how well rice productivity is faring in relation to the Asian average. The index has the advantage of being sensitive to yearly fluctuations in crop production. As can be seen in table 4-8, rice productivity in the Philippines has not changed much in relation to the Asian performance. In 1960-65, the Philippines had an index of .69, while in 1975 it was .65. Although there was considerable improvement in 1970 (an index of .84), the overall change between 1960 and 1975 has been negligible, except in the Central Luzon area which experienced a dramatic decrease in its production index.

Table 4-9 summarizes the production index provided in table 4-8. It is interesting to compare the three year average (1970-72) before the implementation of the land reform against the (1973-75) three year average index after implementation of the program. In all regions, the production index has declined after 1972, or after the implementation of the land reform program. For the Philippines, the production index declined by .12 from the 1970-72 period to the 1973-75 period (table 4-9). While the Philippines was faring poorly between 1973 and 1975, other

Table 4-9
PRODUCTION INDEX SUMMARY

Region*	Average Index			1973-75 Index Minus 1970-72 Index
	1960-65	1966-69	1970-72	
Ilocos	.70	.90	.74	.57
Cagayan Valley	.66	.83	.81	.69
Central Luzon	.99	1.00	.94	.82
S. Tagalog	.63	.66	.75	.64
Bicol	.65	.77	.74	.65
E. Visayas	.49	.43	.55	.52
W. Visayas	.69	.73	.69	.63
N. & E. Mindanao	.48	.49	.69	.47
S. & W. Mindanao	.67	.60	.73	.63
Philippines	.69	.72	.76	.64

*See Appendix I.

Source: Table 4-8.

Asian nations were improving their productivity. Between 1973 and 1975, the Asian rice productivity average exceeded the world average for the first time (table 4-7).

As shown in table 4-10, our null hypothesis is that the Philippine land reform program has been detrimental to rice productivity. To support this contention, one would have to demonstrate that those areas which have been the most affected by the program, experienced the smallest increases in productivity or else the greatest decreases. Conversely, one would also expect to see those areas which were the least affected by the program, to experience the largest increases in productivity or else the smallest decreases. Each of the nine regions has been ranked on two scales, from 1 to 9. For example, Central Luzon has a rank of 1 on the OLT accomplishment scale, as it is the region which has the largest proportion of its rice and corn lands affected by the land reform (table 4-5); while on the production index scale, Central Luzon has a rank of 3, as it is the region with the third largest decrease in its production index from the 1970-72 period to the 1973-75 period (table 4-9). As shown in table 4-10, at the top end of the scales, 3 out of 4 of the regions were the most affected by the land reform and also experienced the largest decreases in their production indexes. Conversely, at the bottom end of the scales, 2 out of 4 of the regions were the least affected by the land

Table 4-10
OLT's IMPACT ON YIELDS

<u>Rank</u>	<u>OLT Accomplishments, 1975, as proportion of Total Area*</u>	<u>1973-75 Index Minus 1970-72 Index**</u>
1	Central Luzon	• N. & E. Mindanao
2	Bicol	• Ilocos
3	Cagayan Valley	• Central Luzon
4	Ilocos	• Cagayan Valley
5	W. Visayas	S. Tagalog
6	N. & E. Mindanao	• S. & W. Mindanao
7	E. Visayas	• Bicol
8	S. Tagalog	• W. Visayas
9	S. & W. Mindanao	• E. Visayas
$r = .25$		

*A rank of 1 means the region where OLT affected the highest proportion of rice and corn lands, whereas 9 indicates the region which has been least affected by OLT.

**A rank of 1 means the region with the greatest decrease in their respective production indexes from the 1970-72 period to the 1973-75 period. A rank of 9 means the region with the lowest decrease in their respective production index.

Source: Tables 4-5 and 4-9.

reform but also had the smallest decreases in their production indexes (table 4-10).⁷

As shown in table 4-10, the correlation coefficient r is 0.25. We can conclude that there appears to be a linear relationship between our independent and dependent variables. Our independent variable being OLT accomplishments as a proportion of total area. The dependent variable is the change in the production index before land reform and after land reform. In other words, OLT has had some impact on productivity. Unfortunately, the relationship is statistically positive, as indicated by a positive coefficient r of 0.25. One would ordinarily expect a statistically negative relationship between our independent and dependent variables. Thus, the proposition that the land reform program has actually improved rice productivity is rejected, and we must accept our null hypothesis.

⁷Northern and Eastern Mindanao ranks low on the OLT accomplishments scale and high on the production index scale. It is the only region which conforms to what one would expect as a result of land reform, or lack of land reform. However, in Northern and Eastern Mindanao's case, the ongoing civil war is most likely the major factor behind the largest production decrease in the Philippines. Bicol is another region which conforms to our expectations; high land reform area with low production index decrease. Two out of nine regions, however, is not a very good record.

In the period from 1968 to 1970, the Philippines was self-sufficient in rice. During this period, the Philippines was a net exporter as shown in table 4-11. While the land reform program was being implemented, the Philippines was a net importer. Interestingly enough, it was not until 1978 that self-sufficiency in rice was once again attained, which is after the land reform began to lose its thrust. Hence, it would appear that self-sufficiency in rice was not achieved as a result of the land reform program.

According to the World Bank, yields per hectare should either increase or at least remain the same as a result of land reform.⁸ Output per worker, however, would likely decrease since smaller or "family" size farms tend to employ more labour per hectare. This is due to the presence of smaller, more family-oriented farms, greater use of labour intensive methods, and so forth. Labour productivity in the Philippines overall, however, has been on the increase since 1973 (see table 4-12). Hence, it would appear that the increasing labour productivity figures supports the general finding that the land reform program has not had much impact, with the possible exception of Central Luzon.

⁸World Bank, Land Reform: Sector Policy Paper (Washington, D.C.: The World Bank, 1975), p. 27.

Table 4-11
NET IMPORTS OF RICE AND CORN (Metric tons)

Year	Net Imports* Rice	% of Total Domestic Production	Net Imports* Corn	% of Total Domestic Production
1966	108,164	2.7	2,297	.2
1967	238,639	5.8	55,484	3.7
1968	(40,274)	(.9)	3,043	.2
1969	(499)	(a)	28,216	1.6
1970	(1,287)	(a)	1,115	.1
1971	367,759	6.9	54,770	2.7
1972	440,106	8.6	160,511	8.0
1973	304,553	6.9	7	(a)
1974	162,912	2.9	110,104	4.8
1975	134,759	2.4	121,471	4.7
1976	55,444	.9	96,401	3.5
1977	15,900	.2	128,000	4.5

*Imports minus exports.

() Net Exports

a Figure is less than .1 percent.

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics, Philippines," Los Banos, December 1976; Food and Agriculture Organization of the United Nations, 1978 FAO Production Yearbook, Vol. 32 (Rome: FAO, 1979); and Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

Table 4-12

LABOUR PRODUCTIVITY, PHILIPPINES, FOR RICE AND CORN

Year	Agricultural Population (000) *	Total Production* (000 cavans)	Output per Person (cavans)
1960	5,224	111,473	21.3
1961	5,514	111,691	20.3
1962	5,898	117,645	19.9
1963	5,779	119,086	20.6
1964	5,752 ^a	116,718	20.3
1965	5,725	120,573	21.1
1966	6,290	123,918	19.7
1967	6,330	126,907	20.0
1968	5,631	139,225	24.7
1969	5,852 ^b	140,398	24.0
1970	6,082 ^b	164,582	27.1
1971	6,321	166,998	26.4
1972	6,863	161,652	23.6
1973	7,766	141,948	18.3
1974	7,684	179,155	23.3
1975	7,768	187,011	24.1
1976	8,126	202,870	25.0

*Total rice and corn production.

^aEstimate based on average annual rates of change between 1963 and 1965, see Appendix E for calculations.

^bEstimates based on average annual rates of change between 1963 and 1971, see Appendix E for calculations.

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

4.4 Impact on Supporting Services

The goal, according to the government, is to increase the productivity of the land by augmenting support services, such as irrigation, fertilizer, credit, and so forth. The International Rice Research Institute concurs that the lack of the above services, along with insect and rodent control, are the major constraints to higher yields in the Philippines.⁹ According to the government:

Increased land productivity will require small improvements in the quality of agricultural support services, particularly to small farmers, in all regions. It will also necessitate the continued expansion of rural infrastructure (i.e., irrigation, electrification, transport services and water supply), increased provision of credit, improved marketing facilities and more dependable supply of non-farm credit, improved marketing facilities and more dependable supply of non-farm inputs. To catalyze the adoption of more productive technology that is not necessarily labor displacing, an effective extension force will be needed. A close attention to input and product prices should likewise be given.¹⁰

⁹See International Rice Research Institute, Constraints to High Yields on Asian Rice Farms: An Interim Report (Los Banos: The International Rice Research Institute, 1977), pp. 152-155.

¹⁰Philippines, NEDA, Regional Development, p. 85.

A lack of adequate irrigation represents an important constraint in Philippine rice productivity.¹¹ Even those areas which are served by irrigation systems apparently suffer from poor irrigation services. There has been the recognition that pump irrigation systems would be preferable over the predominant gravity irrigation systems. "Areas served by irrigation systems rely on the diversion of river flows and as a consequence are also highly dependent on rainfall."¹² For rainfed farms, however, any kind of irrigation system would most likely reduce somewhat the risk of crop failure and increase yields. Table 4-13 provides land productivity (yields per hectare) figures for irrigated and rainfed farms, and for farms using high-yielding varieties (HYV's) and traditional varieties. Quite clearly, irrigated farms tend to report higher yields than rainfed farms, and HYV farms tend to report higher yields than non-HYV farms. As indicated in the last chapter, the widespread use of HYV's in the Philippines does not commensurate with the amount of supporting inputs (i.e., fertilizer and irrigated water). As shown in table 4-14, increasing the access to irrigation systems would increase

¹¹See International Rice Research Institute, Changes in Rice Farming in Selected Areas of Asia (Los Banos: The International Rice Research Institute, 1975), pp. 276-277.

¹²International Rice Research Institute, Farm-Level Constraints to High Rice Yields in Asia: 1974-77 (Los Banos: The International Rice Research Institute, 1979), p. 164.

Table 4-13
YIELDS PER HECTARE, BY IRRIGATED AND RAINFED, AND BY VARIETY OF CROP, PHILIPPINES
(Cavans of Palay per hectare)

Crop Year	Irrigated			Rainfed		
	HYV's*	Other Varieties**	All Irrigated	Lowland		All Rainfed
				HYV's*	Other Varieties**	
1978	44.7	36.7	39.4	29.7	28.2	26.1
1969	40.4	36.8	39.0	25.6	24.8	23.3
1970	49.0	42.9	46.6	33.8	34.7	31.8
1971	46.0	43.9	45.3	36.7	35.9	33.4
1972	46.7	39.2	44.7	32.8	30.7	29.5
1973	44.3	39.6	42.9	29.0	25.2	25.2
1974	46.6	42.9	45.9	34.8	36.7	30.2
1975	50.5	42.7	48.8	32.5	26.8	28.1
						36.4

*High-Yielding Varieties of rice, includes IR-series, BPI-series, and C-series.

**Can also be classified as "traditional varieties".

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics: Philippines," Los Banos, December 1976.

yields to a greater extent than increasing the use of HYV's, at the present time, because of the imbalance in HYV's relative to fertilizer and irrigated water.

Table 4-14

DIFFERENCE BETWEEN RAINFED AND IRRIGATED, HYV, NON-HYV
(Cavans per hectare)

	<u>Trad.</u> <u>Rainfed</u>	<u>HYV</u> <u>Rainfed</u>	<u>Trad.</u> <u>Irrigated</u>	<u>HYV</u> <u>Irrigated</u>
Avg. yield 1968-1975	30.4	31.9	40.6	46.0
Difference, Cavans	0	1.5	10.2	15.6
Percentage Difference	0	4.9%	33.6%	51.3%

Source: Table 4-13

Table 4-14 shows the average yield, between 1968 and 1975, for rainfed-traditional varieties, rainfed-HYV, irrigated-traditional varieties, and irrigated- HYV (first row). The absolute difference in cavans of palay between traditional-rainfed and the other three categories is then calculated (second row). These differences are then divided by the yield for traditional-rainfed, to obtain the percentage difference (third row). In other words, if you were a farmer with a rainfed farm and were growing traditional varieties of rice, you could increase your yield

by an average of 4.9 percent by using HYV's; but you could also increase your yield by an average of 33.6 percent if you had access to an irrigation system but still used traditional varieties (table 4-14). Obviously, the ideal situation would be to use HYV's along with access to an irrigation system, an average increase in yields of 51 percent over rainfed farms using traditional varieties. The widespread acceptance of HYV's in the late 1960's has lead to the current imbalance between use of HYV's and access to irrigated water. Thus at the present time, increasing the access to irrigated systems would increase yields to a much greater extent than increasing the use of HYV's alone.

In table 4-15, a test is performed to determine if the government is expanding irrigation services at a much faster rate under the New Society. The government claims that its objective is to expand agricultural infrastructure in order to increase land productivity, with irrigation systems being one component. The test conducted in table 4-16 shows that the government has not made a successful effort to expand irrigation systems. The test consists of comparing the actual amount of irrigated rice and corn lands against the projected amount. The amount of irrigated lands has been projected for the years 1973 to 1975. The projection is based on the growth rate (linear regression) for the 1966 to 1972 period; or pre-land reform era. The

Table 4-15

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, PHILIPPINES, 1966-1975a

Year	Total Rice Area	Rainfed Lands	Irrigated Lands	Percentage Irrigated	Irrigated lands Projected, 1973-75b	Index Actual/Projected
1966	3,109,180	2,148,720	960,460	30.9		
1967	3,096,120	1,743,830	1,352,290	43.9		
1968	3,303,660	1,994,640	1,309,020	39.6		
1969	3,332,150	1,849,330	1,482,820	44.5		
1970	3,113,440	1,767,710	1,345,730	43.2		
1971	3,112,630	1,642,120	1,470,510	47.2		
1972	3,246,380	1,918,230	1,328,150	40.9		
1973	3,111,800	1,870,820	1,240,980	39.9	1,470,637	.84
1974	3,436,800	1,943,060	1,493,740	43.5	1,674,409	.89
1975	3,538,840	2,127,130	1,411,710	39.9	1,775,790	.79

r = .589						

^aSee Appendix G for actual and projected irrigated lands, for each region.

^bSee Appendix E for the calculations.

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics: Philippines," Los Banos, December 1976.

projection, therefore, is based on trends prior to the implementation of the program. Hence, if the government provided irrigation systems at the same rate as it did prior to the imposition of the land reform program, the actual figures should coincide with the projected figures. As the land reform has been given such high priority in the New Society, one would expect the actual figures to exceed the projected figures.

As can be seen in table 4-15, the actual amount of irrigated lands is less than the projected amount. The magnitude of the difference between actual and projected figures can be indicated by an index, which has been called an "actual/projected index". The index is simply the actual figure divided by the projected figure. If the index is greater than 1, then the "effort" by the government with respect to providing irrigation services is greater in the land reform period than in the pre-land reform period. If the index is less than 1, then the "effort" is less than the pre-land reform era. For the Philippines overall, the "actual/projected" index is less than 1 during the land reform era. For example, in 1975, actual levels of irrigated land were 79 per cent of the projected levels. The correlation coefficient r , in this case is 0.589, suggesting a fairly strong linear relationship. Hence, the figures tend

to support a proposition that the rate of irrigation services provided under the land reform program is less than the rate prior to the implementation of the program.

The Central Luzon region is one of two regions in the Philippines where the actual amount of irrigated lands exceeds the projected amount (see table G-3). In 1975, the "actual/projected" index reached 1.23. The only other region to exceed 1 in the "actual/projected" index is the Southern and Western Mindanao region (see table G-9). In 1974, the index reached 1.04, but is less than 1 in 1973 and 1975. Hence, there is some indication that an extra effort is being made to expand irrigation services in the two major rice areas of the Philippines. All other regions, however, fell below the projected amount after 1972, or after the implementation of the land reform program. Given that providing access to an irrigation system could increase yields to a much greater extent than increasing the use of HYV's (table 4-14), implies that production is not being increased to its greatest potential.

Another important support service, in terms of land productivity, is access to and the use of fertilizers. This is fairly significant in the Philippines case given the high adoption rate of HYV's; or the "imbalance" caused by the

extensive use of HYV's. The same test, which was applied to irrigation has been applied to fertilizer, in tables 4-16, 13. Table 4-16A shows the actual and projected figures for fertilizer use in the Philippines on rice lands, and table 4-16B shows figures for corn lands. In both tables, the actual consumption of fertilizer is greater than the projected amount by a slight margin in 1973. By 1975, however, actual fertilizer use fell below the projected amount in both rice and corn lands. The "actual/projected" index in 1975 was 0.62 for rice lands (table 4-16A) and 0.50 for corn lands (table 4-16B). In both cases, the correlation coefficient r is high, exceeding 0.9. One possible explanation for the dramatic decline in the "actual/projected" indexes may have been due to the sharp increase in the price of fertilizer after 1974 (see chapter 3). The dramatic decline in the index combined with an extremely significant correlation coefficient, however, tends to indicate that there has not been much effort towards increasing the use of fertilizer despite the initial effort in 1973. We should note that the Masagana 99 program (which would be responsible for fertilizer dissemination) was originally planned to last one year. It would seem that the

¹³The data for fertilizer consumption on rice and corn lands is not available on a regional basis. One is also unable to obtain figures on fertilizer use between the wet and dry seasons.

Table 4-16A
AVERAGE FERTILIZER USE PER RICE HECTARE, PHILIPPINES, 1967-1975

Year	Fertilizer Use (000 mt) ^a	Rice Area (000 ha.)	Avg. Fertilizer Use (kg./ha.)	Fertilizer Use, Projected, 1973-75d (kg./ha.)	Index Actual/Projected
1967	28.1	3,096	9.1		
1968	31.2 ^b	3,304	9.4		
1969	39.2 ^b	3,332	11.8		
1970	69.1	3,113	22.2		
1971	78.5	3,113	24.6		
1972	77.3	3,246	23.8		
1973	95.7	3,112	30.8	29.8	1.03
1974	105.6 ^c	3,437	30.7	33.5	.92
1975	81.8 ^c	3,539	23.1	37.2	.62
$r = .928$					

^aFertilizer consumption in terms of nutrient equivalent (N-P₂O₅-K₂O). Fertilizer use for rice production is based on percentages of overall Philippine fertilizer consumption; e.g., in 1967, rice used 26.4 percent of the total fertilizer consumed in the Philippines.

^bEstimates based on same percentage as in 1967 (see footnote 1), at 26.4 percent.

^cEstimates based on same percentage as in 1973 (see footnote 1), at 37.0 percent.

^dProjection based on years 1967 to 1972 (see appendix E for calculations).

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics: Philippines," Los Banos, IRRI, December 1976; and Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

Table 4-16B

AVERAGE FERTILIZER USE PER CORN HECTARE, PHILIPPINES, 1967-1975

Year	Fertilizer Use (000 mt) ^a	Corn Area (000 ha.)	Avg Fertilizer Use (kg./ha.)	Fertilizer Use, Projected, 1973-75 ^d (kg./ha.)	Index Actual/Projected
1967	3.4	2,158	1.6		
1968	3.8 ^b	2,247	1.7		
1969	4.8 ^b	2,255	2.1		
1970	44.7	2,420	18.5		
1971	46.3	2,392	19.4		
1972	52.2	2,432	21.5		
1973	67.2	2,325	28.9	27.7	1.04
1974	74.2 ^c	2,763	26.9	32.5	.93
1975	57.5 ^c	3,062	18.8	37.4	.50
$\bar{r} = .912$					

^aFertilizer consumption in terms of nutrient equivalent (N-P₂O₅-K₂O). Fertilizer use for corn production is based on percentages of overall Philippine fertilizer consumption; e.g., in 1967 corn used 26.4 percent of the total fertilizer consumed in the Philippines.

^bEstimates based on same percentage as in 1967 (see footnote 1), at 26.4 percent.

^cEstimates based on same percentage as in 1973 (see footnote 1), at 37.0 percent.

^dProjection based on years 1967 to 1972 (see appendix E for calculations).

Source: Teresa L. Anden and Adelita C. Palacpac, "Data Series on Rice Statistics: Philippines," Los Banos, IRRI, December 1976; and Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

figures noted in tables 4-16 (A and B) reflect this original emphasis (see section 3.5).

The amount of agricultural loans granted by various financial institutions has been increasing steadily at an average annual rate of 13.9 percent from 1966 to 1975 (table 4-17).¹⁴ This represents an extremely fast rate of increase in the amount of agricultural loans granted in the Philippines. When the "actual/projected" test made with irrigation and fertilizer is applied to agricultural loans granted per rice and corn hectare, the results are just as impressive. Table 4-18 gives the total amount of loans granted per rice and corn land.¹⁵ From 1973 to 1975, the actual amount of loans granted per hectare exceeded the projected amount. The "actual/projected" index ranges from 1.06 to 1.21 during the land reform period. The correlation coefficient is extremely high, r is 0.97, suggesting a very strong linear relationship (table 4-18). This perhaps

¹⁴See appendix B, on how to calculate the average annual growth rates between two years, in this case 1966 and 1975.

¹⁵Since only the amount of loans granted for the entire agricultural sector is available (i.e., figures are not available on a crop by crop basis), the actual average amount of loans granted per rice and corn hectare is most likely around 60 percent of the amounts reported in table 4-19. The rate of increase, however, would likely remain the same. Hence, the test results (e.g., correlation coefficient) is not significantly affected.

Table 4-17

AGRICULTURAL LOANS GRANTED BY FINANCIAL INSTITUTIONS, PHILIPPINES
(million pesos)

Year	AGLFB	ACAC	Rural Banks	Development Banks	Other Banks*	Total
1966	(a)	16.3	247.4	91.0	1,260.9	1,615.6
1967	16.6	31.6	318.3	147.6	1,551.0	2,065.1
1968	15.3	29.6	362.8	158.9	1,652.0	2,218.6
1969	8.3	23.6	408.5	115.0	1,772.0	2,327.4
1970	7.6	41.4	489.0	64.9	2,194.5	2,797.4
1971	18.1	38.4	591.6	61.5	2,513.5	3,223.1
1972	31.1	29.6	677.5	100.0	2,550.7	3,388.9
1973	10.8	55.6	976.9	160.2	2,827.9	4,031.4
1974	(a)	64.3	1,670.0	255.7	3,261.2	5,251.2
1975	(a)	40.7	2,310.2	822.4	2,049.8	5,223.1

^aData not available.

^bBAGLF - Agricultural Guarantee Loan Fund.

^cCACA - Agricultural Credit Administration.

*Philippine National Bank, Land Bank, and other commercial banks.

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

Table 4-18

AGRICULTURAL LOANS GRANTED PER RICE AND CORN HECTARE

Year	Total loans (million pesos)	Rice & Corn Area (000 ha.)	Loans per Hectare (pesos)	Loan per hectare, projected, 1973-75* (Pesos)	Index Actual/Projected
1966	1,615.2	5,215.3	310		
1967	2,065.1	5,254.0	393		
1968	2,218.6	5,551.6	400		
1969	2,327.4	5,588.3	416		
1970	2,797.4	5,533.0	506		
1971	3,223.1	5,504.8	586		
1972	3,388.9	5,678.1	597		
1973	4,031.4	5,437.2	741	652	1.14
1974	5,251.2	6,199.8	847	700	1.21
1975	5,223.1	6,601.2	791	748	1.06
$\bar{r} = .971$					

*See appendix E for calculations.

Source: Table 4-17.

L reflects the strong efforts made by the Masagana rice and corn credit schemes. No analysis, however, can be made concerning the distribution of the loans. Did the loans tend to go to richer farmers? Or, were they used as "transfer payments" in the Central Luzon area to help disquiet agrarian revolutionary tendencies, as suggested by Barker in the last chapter.

The real price for rice and corn received by farmers has been increasing from 1966 to 1975. If one compares the average price per cavan of rice and corn in the three year period just prior to the New Society against the average price for the first three years of the New Society, a fairly dramatic increase can be seen. The average price for rice (received by farmers) increased, in constant 1966 prices, by 22 percent after 1972 (table 4-19A), while for corn the increase from the 1969-71 period to the 1973-75 period was 37 percent (table 4-19B). These dramatic increases in the price for rice and corn is apparently the result of the government's price support program.

Prices received by farmers for rice and corn have tended to be higher in Central Luzon than in Mindanao. The average price for rice received by farmers in Central Luzon

Table 4-19A

AVERAGE PRICES RECEIVED BY FARMERS FOR PALAY ORDINARIO* BY REGION,
IN 3 YEAR PERIODS**
(P/cavan of 44 kgs.)

Region**	1966-1968	1969-1971	1973-1975	1966-1975
Ilocos	16.01	13.75	17.66	15.91
Cagayan Valley	13.30	14.06	16.95	14.87
Central Luzon	16.51	15.48	18.62	16.97
S. Tagalog	13.94	13.59	17.58	15.19
Bicol	13.25	12.94	16.00	14.14
E. Visayas	14.51	13.52	15.12	14.55
W. Visayas	13.29	13.37	14.75	14.09
N. & E. Mindanao	12.82	13.37	16.30	14.38
S. & W. Mindanao	12.97	11.82	14.96	13.33
Philippines	14.06	13.58	16.57	14.93

*Macan or equivalent.

**See Appendix I.

***In constant 1966 prices, see Table H-1.

Source: Appendix H.

Table 4-19B
AVERAGE PRICES RECEIVED BY FARMERS FOR WHITE CORN BY REGION,
IN 3 YEAR PERIODS**
(P/cavan of 57 kg., shelled corn)

Region*	1966-1968	1969-1971	1973-1975	1966-1975
Ilocos	16.97	16.98	20.32	18.52
Cagayan Valley	12.57	14.85	19.43	15.82
Central Luzon	17.04	15.75	22.52	17.87
S. Tagalog	12.74	14.34	19.09	15.32
Bicol	14.84	13.76	20.39	16.46
E. Visayas	15.09	15.07	21.71	17.32
W. Visayas	13.87	14.50	19.40	16.16
N. & E. Mindanao	13.40	13.75	18.58	15.40
S. & W. Mindanao	10.97	13.19	18.53	14.37
Philippines	14.18	14.43	19.72	16.24

*See Appendix I.

**In constant 1966 prices, see Table H-1.

Source: Appendix H.

was Pesos 18.62 in the 1973-75 period, compared to Pesos 15.63 in Mindanao. One might expect the support price for rice to be higher in Central Luzon as it is the major rice producing area. We would, therefore, expect the support price for corn to be higher in Mindanao, since it is the major corn producing area. This is apparently not the case. The average price received for corn was Pesos 22.52 in Mindanao compared to Pesos 18.56 in Central Luzon. If this trend continues, then one will witness an increasing income disparity gap between the northern and southern (i.e., Central Luzon and Mindanao) areas of the Philippines.

4.5 Summary

This chapter carried out an evaluation of the Philippine land reform program under the New Society, in terms of its agricultural impact. The most significant finding was the limited scope of the land reform program, in terms of the proportion of the total crop area which it affected, except in the Central Luzon area. In Central Luzon, the land reform has apparently had a significant impact on the total area.

1) Agriculture continues to be the major employer in the Philippines, more so in Mindanao (where agriculture accounts for over 70 percent of the total workforce) and less so in Central Luzon and Southern Tagalog (less than 40 percent). Despite agriculture's importance as an employer overall, GDP per employed person has remained more or less the same, while other sectors of the economy have experienced steady increases in GDP/capita.

2) GDP per capita of the agricultural sector declined at the same time the land reform program was being implemented, but improved as the program began to lose its thrust after the middle 1970's.

3) The land reform, up to 1978, has only affected 7.4 percent of total rice and corn lands in the Philippines. Central Luzon is the most affected region with 38 percent of its rice and corn lands affected, and Southern and Western Mindanao (the major corn producing area, and second in rice production) is the least affected region at 1 percent.

4) Agricultural productivity has not increased substantially, according to the "production index", which bases its standards on the average Asian performance.

5) Where the land reform has had the greatest impact, those regions have also experienced the largest decreases in their production indexes. This is precisely the opposite of what one would expect. The null hypothesis that the land reform program has actually been detrimental to rice productivity was accepted.

6) Just prior to the New Society, the Philippines became a net exporter of rice. While the land reform program was being implemented, the Philippines returned to its former state of being a net importer of rice. As the program began to lose its thrust, the Philippines, once again, achieved self-sufficiency in rice in 1978.

7) Labour productivity has been increasing in the 1970's. This runs contrary to what one would expect as a result of land reform. It would, therefore, appear that the land reform is not having much impact, which lends additional support to point 3.

8) Increasing access to irrigation systems would increase yields to a much greater extent than increasing the use of HYV's, at the present moment in the Philippines.

9) The amount of irrigated lands increased at a much faster rate than the projected rate in Central Luzon

from 1973-1975, and in Southern and Western Mindanao in 1974, while in other regions the actual amount was lower than the projected amount. The implication of this "actual/projected" test, was that yields were not being increased to their greatest potential, providing further support to point 7.

10) The use of fertilizer increased at a much faster rate than the projected rate up to 1973, but due to sharp increase in the price for fertilizer in 1974, the actual amount fell below the projected amount in 1975.

Nevertheless, some effort was initially made to increase the use of fertilizer.

11) The amount of agricultural loans granted per hectare increased faster than the projected rate from 1973 to 1975. However, no analysis can be made concerning the distribution of the loans. One suggestion, made by Barker in chapter 3, is that the Masagana loans are being used as "transfer payments" to disquiet any agrarian revolutionary tendencies in Central Luzon. The dramatic increase in the amount of agricultural loans granted provides proxy support to this contention.

12) The price for rice increased by an average of 72 percent after the imposition of the land reform, while corn increased by 97 percent. This tends to indicate an effective

price support program. However, prices received by farmers for rice and corn have tended to be higher in Central Luzon than in Mindanao.

CHAPTER V

IMPACT ON POVERTY AND BASIC NEEDS

V. IMPACT ON POVERTY AND BASIC NEEDS

To complete the impact component of our comprehensive evaluation of the Philippine land reform, this chapter will attempt to determine the nature and extent of the impact of the program on poverty and basic needs. The following criteria were selected:

- 1) Poverty and food;
- 2) Landlord-tenant relations;
- 3) Participation; and
- 4) The quality of life.

5.1 Poverty and Food

The Philippine government uses quintiles, or bottom 20 and 40 per cent of the income distribution, to indicate the extent of poverty. Poverty, as indicated by the distribution of family income by each quintile, has worsened over the 1961 to 1971 period (see table 5-1). The bottom 20 per cent of the income distribution have decreased their share of total income from 4.2 per cent in 1961 to 3.6 per cent in 1971. From 1971 to 1975, however, the bottom 20 per cent increased their share of total national income to 5.9 per cent. In fact, in all regions of the Philippines, the

Table 5-1

DISTRIBUTION OF TOTAL FAMILY INCOME BY EACH QUINTILE*,
BY REGION, 1961-1975

<u>REGION**</u>	<u>1961</u>	<u>1965</u>	<u>1971</u>	<u>1975</u>
<u>Philippines:</u>				
Lowest 20 per cent	4.2	3.5	3.6	5.9
Second 20 per cent	7.9	8.1	8.1	9.9
Third 20 per cent	12.1	12.8	13.3	13.6
Fourth 20 per cent	19.3	20.1	21.0	19.9
Top 20 per cent	56.5	55.5	54.0	50.7
Top 10 per cent	41.0	40.1	37.1	34.8
Top 5 per cent	29.0	28.7	24.8	23.3
<u>Ilocos:</u>				
Lowest 20 per cent	5.2	5.0	3.8	7.1
Second 20 per cent	10.3	8.9	6.2	11.5
Third 20 per cent	14.0	13.7	11.1	14.9
Fourth 20 per cent	22.1	20.4	20.5	20.7
Top 20 per cent	48.4	52.0	58.4	45.8
<u>Cagayan Valley:</u>				
Lowest 20 per cent	6.0	5.1	5.3	6.8
Second 20 per cent	10.1	9.2	10.3	10.3
Third 20 per cent	11.9	13.9	11.0	14.8
Fourth 20 per cent	19.0	22.5	23.2	22.7
Top 20 per cent	53.0	49.3	50.2	45.4
<u>Central Luzon:</u>				
Lowest 20 per cent	6.2	4.7	4.0	6.9
Second 20 per cent	8.7	9.5	9.9	11.2
Third 20 per cent	14.5	16.1	16.0	15.6
Fourth 20 per cent	21.8	23.2	26.6	22.1
Top 20 per cent	48.8	46.5	43.5	44.2
<u>Southern Tagalog:</u>				
Lowest 20 per cent	5.8	4.6	4.0	10.3
Second 20 per cent	9.1	9.9	8.8	13.4
Third 20 per cent	14.0	14.7	14.4	17.6
Fourth 20 per cent	20.6	20.5	26.8	22.8
Top 20 per cent	50.5	50.3	46.0	35.9

Table 5-1 (cont'd.)

DISTRIBUTION OF TOTAL FAMILY INCOME BY EACH QUINTILE*,
BY REGION, 1961-1975

<u>REGION**</u>	<u>1961</u>	<u>1965</u>	<u>1971</u>	<u>1975</u>
<u>Bicol:</u>				
Lowest 20 per cent	4.6	5.2	5.0	6.6
Second 20 per cent	9.4	9.7	8.8	11.2
Third 20 per cent	11.7	13.8	14.1	15.1
Fourth 20 per cent	19.0	22.0	22.0	21.2
Top 20 per cent	55.3	49.3	50.1	45.9
<u>Eastern Visayas:</u>				
Lowest 20 per cent	5.9	3.7	3.5	6.1
Second 20 per cent	10.6	9.1	7.3	10.5
Third 20 per cent	12.4	14.0	12.5	14.9
Fourth 20 per cent	19.8	22.1	22.3	20.8
Top 20 per cent	51.3	51.1	54.4	47.7
<u>Western Visayas:</u>				
Lowest 20 per cent	5.6	5.4	5.7	7.0
Second 20 per cent	9.1	10.2	10.0	10.5
Third 20 per cent	12.3	14.4	15.2	13.9
Fourth 20 per cent	19.0	22.2	21.6	20.3
Top 20 per cent	54.0	47.8	47.5	48.3
<u>N. & E. Mindanao:</u>				
Lowest 20 per cent	6.1	4.7	4.5	5.0
Second 20 per cent	9.4	8.5	9.3	9.3
Third 20 per cent	15.0	14.2	14.7	14.2
Fourth 20 per cent	22.9	22.9	22.8	20.1
Top 20 per cent	46.6	49.7	48.7	51.4
<u>S. & W. Mindanao:</u>				
Lowest 20 per cent	4.9	3.2	4.6	6.3
Second 20 per cent	7.8	7.7	9.5	9.3
Third 20 per cent	10.1	11.1	14.5	13.7
Fourth 20 per cent	18.1	19.8	21.6	19.4
Top 20 per cent	59.1	58.2	49.8	51.3

* Quintiles for each region are based on the author's estimates. They are not official figures, except for the Philippines overall.

** See Appendix I.

Source: Philippines, National Economic Development Authority,
1979 Philippine Statistical Yearbook (Manila: NEDA,
1979).

bottom 20 percent has experienced increases in the proportion of income that they account for, from 1971 to 1975. It, therefore, appears that the Philippine agrarian reform program has had a positive impact on alleviating poverty (table 5-1). This, according to the government, has been one of the principle objectives of the reform program.

The agrarian reform program has been a vital component of the national development plan since the last decade. The program has been designed to provide an effective mechanism to promote the redistribution of wealth and uplift the social and economic well-being of the less fortunate groups within the agricultural sector of the country. These groups include tenant cultivators, landless agricultural laborers, and landless farmers who are willing to develop the agricultural arable areas in the public domain.¹

Use of the bottom 20 or 40 per cent of the income distribution to identify the poor, however, has two general disadvantages in relation to the Philippines.² First, there will always be a bottom 20 or 40 per cent of the income distribution. It is not known how many people are in a poverty situation, or how many are brought out of poverty. Thus, it does not tell us the effect of policies, such as agrarian reform, which are aimed at the eradication of poverty. The quintile approach does provide us with the

¹Philippines, Ministry of Agrarian Reform, Annual Report 1978 (Quezon City: MAR, 1978), pp. 5-6.

²Guy Standing and Richard Szal, Poverty and Basic Needs: Evidence from Guyana and the Philippines (Geneva: International Labour Office, 1979), p. 89.

distribution of income, but it is not able to ascertain the extent and nature of the situation in the lowest socio-economic groups. The second disadvantage relates to the Department of Social Services and Development's rationale for the selection of the bottom 20, 30, or 40 per cent. According to the government, which officially uses the bottom 30 percent of the income distribution to indicate poverty, the poverty classification is based on a definition determined by the United Nations. The problem with an international poverty line is that they do not take into account inter-country differences; nor has any "analysis been undertaken to determine whether the income level implied by the 30 per cent cut-off is sufficient to ensure a decent standard of living. There has been no official definition of what constitutes poverty in the Philippines."³

Poverty, as indicated by the income distribution of the bottom 20 per cent, is apparently being reduced. As

³Standing and Szal, *op.cit.*, p. 89. There is also a technical problem in using international poverty lines to a particular country. It is difficult to determine, in real terms, what an individual or family's income is because of generally more rapid rates of inflation in the Third World, and fluctuating currency exchange rates. It is difficult to meaningfully render income into some sort of common denominator, such as real U.S. dollars. The Philippines is no exception to this general rule.

shown earlier in table 5-1, the bottom 20 per cent have increased their share of total income from 1971 to 1975.⁴ If one uses a slightly different measure of poverty, however, a different picture emerges. Benjamin White measures the changing levels of poverty by using three "poverty thresholds". The three "poverty thresholds" are based on the amount of milled-rice that a household or an individual could buy, given their amount of expenditures on food. They are as follows:

- 1) Poor: consumption of less than 320 kg. of rice (or its equivalent) per capita per annum;
- 2) Very poor: consumption of less than 240 kg. of rice; and
- 3) Destitute: consumption of less than 180 kg. of rice.⁵

⁴Officially, the bottom 30 per cent has been designated to indicate poverty in the Philippines. Official data, however, is only available in terms of quintiles (i.e., 20, 40, 60, or 80 per cent).

⁵Benjamin White, "Political Aspects of Poverty, Income Distribution and their Measurement," Development and Change, Vol. 10, No. 1, (1979): 93.

These thresholds become more meaningful if they are converted into a calorie per day equivalent basis. According to the World Health Organization, 1 kilogram of milled brown rice provides 3,590 calories.⁶ White's poverty thresholds can then be converted as follows:

- 1) Poor: 320 kg. times 3,590 calories gives 1,148,800 calories per capita per annum, or 3,147 calories per day;
- 2) Very poor: equivalent to 861,600 calories per annum, or 2,361 calories per day; and,
- 3) Destitute: equivalent to 646,200 calories per annum, or 1,770 calories per day.

The recommended daily calorie allowance, according to the World Health Organization (WHO), is 3,600 calories per day for a male weighing 65 kg. and 2,400 calories per day for a

⁶World Health Organization, The Health Aspects of Food and Nutrition: A Manual for Developing Countries in the Western Pacific Region of the World Health Organization (Manila: WHO, 1969), p. 212.

female weighing 55 kg.; or 3,000 calories per day on average.⁷ Using these guidelines, we can determine what these poverty thresholds mean in terms of sufficiency of daily calorie allowances. At the destitute level, for example, only 49.2 per cent of a male's recommended daily calorie allowance is being met, as shown below in table 5-2.

Table 5-2

Percent Sufficiency of Recommended Daily Calorie Allowance

	<u>POOR</u> <u>3,147 calories</u> <u>per day</u>	<u>VERY POOR</u> <u>2,361 calories</u> <u>per day</u>	<u>DESTITUTE</u> <u>1,770 calories</u> <u>per day</u>
Male	87.4%	65.6%	49.2%
Female	131.1%	98.4%	73.8%
Average	104.9%	78.7%	59.0%

Hence, the poverty threshold labelled "poor", means the average person is obtaining the recommended daily calorie allowance. At the "very poor" level, the average person is obtaining roughly 80 per cent of the recommended daily calorie allowance. At the "destitute" level, the average person is consuming roughly 60 per cent of the recommended daily calorie allowance.

⁷Ibid. p. 224: The average of 3,000 calories per day is obtained by taking an arithmetic average between male and female daily recommended calorie allowances.

Classifying households into one of these poverty thresholds is based on the amount of milled-rice that a Philippine household could buy given their expenditures on food, as reported in the Philippine Statistical Yearbook.⁸ There is no feasible means to determine the reliability of such data (i.e., expenditures on food). We will assume that the data on food expenditures is an accurate approximation of Philippine household consumption behaviour. The poverty thresholds were converted to "fit" an average household in the various regions of the Philippines.⁹ This was accomplished by taking the individual poverty thresholds, as shown in table 5-2, and multiplying by the average number of persons per household in a region, to obtain household poverty thresholds (see table 5-3).

According to the "quintile approach" to poverty measurement, the bottom 20 or 40 per cent of the income distribution have increased their share of total national income, from 1971 to 1975. When one uses the "poverty threshold rice equivalent approach" to poverty measurement,

⁸Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979), pp. 565-570.

⁹Ibid.

however, a different picture emerges (table 5-3). In the Philippines, the number of people who are consuming less than 3,000 calories (recommended daily calorie allowance) has increased from 29 per cent in 1971 to 40 per cent in 1975. Perhaps the most alarming discovery is the increase in the number of "destitute" (60 per cent of recommended daily calorie allowance) from 12 per cent to 15 per cent, in the 1971-1975 period (table 5-3).

It is interesting to note that those areas which were the most affected by OLT (i.e., the Central Luzon and Southern Tagalog area) experienced dramatic increases in the number of people who did not satisfy the recommended minimum daily calorie allowance. Perhaps one of the reasons for this dramatic shift is a reflection of comparatively more rapid changes in the agricultural sector in this area of the Philippines. In the following section, the proposition that changes in landlord-tenant relations have brought about this dramatic shift in Central Luzon, as indicated by the poverty thresholds, is explored (table 5-3).

The "poverty threshold rice equivalent approach" demonstrates the inequities in terms of calorie intake, which exists in the Philippines. If the amount of available calories in the Philippines were distributed equitably, there would be an increase in the average per capita calorie intake

Table 5-3
DISTRIBUTION OF "POOR", "VERY POOR", AND "DESTITUTE" HOUSEHOLDS, BY REGION, 1961-1975
(Percent)

REGION*	1961	1965	1971	1975
<u>Philippines:</u>				
Destitute	17.2	10.8	11.9	14.9
Very Poor	8.8	7.2	7.6	11.4
Poor	11.1	9.9	9.5	13.8
Total	37.1	27.9	29.0	40.1
<u>Ilocos:</u>				
Destitute	18.8	17.4	15.0	11.0
Very Poor	10.6	10.6	6.2	13.1
Poor	14.8	13.5	7.3	16.7
Total	44.2	41.5	28.5	40.8
<u>Agayay Valley:</u>				
Destitute	17.4	19.9	22.3	13.0
Very Poor	10.8	13.0	12.3	10.2
Poor	10.0	17.8	12.5	12.0
Total	38.2	50.7	47.1	35.2
<u>Central Luzon:</u>				
Destitute	12.4	9.0	8.1	18.9
Very Poor	8.2	6.4	7.2	13.6
Poor	11.8	9.9	10.3	16.4
Total	32.4	25.3	25.6	48.9
<u>Southern Tagalog:</u>				
Destitute	9.4	4.8	6.6	13.5
Very Poor	6.4	3.9	4.8	11.4
Poor	10.6	9.4	7.2	13.7
Total	26.6	18.1	18.6	38.6

Table 5-3 (continued)
 DISTRIBUTION OF "POOR", "VERY POOR", AND "DESTITUTE" HOUSEHOLDS, BY REGION, 1961-1975
 (Percent)

REGION*	1961	1965	1971	1975
<u>Bicol:</u>				
Destitute	27.4	22.6	19.3	21.9
Very Poor	10.5	11.0	9.6	14.9
Poor	10.4	12.8	12.0	17.5
Total	48.3	46.4	40.9	54.3
<u>Eastern Visayas:</u>				
Destitute	26.6	20.5	21.2	19.5
Very Poor	11.3	11.4	9.4	13.1
Poor	12.7	13.9	10.2	14.7
Total	50.6	45.8	40.8	47.3
<u>Western Visayas:</u>				
Destitute	15.9	15.8	11.3	16.1
Very Poor	8.6	11.2	9.9	13.0
Poor	10.9	13.3	14.2	15.8
Total	35.4	40.3	35.4	44.9
<u>N. & E. Mindanao:</u>				
Destitute	23.1	14.9	14.5	21.4
Very Poor	13.4	8.7	9.2	12.9
Poor	14.7	11.7	12.1	14.4
Total	51.2	35.3	35.8	48.7
<u>S. & W. Mindanao:</u>				
Destitute	18.7	13.7	15.7	19.1
Very Poor	8.4	8.7	10.2	11.7
Poor	10.4	12.6	11.3	15.2
Total	37.5	35.0	37.2	46.0

* See Appendix I.

during the first half of the 1970s. As shown in table 5-4, the average per capita available food supply was 2,047 calories in 1972, which increased to 2,290 calories per day by 1975.¹⁰ Thus, while the average per capita available calories has been increasing during the land reform program, the proportion of families who cannot meet the recommended daily calorie allowance has also been increasing. This suggests a trend towards greater inequality in the Philippines, in regards to satisfying the basic need of food.

One possible explanation for this discrepancy between the "quintile" and "rice equivalent" approaches lies in the rate of Philippine inflation. The Consumer Price Index increased at an average annual rate of 16.0 per cent from 1971 to 1975. Real average agricultural wages, on the other hand, increased by only 8.6 per cent per annum during the same period.¹¹ Thus, although the bottom quintile of the population increased their share of total national income, the increase was outstripped by the rate of inflation. In other words, the purchasing power of the lower quintile households may have actually declined since the implementation of the land reform program.

¹⁰Based on total domestic food production and net food imports, ibid. pp. 642-645.

¹¹Ibid.

Table 5-4

CALORIE AND PROTEIN VALUES OF DAILY PER CAPITA
AVAILABLE FOOD SUPPLY, PHILIPPINES, 1960-1976

<u>Year</u>	<u>Per Capita Calories per Day</u>	<u>Per Capita Protein (Grams) per Day*</u>
1960	1,782	43.4
1961	1,862	45.2
1962	1,815	43.0
1963	2,035	48.9
1964	2,010	48.4
1965	2,103	50.7
1966	1,991	50.7
1967	2,094	52.0
1968	2,006	52.5
1969	2,084	53.5
1970	2,097	54.2
1971	2,123	54.9
1972	2,047	52.9
1973	2,109	54.5
1974	2,259	56.6
1975	2,290	69.5
1976	2,328	66.8

* 50 grams per day equals the recommended daily allowance of protein.

Source: Philippines, National Economic Development
Authority, 1979 Philippine Statistical Yearbook
(Manila: NEDA, 1979), pp. 646-647.

5.2 Landlord-Tenant Relations

One of the most important aspects of land reform is to alter the man to land relationship, in short, the system of land tenure. "Changing or modifying the land tenure system is, perhaps, one of the most important element in any land reform program."¹³ Quite clearly any assessment of a land reform program must also include an evaluation of landlord-tenant relations where it dominates the system of land tenure, as in the Philippines. With the implementation of a land reform program, one would expect landlord-tenant relations to change.

Presumably, the greatest amount of change has occurred in the Central Luzon area because it is this region which has been the most affected by Operation Land Transfer. The Luzon area can be divided into two areas, which have been called the "Coastal Region" and the "Inner Central Luzon" area. The Coastal Region includes Laguna, the southern parts of Bulacan and Pampanga, and the northern part of Pangasinan.

¹³Pedro R. Sandoval, Land Reform: Patterns, Objectives and Economic Issues, Agrarian Reform Institute, Occasional Papers No. 6, 15 April 1976 (Los Banos: University of the Philippines at Los Banos, College, Laguna, 1976), p. 4.

The Inner Central Luzon encompasses the remaining land-locked area.¹⁴

Both regions are characterized by a pervasive landlordism, but the Coastal Region has been characterized by small land holdings since the colonial era, generally from 10 to 24 hectares in size. The system of land tenure was based on the "kasamajan" system (partnership), where the landlord and tenant shared equally in the production costs and output from the harvest. This type of land tenure is paternalistic, where the landlord is actively involved in the management of the farm. According to Kikuchi, "in general, the landlord-tenant relation in the Coastal Region is a paternalistic one. The landlord patronizes the tenant in advancing credit and in utilizing his connection and social influence, in return for the loyalty of the tenant."¹⁵

¹⁴ Masao Kikuchi, et al., "Changes in Rice Harvesting Arrangements in Central Luzon and Laguna," report No. 3, of a project on "Dynamics of Agrarian Change", joint study by the International Rice Research Institute and the International Development Center of Japan, Los Banos, 1978, p. 5.

¹⁵ Ibid. p. 7.

The type of landlord-tenant relations in the Inner Central Luzon area, by contrast, is more of a contractual and "business-like" relationship. This area is characterized by large estates (haciendas) ranging in size from several hundred to several thousands of hectares. These landlords are typically absentee, residing in Manila, and with little interest in the welfare of their tenants. The management of the estate was carried out by the "encargado" (farm manager) and a number of "katiwalas" (supervisors). Interestingly enough, though not surprising, is that Philippine unrest (notably the Huk movement) has been concentrated in the haciendas of the Inner Central Luzon area.¹⁶

Kikuchi and Barker, in separate studies, have reached the following conclusion: "The implementation of land reform following the declaration of Martial Law in 1972 resulted in the break up of many of the haciendas, and in the widespread shift from share tenancy to leasehold."¹⁷

¹⁶Ibid. pp. 7-8.

¹⁷Randolph Barker, "Recent Trends in Labor Utilization and Productivity in Philippine Agriculture", paper presented at the Ninth Annual Conference of the Canadian Council for Southeast Asian Studies, University of British Columbia, Vancouver, November 9-11, 1979, p.26. For a similar conclusion, see Masao Kikuchi et al., "Evolution of Land Tenure System in a Laguna Village", report no. 1 of a project on "Dynamics of Agrarian Change", joint study by the International Rice Research Institute and the International Development Center of Japan, Los Banos, 1977, p.10.

Many observers feel that a fixed cash-rent contract, or leasehold system, is superior to the share tenancy system because the total income from the land in excess of the fixed rent accrues entirely to the actual farmer.

It would appear that farmers (actual tillers of the land) have benefited somewhat from the land reform program (particularly the Inner Central Luzon area), due to a change in land tenure from share tenancy to leasehold. Even those farmers who have not opted for a leasehold system, as well as farmers in other areas, appear to have benefited as well. Kikuchi, in a study of a Laguna village asked the following question: "Why don't they try to change their tenure status? Their answer was that their landlords were either relatives or friends who have been good to them."¹⁸ In these cases, share tenants have used the land reform legislation to obtain a better sharing arrangement with the landlord. The landlord has offered more services in order to prevent the tenant from converting to leasehold. Castillo has the following observation on this recent conversion to leasehold, and the reluctance on the part of others to convert:

(T)his turn of events. . . of shifting to leasehold was not immediately perceived as a part of the give-and-

¹⁸Kikuchi et al., op.cit., p. 9.

taking process. In the beginning, it was conceived neither as a favour nor a disfavour. It was only when the social meaning of land reform became internalized as part of their exchange of relations that the act to shift or not to shift to leasehold became an ingredient in the bargaining. On the part of the landlord, he must offer services to win the tenant away from leasehold. On the part of the tenant, not to shift means a possibility of demanding more services from the landlord. It is probably at this point where the mere presence of a land reform law has been beneficial to the tenant even if only because this is an option he now has which he did not have before.¹⁹

Presumably, those farmers (actual tillers of the land) who have converted to a leasehold system have benefited. The reduction in rental from the 50 per cent arrangement under share tenancy to the fixed rental of leasehold (20%-25%) would mean an increase in income. This assumption is supported by Kikuchi and Hayami's findings in a study of a Luguna village. They found that the number of plots under share tenancy decreased from 70 per cent in 1966 to 32 per cent in 1976. The proportion of leasehold plots, on the other hand, increased from 19 per cent to 47 per cent, during the same period. This suggests a fairly large conversion from share tenancy to leasehold. What is more interesting, however, is the proportion of plots under

¹⁹Gelia T. Castillo, Beyond Manila: Philippine Rural Problems in Perspective (Ottawa: International Development Research Centre, 1979), p. 292.

sub-tenancy, which has increased from 8 percent in 1966 to 17 percent in 1976 (see table 5-5).

Sub-tenancy occurs when a lessee rents out part of the land he tills to another tiller. There are three general categories of sub-tenancy: 1) A sub-lessor and a sub-lessee share farm costs and the harvest (output) on a 50:50 basis ("sub-share tenancy"); 2) A sub-lessor and a sub-lessee agree on a fixed rental ("sub-leasehold"); and, 3) A "sub-lessor puts his land in pawn to the sub-lessee; in other words, the sub-lessee advances a credit to the sub-lessor in order to establish a right to cultivate the land until the loan is repaid."²⁰

Sub-tenancy as a form of land tenure appears to be increasing. There are several reasons for this recent trend. First, the land reform legislation has meant a reduction in rental for most tenants, either through conversion to leasehold or by obtaining a better sharing arrangement. This

²⁰Masao Kikuchi and Yujiro Hayami, "Inducements to Institutional Innovations in an Agrarian Society", IDCJ Working Paper Series No. A-07 (Tokyo: International Development Center of Japan, Dec. 1977), p. 8.

Table 5-5
DISTRIBUTION OF PLOTS BY TENURIAL STATUS

<u>Year</u>	<u>No. of plots (Percent)</u>	<u>Area (Percent)</u>	<u>Avg. area per plot (Ha.)</u>
1966			
Owned	3	1	0.7
Leasehold	19	28	2.5
Sharecrop	70	63	1.5
Sub-rent	8	7	1.4
Total	100%	100%	1.7
1976			
Owned	3	2	0.6
Leasehold	47	63	1.5
Sharecrop	32	27	1.0
Sub-rent	17	8	0.6
Total	100%	100%	1.2

Source: Masao Kikuchi and Yujiro Hayami, "Inducements to Institutional Innovations in an Agrarian Society," IDJC Working Paper Series No. A-07 (Tokyo: International Development Center of Japan, Dec. 1977), p. 7.

has resulted in an increase in income on the part of the tenants. Second, social pressure in favour of reform has reinforced the position of the land reform program. There has apparently been popular consensus against the position of the large landowners, and supportive of the tenants and small landowners (i.e., on lands under 7 hectares in size).²¹ Third, social pressure, at the grass-roots level, would tend to make the lessee who has experienced an increase in income, to feel obligated to share in his good fortune with others (such as relatives). Fourth, the lessee may want to sub-tenant out part of his land. Farming is an occupation which requires a lot of hard work and long hours. By sub-tenanting part of his land he can still receive income from the land, but with less work.

This general shift from share tenancy to leasehold enables us to propose an additional explanation concerning the increase in the number of households who cannot satisfy the minimum food (calorie) requirements" (see table 5-3) in the early 1970's, for the Central Luzon region. The Central Luzon region has undergone the most drastic change in this

²¹Ibid. pp. 8-9.

regard. In 1971, the Central Luzon region had only 25.6 per cent of all households below the "poor" threshold (i.e., recommended daily calorie allowance level); the second lowest proportion in the Philippines next to Manila. By 1975, however, 48.9 per cent of all households were below the "poor" threshold in Central Luzon; the second highest proportion in the Philippines. One possible explanation for this dramatic change could be due to this widespread shift to leasehold. As farmers converted from share tenancy to leasehold, farm incomes increased. This attracted farmers in other regions to migrate to the Central Luzon area, and presumably they were poor and perhaps landless.²² These migrants became sub-tenants, subsequently causing the overall average household income to fall below the "poor" threshold. Or to put it another way, the increase in income became shared by an even greater increase in the region's overall population.²³

²²Landless are defined as being those farmers who do not own or have the right to till a parcel of land on a regular and continuous basis. They are not landowners or tenants, but they are farmers.

²³Conversation with Dr. Randolph Barker, Professor of Agriculture Economics, Cornell University, Ithica, New York, 27 February 1980.

5.3 Participation

Participation, according to the International Labour Organization, is both a means and an end in the context of basic needs. "People must be given the opportunity to participate in making the decisions which affect them through organizations of their own choice, and be given the opportunity to take concrete action to carry out those decisions without conflicting with the rights of others."²⁴ The report then goes on to say that, "this forms the cornerstone of the basic needs approach to development, and although it may be a need which people can survive without having satisfied, it is one which is a requirement for the success of a basic needs approach to development planning."²⁵ Standing and Szal identify employment, self-help schemes and agrarian reform as key aspects of economic participation. Land redistribution should "be viewed as a form of participation, since it gives the landless greater opportunities to take part in the production process. Suffice it to say that a policy of land

²⁴Standing and Szal, op.cit., p. 129.

²⁵Ibid.

redistribution is one of the few areas where popular participation can be legislated."²⁶

A policy of land redistribution will, under normal circumstance, use more labour in the production process. It was shown that smaller farms tend to employ more labour, since their production processes are more labour intensive. Larger farms, on the other hand, tend to employ more capital intensive production methods in order to maximize profits. Where land holding patterns are skewed, a policy of land redistribution will tend to create a larger number of smaller farms, which implies employing more labour. Productivity, in terms of output per hectare, will not decrease as a result of land reform for reasons cited earlier. Participation and employment, which are both means and ends in a basic needs approach, are also components of a land reform. One indicator of increased participation in the production process as a result of land reform, therefore, is the rate of unemployment, and underemployment.

There is some indication that the Philippine land reform program has caused an increase in the level of participation. As shown in table 5-6, the proportion of unemployed has decreased from 1971 to 1975. This decrease,

²⁶Ibid. p. 138.

Table 5-6
SELECTED EMPLOYMENT STATISTICS, 1971 and 1975
(in per cent)

	MALE				FEMALE			
	Urban 1971	Urban 1975	Rural 1971	Rural 1975	Urban 1971	Urban 1975	Rural 1971	Rural 1975
Total population, 10 years and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
In labour force	61.4	60.0	71.2	71.5	35.9	35.6	31.1	28.9
Employed (fully or partially):								
in agriculture	8.0	8.5	52.6	57.4	1.1	1.2	14.1	15.3
in non-agriculture	47.9	47.1	16.5	12.8	31.8	32.5	15.2	12.6
Totally unemployed	5.5	4.5	2.1	1.4	3.0	1.8	1.7	0.9

Source: Guy Standing and Richard Szal, Poverty and Basic Needs: Evidence from Guyana and the Philippines (Geneva: International Labour Office, 1979), p. 132.

however, has been significant in both the urban and rural areas. If, however, one looks at the proportion of visibly underemployed (particularly in the category of "those worked less than 40 hours) as shown in table 5-7, a different picture emerges. In the agricultural sector, the proportion of "visibly underemployed" (less than 40 hours) has decreased, whereas in the non-agricultural sector the proportion has increased in the case of males and stayed the same in the case of females.

The finding that there has been a fairly widespread conversion of leasehold and the finding that the overall level in participation rates has increased, are mutually supportive of the other. This is an effect or impact which was not foreseen in the original design of the program. In other words, it would appear that the land reform legislation caused a shift to leasehold (or at least an improvement in landlord-tenant relations), resulting in the level of sub-tenancy to increase, and consequently, the level of participation to rise. One would also presume that the Central Luzon region has fared even better than other areas of the Philippines, due to the greater concentration of effort in these areas with a history of agrarian unrest. These two propositions (one which relates to the Philippines in general, and the other to the Central Luzon area), however, cannot be adequately tested with the existing

Table 5-7

VISIBLE UNDEREMPLOYMENT BY SECTOR, 1971 and 1975

	MALE		FEMALE	
	Agriculture 1971	Non- agriculture 1971	Agriculture 1971	Non- agriculture 1971
Total employment*	5,025	5,994	3,370	1,502
Visible underemployment**:				
worked less than 40 hrs.***	6.2	5.2	5.7	7.0
worked more than 40 hrs.***	8.1	4.3	7.6	2.3

*In thousands.

**In per cent.

***per week.

Source: Guy Standing and Richard Szal, Poverty and Basic Needs: Evidence from Guyana and the Philippines (Geneva: International Labour Office, 1979), p. 134.

available indicators. Further detailed micro-village studies are required before anything conclusive can be reached in this regard.

5.4 The Quality of Life

The term "quality of life" has become increasingly synonymous with basic needs. This is only natural as the basic needs approach is fundamentally concerned with improving the quality of life of the poorest in a given society. It has also occurred because as one attempts to quantify basic needs, one finds that the indicators tend to reflect conditions concerning the quality of life. The ILO has quantified basic needs in terms of life expectancy, literacy, infant mortality, employment, quality of housing, food balance sheets, availability of clean water, adequate disposal of waste, and so forth.²⁷ Quite clearly indicators of this nature, known as social indicators, tend to give some indication of the well-being or quality of life of an individual or group of people.

The Overseas Development Council has combined three indicators of basic needs, to create the Physical Quality of Life Index (PQLI). The PQLI is a composite of life expectancy, infant mortality, and literacy.

²⁷See International Labour Office, Employment, Growth and Basic Needs: A One-World Problem (New York: Praeger Publishers, 1976).

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The Physical Quality of Life Index is a limited measure. It makes no attempt to incorporate the many other social and psychological characteristics suggested by the term "quality of life" - security, justice, freedom of choice, human rights, employment satisfaction, etc. Thus, it is labelled a physical quality of life index, even though there is some question about calling literacy (and what it represents) a physical feature of existence. The name helps to indicate the narrowness of the target.²⁸

The quality of life, as indicated by the PQLI, appears to be fairly "good" and has been improving steadily in the Philippines. In 1950, the PQLI in the Philippines was 55.1 and has since improved to 72.1 in 1971; the PQLI range is from 0 to 100, with 100 as the best score (see table 5-8). Women tend to have higher PQLIs than men because of generally lower infant mortality rates and longer life expectancies.²⁹ In general, however, the "quality of life" in the Philippines in relation to the rest of the Third World, appears to be relatively good. The Philippine PQLI (1971) of 72 is above the Southeast Asian average of 55, and the world average of 65 (table 5-9). Guinea-Bissau records the lowest PQLI

²⁸Morris David Morris, Measuring the Condition of the World's Poor: The Physical Quality of Life Index (New York Pergamon Press, 1979), p. 35.

²⁹Among the countries where PQLI can be available by sex, the Overseas Development Council found that "India (1970) is the only country for which all three indicators registered worse performance for women than for men. This does not mean that the PQLI for women has been worsening - between 1949 and 1970 it rose from 10 to 35 - but that it has risen less rapidly than the PQLI of men," in ibid. p. 83.

Table 5-8

PQLI FOR THE PHILIPPINES, BY SEX, HISTORICAL AND PROJECTED

	1950	1960	1971	1980*	1990*	2000*
Total	55.1	59.8	72.1	77.2	81.8	85.5
Female	57.2	61.7	74.0	79.0	83.4	86.9
Male	53.1	58.0	70.5	75.8	80.6	84.4

*Projected figures based on DRRs from 1950 to 1971, see table 5-10.

Source: Morris David Morris, Measuring the Condition of the World's Poor: The Physical Quality of Life Index (New York: Pergamon Press, 1979); and Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

Table 5-9

PQLI FOR VARIOUS REGIONS OF THE WORLD, EARLY 1970s*

World	S.E. Asia	S. Asia	Asia	Africa	Latin America	Oceania	Europe	N. America
65	55	41	58	32	71	85	92	94

*Weighted averages of PQLI for each region.

Source: Morris David Morris, Measuring the Condition of the World's Poor: The Physical Quality of Life Index (New York: Pergamon Press, 1979), p. 68.

at 12, while Sweden records the highest at 97 (early 1970s).³⁰ Unfortunately, 1971 is the most recent year at which one is able to calculate the PQLI for the Philippines. Based on historical trends between 1950 and 1971, the PQLI is projected to reach 85 by the year 2000; a figure which is approaching that of the developed world. These projections are calculated using the Disparity Reduction Rates (DRR) for the historical period, 1950 to 1971. DRR measures the progress of a social indicator or index. It measures the rate at which the "gap" of an indicator is narrowing between its current level and the best expected by the year 2000; for the PQLI, the best is 100.³¹ The average annual PQLI-DRR for the Philippines between 1950 and 1971 was 2.2 per cent. Hence, during this period, the Philippines experienced an improvement in its PQLI, or in other words reduced its disparity, at an average annual rate of 2.2 per cent (table 5.10).

³⁰Ibid. pp. 139-145. For the methodology on how to construct the PQLI, see chapter 5, pp. 41-56, and Appendix A, pp. 126-127, in ibid.

³¹See James P. Grant, Disparity Reduction Rates in Social Indicators: A Proposal for Measuring and Targeting Progress in Meeting Basic Needs, Overseas Development Council, Monograph No. 11, September 1978.

Table 5-10

QOLI.- DISPARITY REDUCTION RATES FOR THE PHILIPPINES, BY SEX, 1950-1971*
(Per cent)

	1950-1960	1960-1971	1950-1971
Total	1.1	3.3	2.2
Female	1.1	3.5	2.3
Male	1.1	3.2	2.2

*Average annual rates for the periods shown.

Source: Table 5-8.

Table 5-11

GROSS DOMESTIC PRODUCT PER CAPITA FOR THE PHILIPPINES, IN 1972 PRICES

	1950	1960	1971
GDP (Billions Pesos)	16,153	30,874	53,526
Pop. (Millions)	20,364	27,088	37,703
GDP/Capita (Pesos)	810	1,140	1,420

Source: Philippines, National Economic Development Authority, 1979 Philippine Statistical Yearbook (Manila: NEDA, 1979).

It is interesting to compare per capita GNP with PQLI. According to the Overseas Development Council, "per capita GNP is not a very good predictor of PQLI performance and cannot serve as a surrogate for it."³² In 1950, real GDP per capita was 810 pesos in the Philippines compared to 1,420 pesos in 1971 (table 5-11). As shown in table 5-12 below, the growth rate for GDP per capita has exceeded the growth rate of PQLI (DRR), for the 1950-1971 period. In the 1950s real GDP per capita growth rates exceeded PQLI growth rates, but in the 1960s, PQLI growth rates exceeded real GDP per capita growth rates. It will be interesting to examine the progress of PQLI in relation to GDP per capita in the 1970s, when data for constructing the PQLI becomes available.

Table 5-12

PQLI-DRR and Real GDP/Capita Growth Rates*

	<u>1950-1960</u>	<u>1960-1971</u>	<u>1950-1971</u>
PQLI-DRR	1.1%	3.3%	2.2%
GDP/Capita	3.5%	2.0%	2.7%

*Average annual growth rates for the periods shown.

Source: Tables 5-10 and 5-11

There appears to be a general indication that the quality of life has improved, as indicated by the "quintile approach", conversion to leasehold, and the participation rate. These effects, however, are not direct impacts, but further unintended and indirect impacts. Moreover, there is some question concerning the nature or state of poverty amongst the poorest strata of society. Although the quality of life in general has improved, as indicated by the "poverty threshold approach" this general trend may not be reaching the poorest strata of society.

5.5 Summary

This chapter tended to concentrate on further impacts and effects of the land reform program. More specifically, it has meant the impact of the program on poverty and basic needs. The major findings can be summarized as follows:

- 1) The bottom quintiles have increased their share of total national income during the implementation of the program.

2) There are two disadvantages to the quintile approach to measuring poverty with respect to the Philippines. First, there will always be a bottom 20 per cent of the income distribution, which implies that poverty will always exist. Second, there has been no official definition of what constitutes poverty in the Philippines. There has been no analysis of the income level implied by the quintile cut-off point.

3) The number of households, or the number of people, who are consuming less than 3,000 calories (WHO recommended daily allowance) has increased during the implementation of the land reform.

4) One possible explanation for the discrepancy between the "quintile" and "threshold rice equivalent" approach to measuring poverty may be due to the rate of inflation. The increase in the share of national income, from 1971 to 1975, has not kept pace with the rate of inflation.

5) According to several studies there has apparently been a fairly widespread conversion from share tenancy to leasehold. This has resulted in sub-tenancy, as a form of tenure, to increase.

6) It would appear that the Central Luzon region has experienced the greatest change in land tenure, due to the greater concentration of effort in areas with a history of agrarian unrest. Sub-tenancy would, therefore, occur with greater frequency in Central Luzon than in other regions. This proposition is supported by findings from the "poverty threshold approach".

7) Land reform is one of the few development programs where popular participation can be legislated.

8) There is some indication that the level of participation has increased as a result of the reform program. Evidence for this is in the greater reduction of visibly underemployed in the agricultural sector compared to the non-agricultural sector.

9) The quality of life in the Philippines, as indicated by the PQLI, appears to be fairly good relative to the rest of Asia. In the 1960s PQLI growth rates exceeded real GDR per capita growth rates.

10) Although the quality of life in general appears to have improved, one is unable to determine if this trend has affected the poorest strata of society.

CHAPTER VI

CONCLUSION

VI. CONCLUSION

The primary objective of this paper was to carry out an evaluation of the Philippine land reform program in the New Society. This has included an assessment of the design of the program, its outputs, its purpose, and its goal. In this chapter, some conclusions will be formulated along each stage of the evaluation design, eventually leading to a final assessment on the goal of the program.

An underlying objective to land reform, in theory, is to obtain a "fair deal" for the actual tillers of the land (e.g., tenants). Landlords have been described as being parasites on the economy. The basis for this description rests primarily with the act of collecting rents. Clearly, the act of rent collection by itself, is not a productive endeavor, has a negligible effect on the economy (other than for the personal gain to the landlords), and has little beneficial impact on overall development. Moreover, in many cases landlords also have control of other vital resources, such as irrigation and credit. It is assumed that one of the most effective ways for farmers to get actual control of the land, is to transfer ownership to them. In addition, one must also transfer control of related vital resources such as irrigation facilities and the provision of credit. With control over the land, farmers will realize all of the fruits

of their labour instead of having to give up half of their harvest to the landlord. As well, it is presumed that providing for equitable distribution of inputs (e.g., land), it will have a positive effect on the distribution of outputs (e.g., food).

Land reform is predominantly a question of equity, since it attempts to provide for a more equitable distribution of land, control and access to land. Due to this primary concentration on equity, land reform is often highly political since it may redistribute power as well as wealth. It is also noted that productivity (i.e., output per hectare) will not decline after implementation of land reform, and in fact may increase. Output per worker, however, may decline because small farms tend to employ more labour than large farms.

Employment is considered as a means as well as an end, from a basic needs perspective. Since land forms such an integral part of the farmer's employment, land reform can be regarded as a strategy for meeting basic needs. Assuming that the desired effects have been reached as a result of land reform, basic needs are subsequently being met. The farmer realizes an increase in income which impacts on other basic needs (e.g., food, shelter, etc.), and also increases his self-reliance in the process. In short, the quality of the farmer's life should improve after land reform.

This theory of land reform perhaps runs into its own dilemma. It appears to be applicable in most cases, except where the relationship between the landlord and tenant is fairly "good". In these cases, the landlord is typically on a small plot, takes an active role in the management of the farm, and is often related to the tenant (e.g., father-son). Presumably, those tenants who refuse to convert from share tenancy to another more equitable form of tenure would experience this type of relationship with their landlord. The relationship, however, is still not an equitable one. If both the landlord and tenant were to work the land equally and receive equal benefits, then the relationship would be fair; but it would be a partnership and not one of landlord-tenant. This particular peculiarity can pose some interesting theoretical problems, but in general, land reform is seen as a strategy that helps all farmers to improve the quality of their lives.

The major findings and conclusions of this program evaluation have been summarized in Figure 6-1. The four phases of the evaluation design - input, output, purpose and goal - are shown at the top of the Figure. Under each phase represents the stages that the impacts and effects have been grouped under; ranging from direct effects, intermediate effects, further effects, to final impacts. The major findings and conclusions are then listed under each corresponding effect. An elaboration of Figure 6-1 follows.

FIGURE 6-1

LOGICAL FRAMEWORK ANALYSIS

6.1 Inputs

The design (or input) of the Philippine land reform in the New Society can on first blush be regarded as a comprehensive program. It has a land transfer component combined with key support services. Moreover, one of the stated objectives was to "uplift the rural masses from poverty and stagnation."

Upon closer analysis, however, the design of the program does not fare nearly as well. The most serious weakness with the design is the 7 hectare retention limit. This one flaw means that less than half of the tenants are eligible for land transfer, thereby drastically limiting the scope of the program. It also means that the Samahang Nayan can only adequately serve half of the tenants. Yet, all farmers are required to join the pre-cooperative regardless of whether they are eligible for land transfer or not. There was nothing fundamentally wrong with the Samahang Nayan, but since it is a part of Operation Land Transfer its effectiveness was seriously curtailed.

- It was discovered that the 7 hectare retention limit seriously limits the scope of the land reform program and curtails the effectiveness of the pre-cooperatives.

Another objective, as stated in the various decrees made by Marcos, was to reduce the threat of agrarian unrest. Judging by the rhetoric used around the start of the New Society, it appears that the threat whereby the peasantry could easily become aroused within a short period of time, was perceived by the Government to be real. This perception was transferred to the design of the program. Of those lands that came under the scope of the program, 60 percent were in the 7 provinces with a history of agrarian unrest. In addition, the Cotabato area (the second major rice area) had only 9 percent of its land under the scope of the program. One could perhaps justify the concentration on these 7 provinces with a history of agrarian unrest, because most of them are in Central Luzon (the major rice area), except that the Cotabato region is not significantly affected.

- The design of the program is such that it concentrates on those areas with a history of agrarian unrest, and by comparison neglects the second major rice growing area.

The Masagana 99 credit program was the largest credit scheme for farmers in Philippine history. Its primary objective was to increase productivity to 99 cavans of palay per hectare (sack of rice weighing 44 kg.). Its official policy was to favour irrigated parcels of land, because it

was associated with a "Green Revolution" package, and because it was presumably perceived to be more effective in regards to increasing productivity. This policy, however, does not exactly conform to Marcos' objective to "uplift the rural masses from poverty and stagnation". Farmers on irrigated parcels tend to be comparatively better-off than farmers on rainfed parcels. According to Barker, many farmers in those provinces with a history of agrarian unrest have not been required to pay back their loans. It represents an attempt by the Government to use the program for transfer payment purposes, in order to reduce the threat of agrarian unrest.

- The program is designed to assist comparatively better-off farmers on irrigated lands, and is apparently being used for transfer payment purposes in some provinces to reduce the threat of agrarian unrest.

In the initial stages of the Philippine land reform program three general objectives, as stated by presidential decrees, were identified: 1) to reduce the threat of agrarian unrest; 2) to improve the quality of life of the rural masses; and 3) to increase overall rice and corn production. As the program progressed, however, it became apparent that a fourth objective had been adopted by the government. This fourth objective was to strengthen the

middle class, of which small landlords were a part of. Small landlords (those owning less than 7 hectares) were apparently favoured over their tenants. Hence, this fourth objective meant that the second objective (alleviating poverty) had to be sacrificed.

- The objective to strengthen the middle class implied that another objective to improve the quality of life of all tenants had to be compromised.

6.2. Outputs

The next stage of the evaluation design was to look at the direct and intermediate effects, or output, of the program. Outputs can be divided into two parts: direct effects and intermediate effects. Direct effects consist of outputs which are immediate and can primarily be attributed directly to the program. Intermediate effects consist of outputs which occur after the immediate effects and can most likely be attributed to the program.

The immediate effects were found to reflect the nature of the input quite clearly, such as concentrating on areas with a history of agrarian unrest and the low impact of

the program in other areas of the Philippines. Only 7 percent of all rice and corn lands in the Philippines have actually been covered by Operation Land Transfer. By contrast, 38 percent of the land in Central Luzon (provinces with a history of agrarian unrest) were actually affected by the program. The actual coverage (direct effect) of the program clearly reflects the scope (input) of the program.

- In terms of coverage, the land reform has had a negligible impact on the land in the Philippines overall. By contrast, the Central Luzon region has been quite significantly affected.

There has apparently been a fairly widespread conversion from share tenancy to leasehold, as a result of the break up of many haciendas. As most of the haciendas can be found in the Inner Central Luzon region, presumably the majority of the conversion to leasehold has taken place here. It has also meant that some tenants who have not opted for leasehold, have used the land reform legislation to bargain for a better sharing arrangement under share tenancy. It is difficult to ascertain how many of the new leaseholders are being converted to amortizing owners, but the general effect has meant improvements in the situation of land tenure.

- The land-reform legislation and the program itself has resulted in better sharing arrangements or, else, a reduction in rental; however this generally applies to the Central Luzon region only.

Another direct or immediate effect of the program is that the Samahang Nayan pre-cooperatives are not functioning properly. According to Wurfel, dues are not being collected and meetings are not held regularly nor does any one attend.¹ Even Sacay, founder of the Samahang Nayan, has admitted that they are "unhealthy".² This would seem to be a direct reflection of the dilemma of the 7 hectare retention limit, where only half of the tenants can only be adequately served by the pre-cooperative.

- The Samahang Nayan's are generally unresponsive to their members, but this appears to be more of a reflection of weaknesses in the design of the program (e.g., 7 hectare retention limit).

¹David Wurfel, Philippine Agrarian Policy Today: Implementation and Political Impact, Occasional Paper No. 46 (Singapore: Institute of Southeast Asian Studies, 1977), pp. 22-23.

²Ibid.

Intermediate effects were also found to generally reflect the nature of the inputs. It was discovered that productivity (output per hectare) had generally decreased in the Philippines, which perhaps indicates the limited coverage of the land reform program. What was surprising, however, was that those areas most affected by Operation Land Transfer experienced the largest decreases in productivity. This could mean either two things: 1) the theory behind land reform and its relationship to productivity is wrong; or 2) the program was not implemented properly with adequate support services.

- A statistically positive relationship was found between Operation Land Transfer and the production index scale.

In Central Luzon, the only region significantly covered by the land reform program, a statistically negative relationship was found between OLT and output per hectare. Yet, adequate support services appear to have been provided, at least in regards to irrigation and support prices.

- Prices received by farmers for rice and corn are increasing at a faster rate in the New Society, compared to the rate before 1972. In Central Luzon, support prices for rice and corn are generally higher than in other regions.

- The amount of irrigated lands increased at a faster rate than the projected rate in Central Luzon, while in other regions the actual amount was lower than the projected amount.

6.3 Purpose

The next stage of the evaluation design is referred to as the Purpose phase, or an examination of the further effects of the program. These effects are ones which can likely be attributed to the program (inputs), but may also be the result of other development strategies. It was found that the bottom 20 and 40 percent of the income distribution have increased their share of total national income. This could be the result of the change in tenurial status to leasehold. While this might be true for Central Luzon, it probably is not the case for other regions which were not significantly covered by Operation Land Transfer.

- For all regions in the Philippines, the lowest quintiles have increased their share of total national income during the land reform program.

On another indicator of poverty measurement, however, the lowest strata of society appear to have

experienced a decline in their general standard of living. Using the "poverty threshold rice equivalent" approach, it was discovered that the number of households who are consuming less than the recommended minimum daily calorie allowance has increased. It would seem that the rate of inflation has cancelled out any increase in income of the poorest strata of Philippine society. Hence, the basic need of food was not being met while the land reform program was implemented. Again, a notable exception to the general rule was the Central Luzon region. This region experienced the largest increase in the number of households who are not meeting the minimum calorie requirements, from 25.6 percent in 1971 to 48.9 percent in 1975. One possible explanation is that this region experienced the largest increase in sub-tenancy as a form of tenure. This meant farmers and labourers migrated to the region, with the net effect of the land supporting more people. Hence, in Central Luzon, the increase in the number of people being supported by the land combined with the effects of inflation, may have meant a dramatic increase in the number of households overall which were unable to meet the minimum calorie requirements.

- The basic need of food is not being met in the Philippines. This is particularly significant for the Central Luzon region.

- Sub-tenancy is apparently increasing to a greater extent in the Central Luzon area, and may account for the dramatic shift in the number of households unable to meet the minimum calorie requirements in this region.

6.4 Goal

The final stage in the evaluation design is the goal, or an examination of the final impacts of the program. At this stage, as in the Purpose stage, other strategies will also have an effect on the goal, or final impacts. This final phase looks at general changes in the quality of life in the Philippines. It was found that the quality of life, as measured by the Physical Quality of Life Index, has improved at a faster rate than per capita GNP in the 1960's. Data, however, for the construction of the PQEI is not available for the 1970's.

- The physical quality of life has been improving steadily in the Philippines, at a faster rate than increases in GDP per capita.

One of the objectives of the Philippine land reform program was to increase overall rice and corn production, in

order to achieve self-sufficiency in these two commodities.

The general conclusion is that the government was not successful and may have had a detrimental effect on productivity. There are several reasons for this conclusion:

a) a statistically positive relationship was found between OLT and the production index scale; b) the imbalance, or improper "mix" of HYV's, irrigation, fertilizer and other factors associated with the Green Revolution; c) the negligible effect on support services, such as irrigation; and, d) rice and corn self-sufficiency was not achieved until after the program began to lose its thrust.

Another objective of the program was to "strengthen the middle class." In the context of this program, by attempting to strengthen the middle class meant that the goal of improving the quality of life of the rural masses had to be compromised. This evaluation was not concerned with attempting to determine if the middle class had been strengthened, as it was not one of the original objectives at the start of the program. Some of the evidence, however, does indicate that efforts were made by the government to achieve this objective: a) the 7 hectare retention limit; b) the issuance of Letter of Instruction³ No. 143; and, c) favouring larger, irrigated farms through the Masagana 99 program.

³See Chapter 3, footnote 35.

Perhaps one of the major objectives of the government was to reduce the threat of agrarian unrest. It would appear that this objective has been met, at least in the short term, because there has apparently not been any increase in agrarian tension. Some of the indications of the effort by the Government in this regard are: a) the scope of Operation Land Transfer; b) the distribution of Certificates of Land Transfer; c) the areas affected by OLT; d) higher support prices for rice and corn in areas with a history of agrarian unrest; and e) the "transfer payment" aspect of the Masagana 99 program.

The fourth goal of the Philippine land reform program was to improve the quality of life of the rural masses. If there has been one strong trend which has emerged is that Central Luzon has been treated differently from other regions in the Philippines. This means that there is one set of conclusions concerning the impact on the quality of life for Central Luzon and another set of conclusions for other areas in the Philippines.

The assumption is that the input or design of the program, and the immediate, intermediate and further effects are all linked in some way and have some impact on the final goal of the program. In the Philippines overall, there are mixed results concerning the impact on the quality of life in

the Philippines. There were some positive results, such as: a) PQLI is apparently increasing at a faster rate than real GDP per capita; b) the lowest quintiles have increased their share of total national income; and c) the level of participation (employment) appears to be increasing. Other results, however, tend to indicate that the quality of life has not improved as indicated by the "rice equivalent" approach to poverty measurement; the basic need of food is apparently not being met. The program in general has had a negligible impact on the countryside: a) the pattern of land ownership appears to have been left virtually intact; b) the scope of OLT, the distribution of CLT's, and the areas affected by OLT has been negligible; c) the impact on many support services also appears to have had little impact (particularly in relation to Central Luzon); and d) the objective of the government to strengthen the middle class. Hence, even though the quality of life, in some regards, appears to be improving, it is difficult to attribute this to the land reform program because of the limitations in the design, and only a few positive immediate and intermediate effects.

While the land reform program was being implemented, there has evidently been a significant amount of change occurring in the Central Luzon region. On all indicators, which could be disaggregated by region, the

Central Luzon region experienced the greatest change in either a positive or negative way. Some of the positive results included: a) significant proportion of its land affected by OLT; b) the "transfer payment" aspect of the Masagana 99 program; c) the only region where the amount of irrigated lands is increasing at rates above the projected levels; and d) rice and corn support prices have been considerably higher in this region. Some of the negative results included: a) the number of households unable to meet the recommended minimum daily calorie allowance has increased dramatically; b) productivity (output per hectare) has decreased significantly; and c) sub-tenancy is occurring with greater frequency. It would appear that the Philippine land reform program has had a significant impact on Central Luzon. The impact on the quality of life, however, appears to be negligible and may actually be negative, as indicated by the "rice equivalent" approach to poverty measurement, and the greater frequency of sub-tenancy.

It appears that many haciendas have been turned over to the tenants, in Central Luzon, and that there has been a fairly widespread conversion to leasehold. This has apparently resulted in the greater frequency of sub-tenancy in the region. Although this may have resulted in a greater absorption of labour, it has not eliminated landlord-tenancy. Many former share tenants became "landlords" by sub-tenanting

out part of the land which they till. To complicate the issue further, there are also some unsubstantiated reports that some of the land is being returned to the former landlords. This only serves to indicate the complexity of this subject matter. It also provides us with some indication of how resilient the institution of landlord and tenant actually is.

The Philippine land reform program in the New Society contained some key elements (e.g., transfer of land ownership coupled with supporting services). As the program progressed, however, the government apparently became more concerned with strengthening the middle class and reducing the threat of agrarian unrest rather than improving the quality of life of the rural masses. The general goal, however, was to "uplift the rural masses from poverty and stagnation."⁴ Given this goal, the Philippine government should have ensured that the program was designed to obtain certain outputs, such as improving access to and control of land. These expected outputs should have some purpose behind them, such as making "employment more humane and satisfying" and meeting basic needs.⁵ Hence, if the inputs are designed to obtain the expected outputs, which in turn are satisfying the basic purpose of the program, then the

⁴See Chapter I, page 5.

⁵See Chapter II, page 31.

development goal of improving the quality of life of the rural masses (in theory) should result. The Philippine example only serves to demonstrate the importance of ensuring that the objectives are reflected in the design of the program (input), the immediate, intermediate and further effects, and are expected to impact on the eventual goal in the desired manner.

APPENDIX A
PRESIDENTIAL DECREE NO. 2

PRESIDENTIAL DECREE NO. 2

PROCLAIMING THE ENTIRE COUNTRY AS A LAND REFORM AREA

WHEREAS, there is pressing need to accelerate the Agrarian Reform Program of the Government for the early attainment of the objectives set forth in Republic Act No. 3844, as amended;

WHEREAS, among such objectives is to achieve dignified existence for the small farmers free from pernicious institutional restraints and practices which have not only retarded the agricultural development of the country but have also produced widespread discontent and unrest among our farmers, one of the causes of the existing national emergency; and

WHEREAS, it is believed that the lasting objectives of land reform may be sooner realized if the whole country is declared a land reform area;

NOW, THEREFORE, I, FERDINAND E. MARCOS, President of the Philippines, by virtue of the powers in me vested by the Constitution as Commander-in-Chief of the Armed Forces of the Philippines, and pursuant to Proclamation No. 1081, dated September 21, 1972, and General Order No. 1, dated September 22, 1972, as amended, whereby I have assumed direction of the operation of the entire Government, do hereby proclaim the whole country as land reform area.

All agencies and offices of the Government are enjoined to extend full cooperation and assistance to the Department of Agrarian Reform to insure the successful prosecution of the Agrarian Reform Program.

The Agrarian Reform Coordinating Council created under Executive Order No. 347, series of 1971, is hereby directed to convene immediately to exercise its functions.

The Secretary of Agrarian Reform shall take the necessary steps for the prompt and effective implementation of this decree.

Done in the City of Manila, this 26th day of September, in the year of Our Lord, nineteen hundred and seventy-two.

SOURCE: Philippines, Department of Agrarian Reform, Public Information Division, Vital Documents on Agrarian Reforms in the New Society (Diliman, Quezen City: Department of Agrarian Reform, 1972), p.1.

APPENDIX B
THE CODE OF AGRARIAN REFORMS

EXCERPTS FROM THE CODE OF AGRARIAN REFORMS

- Automatic conversion of agricultural share tenancy into agricultural leasehold subject to minimal exceptions. (See Sec. 4.)
- Work animal and tillage equipment in the possession of a share tenant but owned by the landowner shall automatically be sold to said tenant on installments for a period not exceeding five years and at a price agreed upon by the parties provided that the tenant shall pay in advance 10% of the price agreed upon. (Sec. 4.)
- The rental paid after affectivity of Republic Act 6389 shall be credited as amortization payment on the purchase price of the landholding tilled by the lessee in any of the following instances: (1) When the landholding is expropriated by the government for the lessee; and (2) When it is redeemed. (Sec. 34-A.)
- Creation of the Department of Agrarian Reform to replace the Land Authority and The National Land Reform Council in carrying out the policies of the Code of Agrarian Reforms. (Sec. 49.)
- The Land Bank of the Philippines is now attached to the Department of Agrarian Reform as its land financing arm and shall devote all of its resources to agrarian reforms. (Sec. 14, RA 6389.)
- The Agricultural Credit Administration under the Office of the President shall coordinate and cooperate with the Department of Agrarian Reform as its credit arm and shall devote its resources to agrarian reforms. (Sec. 14, RA 6389.)
- In expropriating private agricultural lands declared by the Department of Agrarian Reform to be necessary for the implementation of the provisions of the Code, the following order of priority shall be considered:
 - (1) Idle or abandoned lands;
 - (2) Those whose area exceeds 1,024 hectares;
 - (3) Those whose area exceeds 500 hectares but is not more than 1,024 hectares;
 - (4) Those whose area exceeds 144 hectares but is not more than 500 hectares;

APPENDIX B - Continued

- (5) Those whose area exceeds 75 hectares but is not more than 144 hectares; and
- (6) Those whose area exceeds 24 hectares but is not more than 75 hectares. (Sec. 51.)

- The Department of Agrarian Reform shall, in every way possible to insure the successful implementation of the Agrarian Reform Program, involve local governments and secure their participation in the various aspects of the program. (Sec 128-A.)

Sections 1 and 2

SECTION 1. Title - This Act shall be known as the Code of Agrarian Reforms of the Philippines.

SEC. 2. Declaration of Policy - It is the policy of the State:

(1) To establish cooperative-cultivatorship among those who live and work on the land as tillers, owner-cultivatorship and the economic family-size farm as the basis of Philippine agriculture and, as a consequence, divert landlord capital in agriculture to industrial development;

(2) To achieve a dignified existence for the small farmers free from pernicious institutional restraints and practices;

(3) To create a truly viable and economic structure in agriculture conducive to greater productivity and higher farm incomes through a cooperative system of production, processing, marketing, distribution, credit, and services;

(4) To apply all labor laws equally and without discrimination to both industrial and agricultural wage earners;

(5) To provide a more vigorous and systematic land resettlement program and public land distribution;

(6) To make the small farmers more independent, self-reliant and responsible citizens, and a source of genuine strength in our democratic society;

APPENDIX B - Continued

(7) To give first priority to measures for the adequate and timely financing of the Agrarian Reform Program pursuant to House Joint Resolution Numbered Two, otherwise known as the Magna Carta of Social Justice and Economic Freedom; existing laws; executive and administrative orders; and rules and regulations to the contrary notwithstanding;

(8) To involve local governments in the implementation of the Agrarian Reform Program; and

(9) To evolve a system of land use and classification.

Notes

The provisions of the Economic Freedom Resolution directly involved with agricultural development are the following:

"6. The Government shall actively plan and promote the development of the agricultural sector, in harmony with the industrial sector in order to achieve increased agricultural productivity and national self-sufficiency in the basic staples."

"7. To attain these objectives:

(a) Emphasis shall be placed on irrigation, water resource development, the application of suitable scientific farming methods, power utilization, and extension of liberal credit facilities;

(b) The Government shall encourage and support agricultural cooperatives and shall establish a carefully planned, well-organized national marketing network;

(c) The total electrification of the Philippines on an area coverage basis with reference to rural areas shall be among the prime objectives of the economic program and shall be given adequate financing, subsidy, or such other incentives as may be needed. In realizing these objectives, the primary instruments shall be electric cooperatives; and

(d) The Government shall immediately implement a thorough-going program of land survey, classification, and titling in order to hasten the rational utilization of the land resources of the nation."

SOURCE: Jose N. Nollado, ed., The Code of Agrarian Reforms of the Philippines, 2d ed. (Manila: National Book Store, 1972), pp. iii-2.

APPENDIX C
PRESIDENTIAL DECREE NO. 27

PRESIDENTIAL DECREE NO. 27

Decreeing the Emancipation of Tenants From the Bondage of the Soil Transferring to Them the Ownership of the Land They Till and Providing The Instruments and Mechanism Therefore.

Inasmuch as the old concept of land ownership by a few has spawned valid and legitimate grievances that gave rise to violent conflict and social tension,

The redress of such legitimate grievances being one of the fundamental objectives of the New Society,

Since Reformation must start with the emancipation of the tiller of the soil from his bondage,

Now, therefore, I, Ferdinand E. Marcos, President of the Philippines by virtue of the powers in me vested by the Constitution as Commander-in-Chief of the Armed Forces of the Philippines, and pursuant to Proclamation No. 1081, dated September 21, 1972, and General Order No. 1 dated September 22, 1972, as amended do hereby decree and order the emancipation of all tenant farmers as of this, October 21, 1972;

This shall apply to tenant-farmers of private agricultural lands primarily devoted to rice and corn under a system of sharecrop or lease-tenancy, whether classified as landed estate or not;

The tenant-farmer, whether in land classified as landed estate or not, shall be deemed owner of a portion constituting a family-size farm of five (5) hectares if not irrigated and three (3) hectares if irrigated;

In all cases, the landowner may retain an area of not more than seven (7) hectares if such landowner is cultivating such area or will now cultivate it;

For the purpose of determining the cost of the land to be transferred to the tenant-farmer pursuant to this Decree, the value of the land shall be equivalent to two and one half (2 1/2) times the average harvest of three normal crop years immediately preceeding the promulgation of this Decree;

The total cost of the land, including interest at the rate of six (6) percentum per annum, shall be paid by the tenant in fifteen (15) years of fifteen (15) equal annum amortizations;

APPENDIX C - Continued

In case of default, the amortizations due shall be paid by the farmers' cooperative in which the defaulting tenant-farmer is a member, with the cooperative having a right of recourse against him;

The government shall guarantee such amortizations with shares of stock in government-owned and government-controlled corporations;

No title to the land owned by the tenant-farmers under this Decree shall be actually issued to a tenant-farmer unless and until the tenant-farmer has become a full-fledged member of a duly recognized farmers' cooperative;

Title of land acquired pursuant to this Decree or the Land Reform Program of the Government shall not be transferable except by hereditary succession or to the Government in accordance with the provisions of this Decree, the Code of Agrarian Reforms and other existing laws and regulations,

The Department of Agrarian Reforms through its Secretary is hereby empowered to promulgate rules and regulations for the implementation of this Decree.

All laws, executive orders, decrees and rules and regulations, or parts thereof, inconsistent with this Decree are hereby repealed and or modified accordingly.

Done in the City of Manila this 21st day of October, in the year of Our Lord, nineteen hundred and seventy-two.

SOURCE: Philippines, Department of Agrarian Reform, Public Information Division, Vital Documents on Agrarian Reforms in the New Society (Diliman, Quezon City: Department of Agrarian Reform, 1972), pp. 2-3.

APPENDIX D
PROGRESSIVE LAND REFORM COMPENSATION SCHEME

EXAMPLE OF A PROGRESSIVE LAND REFORM COMPENSATION SCHEME

<u>Size of Estate (Ha.)</u>	<u>Compensation Rate</u>	<u>Cash %</u>
7.00 or less.	P5,000/ha.	50
7.01 to 12.00	P35,000 plus P4,000/ha. in excess of 7.00 ha.	40
12.01 to 24.00	P55,000 plus P2,000/ha. in excess of 12.00 ha.	30
24.01 to 50.00	P67,000 plus P1,000/ha. in excess of 24.00 ha.	20
50.01 or more	P93,000 plus P500/ha. in excess of 50.00 ha.	10

In this example, the basic land price is set at P5,000 per hectare, or somewhat less than average price being paid by the Land Bank in the relatively few purchases it has made. (As of June 14, 1974, the Bank had purchased only 1,860 hectares from a total of 30 landlords, at an average price of over P6,000 per hectare. These lands were heavily encumbered by mortgages and unpaid taxes, obligations which were then shouldered by the Bank. Counting these as effective cash receipts by the landlords, the cash: bonds payment ratio is effectively 35:65, in contrast to the officially declared ratio of 10:90.) It is designed such that lower prices are paid for land in excess of certain base levels. For instance, the owner of 12 hectares would receive only P55,000 instead of P60,000. On the other hand, the owner of 50 hectares would receive only P93,000 (or an average of P1,860 per hectare) instead of 250,000. Thus the burden of the land reform program is not made to apply proportionately, in recognition of the social view that a loss of 7 hectares means much more to an owner of only 7 hectares than to an owner of 50 hectares.

SOURCE: Mahar Mangahas, "Economic Aspects of Agrarian Reform Under the New Society," Institute of Economic Development and Research, University of the Philippines, Discussion Paper No. 74-20, Quezon City, 4 December 1974, pp. 8-9.

APPENDIX E
ESTIMATION AND PROJECTION TECHNIQUES USED IN REPORT

ESTIMATION AND PROJECTION TECHNIQUES USED IN REPORT

E.1 Estimation

When data is missing, one can employ various techniques to estimate the value of the missing data based on the data that is available. The technique used in this report calculates a compounded average growth rate for a given period. This growth rate is then multiplied to available data to provide an estimate of missing data. The formula for calculating compounded average growth rates is as follows:

$$G = \sqrt[n]{(a/b)}$$

Where

G = compounded average growth rate

n = number of years

a = the value for the last year

b = the value for the first year

This technique can be illustrated by using an example from table 4-2. In this table we wish to calculate GDP per capita of employed persons. The figure for employed population in agriculture in 1970, however, is missing. We must, therefore, estimate the employed population figure for 1970, based on the available data. The figure for 1968 is 5,631,000 and for 1971 it is 6,321,000; which represents our available data.

Hence,

a = 6,321,000 = the value of the last year

b = 5,631,000 = the value of the first year

n = 3 = 1971 minus 1968 = the number of years

We apply this to our formula:

$$G = \sqrt[3]{(6,321,000/5,631,000)}$$

$$G = \sqrt[3]{1.122536}$$

$$G = 1.039282$$

APPENDIX E - Continued

To arrive at our estimate for 1970, we multiply G to the 1968 figure to give us a 1969 figure. The 1969 figure is then multiplied by G to give us our 1970 estimate:

- 5,631,000 (1968 figure) times 1.039282 gives 5,852,197 (1969 estimate)
- 5,852,197 (1969 estimate) times 1.039282 gives 6,082,083 (1970 estimate)
- 1970 estimate of employed population in agriculture is thus 6,082 thousand.

E.2 Projection

The projection technique used in this report is based on linear regression analysis. It is based on the following formula:

$$Y = b + mX$$

where, Y = the dependent variable

X = the independent variable (e.g., usually the year)

$$\text{and, } m = \frac{N\sum XY - (\sum X)(\sum Y)}{N\sum X^2 - (\sum X)^2}$$

where, N = the size of the sample

$$\text{and, } b = \frac{\sum Y - m\sum X}{N}$$

This technique can be illustrated by using an example from table 4-16. Our sample is from 1966 to 1972, or the pre-land reform era. Our projections for 1973 to 1975 therefore, are based on the linear regression equation derived from the pre-land reform era. We derive our linear regression equation from the 1966 to 1972 period. Once the equation has been derived, we simply substitute "X" with our projected year (1973, 1974, or 1975), to yield a projected estimate of Y (i.e., percentage of land irrigated).

APPENDIX E - Continued

To test the strength of, or how linear, our projection is, the coefficient r is derived. The value of r ranges from -1 to $+1$. "If there is a high correlation, as measured by r , most of the data points will fall very close to the line, and the differences (errors) between our predictions and the true values will be much smaller on the average than the discrepancy which would occur by always predicting the mean value of Y ."* We derive r from the following formula:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

* Norman H. Nie, et al., Statistical Package for the Social Sciences, Second Edition. (New York: McGraw-Hill Book Co., 1975), p. 279.

APPENDIX F
OLT COVERAGE BY PROVINCE

Tables:

- F-1 Top Ten Provinces: Number of CLTs Issued
- F-2 Number of CLTs Issued by Region and Province
- F-3 Number of Tenants who have Received CLTs by Region and Province
- F-4 Amount of Rice and Corn Lands (Hectares) Affected by OLT by Region and Province

Table F-1
TOP TEN PROVINCES: NUMBER OF CLIS ISSUED

1973				1974				1975			
Prov.	No. of CLIs Issued	% of Phil. Total		Prov.	No. of CLIs Issued	% of Phil. Total		Prov.	No. of CLIs Issued	% of Phil. Total	
1. Nueva Ecija	49,103	23.7		1. Nueva Ecija	12,896	21.0		1. Tarlac	4,183	15.7	
2. Leyte	18,711	9.0		2. Pampanga	5,857	9.5		2. Nueva Ecija	3,682	13.8	
3. Pangasinan	14,904	7.2		3. Tarlac	4,030	6.6		3. Ilocos Norte	2,478	9.3	
4. Tarlac	14,093	6.8		4. Camarines Sur	3,550	5.8		4. Cebu	1,730	6.5	
5. Camarines Sur	13,412	6.5		5. Cebu	3,530	5.8		5. Isabela	1,560	5.8	
6. Isabela	11,670	5.6		6. Ilocos Norte	2,490	4.1		6. Camarines Sur	1,472	5.5	
7. Iloilo	11,452	5.5		7. Isabela	2,066	3.4		7. Pangasinan	1,461	5.5	
8. Pampanga	11,042	5.3		8. Negros Occidental	1,772	2.9		8. Pampanga	1,255	4.7	
9. Cagayan	8,600	4.1		9. North Cotabato	1,756	2.9		9. Negros Occidental	705	2.6	
10. Bulacan	6,119	3.0		10. Pangasinan	1,747	2.8		10. Cagayan	652	2.4	
SUB-TOTAL	159,106	76.7		SUB-TOTAL	39,694	64.7		SUB-TOTAL	19,178	71.8	
PHILIPPINES	207,415	100.0		PHILIPPINES	61,344	100.0		PHILIPPINES	26,698	100.0	

Table F-2
NUMBER OF CLT'S ISSUED BY REGION AND PROVINCE

Region/ Province	1973		1974		1975	
	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total
REGION I	18,465	8.9	4,876	7.9	4,604	17.2
Abra	-	-	-	-	-	-
Benguet	-	-	-	-	-	-
Ilocos Norte	1,790	0.9	2,494	4.1	2,478	9.3
Ilocos Sur	1,134	0.5	635	1.0	324	1.2
La Union	637	0.3	-	-	341	1.3
Mt. Province	-	-	-	-	-	-
Pangasinan	14,904	7.2	1,747	2.8	1,461	5.5
REGION II	21,409	10.3	4,239	6.9	2,386	8.9
Batanes	-	-	-	-	-	-
Cagayan	8,600	4.1	1,683	2.7	652	2.4
Ifugao	52	-	59	.1	2	-
Isabela	11,670	5.6	2,066	3.4	1,560	5.8
Kalinga-Apayao	758	0.4	222	.4	6	-
Nueva Vizcaya	329	0.2	125	.2	66	.2
Quirino	-	-	84	.1	100	.4
REGION III	82,300	39.7	24,766	40.4	9,874	37.0
Bataan	351	0.2	409	.7	332	1.2
Bulacan	6,119	3.0	1,324	2.2	249	.9
Nueva Ecija	49,103	23.7	12,896	21.0	3,682	13.8
Pampanga	11,042	5.3	5,857	9.5	1,255	4.7
Tarlac	14,093	6.8	4,030	6.6	4,183	15.7
Zambales	1,592	0.8	250	.4	173	.6
REGION IV-A	2,074	1.0	654	1.1	89	.3
Manila	-	-	-	-	-	-
Rizal	2,074	1.0	654	1.1	89	.3
REGION IV-B	9,328	4.5	3,823	6.2	1,473	5.5
Batangas	601	0.3	981	1.6	477	1.8
Cavite	1,627	0.8	550	.9	55	.2
Laguna	2,808	1.4	246	.4	43	.2
Marinduque	-	-	168	.3	-	-
Occidental Mindoro	2,012	1.0	788	1.3	626	2.3
Oriental Mindoro	966	0.5	132	.2	103	.4
Palawan	31	-	4	-	-	-
Quezon	1,148	0.6	760	1.2	167	.6
Romblon	135	0.1	194	.3	2	-

Table F-2
NUMBER OF CLT'S ISSUED BY REGION AND PROVINCE
cont'd:

Region/ Province	1973		1974		1975	
	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total
REGION V	19,459	9.4	5,880	9.6	2,514	9.4
Albay	2,689	1.3	1,401	2.3	622	2.3
Camarines Norte	500	0.2	72	.1	36	.1
Camarines Sur	13,412	6.5	3,550	5.8	1,472	5.5
Catanduanes	-	-	90	.1	15	.1
Masbate	1,856	0.9	189	.3	30	.1
Sorsogon	1,002	0.5	578	.9	339	1.3
REGION VI	17,878	8.6	5,204	8.5	1,228	4.6
Aklan	137	0.1	97	.2	18	.1
Antique	519	0.3	134	.2	70	.3
Capiz	2,133	1.0	1,486	2.4	213	.8
Iloilo	11,452	5.5	1,715	2.8	222	.8
Negros Occidental	3,637	1.8	1,772	2.9	705	2.6
REGION VII	8,305	4.0	4,916	8.0	2,492	9.3
Bacolod	1,420	0.7	10	-	215	.8
Cebu	5,501	2.7	3,530	5.8	1,730	6.5
Negros Oriental	1,384	0.7	1,376	2.2	547	2.0
Siquijor	-	-	-	-	-	-
REGION VIII	20,365	9.8	704	1.1	488	1.8
Leyte	18,711	9.0	459	.7	427	1.6
Southern Leyte	-	-	54	.1	-	-
Eastern Samar	110	0.1	39	.1	6	-
Northern Samar	652	0.3	20	-	31	.1
Western Samar	892	0.4	132	.2	24	.1
REGION IX-A	2	-	-	-	-	-
Sulu	2	-	-	-	-	-
Tawi-Tawi	-	-	-	-	-	-
Basilan	-	-	-	-	-	-
REGION IX-B	467	0.2	379	.6	227	.9
Zamboanga del Norte	-	-	96	.2	42	.2
Zamboanga del Sur	467	0.2	283	.5	185	.7

Table F-2
NUMBER OF CLT'S ISSUED BY REGION AND PROVINCE
cont'd.

Region/ Province	1973		1974		1975	
	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total	No. of CLT's Issued	% of Phil. Total
REGION X	2,834	1.4	2,781	4.5	427	1.6
Agusan del Norte	354	0.2	112	.2	3	-
Bukidnon	1,142	0.6	1,521	2.5	170	.6
Camiguin	-	-	43	.1	1	-
Misamis Occidental	409	0.2	386	.6	152	.6
Misamis Oriental	276	0.1	391	.6	54	.2
Surigao del Norte	-	-	238	.4	47	.2
Agusan del Sur	653	0.3	90	.1	-	-
REGION XI	2,881	1.4	633	1.0	487	1.8
South Cotabato	905	0.4	35	.1	221	.8
Davao del Norte	645	0.3	113	.2	64	.2
Davao del Sur	1,054	0.5	41	.1	51	.2
Davao Oriental	277	0.1	67	.1	6	-
Surigao del Sur	-	-	377	.6	145	.5
REGION XII	1,648	0.8	2,489	4.1	409	1.5
Lanao del Norte	1,237	0.6	311	.5	97	.4
Lanao del Sur	-	-	-	-	-	-
North Cotabato	411	0.2	1,756	2.9	182	.7
Maguindanao	-	-	384	.6	3	-
Sultan Kudarat	-	-	38	.1	127	.5
PHILIPPINES	207,415	100.0	61,344	100.0	26,698	100.0

Table F-3

NUMBER OF TENANTS WHO HAVE RECEIVED CLT'S BY REGION AND PROVINCE

	1973		1974		1975	
	No. of Tenants	%	No. of Tenants	%	No. of Tenants	%
REGION I	12,958	5.0	1,996	2.6	1,752	5.7
Abra	-	-	-	-	-	-
Benguet	-	-	-	-	-	-
Ilocos Norte	299	.1	233	.3	266	.9
Ilocos Sur	390	.2	191	.2	95	.3
La Union	494	.2	-	-	273	.9
Mt. Province	-	-	-	-	-	-
Pangasinan	11,775	4.5	1,572	2.0	1,118	3.6
REGION II	27,751	10.3	4,709	6.0	3,002	9.8
Batanes	-	-	-	-	-	-
Cagayan	13,181	5.1	1,708	2.2	686	2.2
Ifugao	40	-	58	.1	1	-
Isabela	12,700	4.9	2,403	3.1	2,127	6.9
Kalinga-Apayao	1,456	.6	293	.4	9	-
Nueva Vizcaya	375	.1	165	.2	81	.3
Quirino	-	-	82	.1	98	.3
REGION III	122,898	47.4	39,051	50.1	14,267	46.5
Bataan	497	.2	641	.8	258	.8
Bulacan	9,745	3.8	1,907	2.4	275	.9
Nueva Ecija	75,524	29.1	21,906	28.1	6,146	20.0
Pampanga	16,427	6.3	7,945	10.2	1,893	6.2
Tarlac	19,164	7.4	6,326	8.1	5,489	17.9
Zambales	1,541	.6	326	.4	206	.7
REGION IV	2,063	.8	805	1.0	71	.2
Manila	-	-	-	-	-	-
Rizal	2,063	.8	805	1.0	71	.2
REGION IV-B	12,246	4.7	4,553	5.8	2,319	7.6
Batangas	647	.2	1,034	1.3	463	1.5
Cavite	2,455	.9	701	.9	79	.3
Laguna	3,203	1.2	267	.3	53	.2
Marinduque	-	-	52	.1	-	-
Occidental Mindoro	3,349	1.3	1,424	1.8	1,258	4.1
Oriental Mindoro	1,139	.4	158	.2	189	.6
Palawan	37	-	10	-	-	-
Quezon	1,310	.5	765	1.0	274	.9
Romblon	106	-	142	.2	3	-

Table F-3
NUMBER OF TENANTS WHO HAVE RECEIVED CLT'S BY REGION AND PROVINCE
cont'd.

	1973		1974		1975	
	<u>No. of</u> <u>Tenants</u>	<u>%</u>	<u>No. of</u> <u>Tenants</u>	<u>%</u>	<u>No. of</u> <u>Tenants</u>	<u>%</u>
REGION V	22,278	8.6	5,968	7.7	2,544	8.3
Albay	2,739	1.1	1,340	1.7	624	2.0
Camarines Norte	479	.2	61	.1	42	.1
Camarines Sur	14,580	5.6	3,633	4.7	1,243	4.1
Catanduanes	-	-	138	.2	21	.1
Masbate	3,681	1.4	403	.5	84	.3
Sorsogon	799	.3	393	.5	530	1.7
REGION VI	22,530	8.7	6,048	7.8	1,549	5.1
Aklan	66	-	73	.1	13	-
Antique	800	.3	169	.2	93	.3
Capiz	2,574	1.0	1,348	1.7	224	.7
Iloilo	14,453	5.6	2,442	3.1	385	1.3
Negros Occidental	4,637	1.8	2,016	2.6	834	2.7
REGION VII	6,127	2.4	3,757	4.8	1,743	5.7
Bohol	918	.4	20	-	186	.6
Cebu	3,266	1.3	1,879	2.4	897	2.9
Negros Oriental	1,943	.7	1,858	2.4	660	2.2
Siquijor	-	-	-	-	-	-
REGION VIII	18,333	7.1	582	.7	634	2.1
Leyte	15,787	6.1	327	.4	532	1.7
Southern Leyte	-	-	22	-	-	-
Eastern Samar	198	.1	67	.1	12	-
Northern Samar	1,612	.6	48	.1	72	.2
Western Samar	736	.3	118	.2	18	.1
REGION IX-A	1	-	-	-	-	-
Subu	1	-	-	-	-	-
Tawi-Tawi	-	-	-	-	-	-
Basilan	-	-	-	-	-	-
REGION IX-B	559	.2	430	.6	323	1.1
Zamboanga del Norte	-	-	93	.1	53	.2
Zamboanga del Sur	559	.2	337	.4	270	.9

Table F-3
NUMBER OF TENANTS WHO HAVE RECEIVED CWT'S BY REGION AND PROVINCE
cont'd.

	1973		1974		1975	
	No. of Tenants	%	No. of Tenants	%	No. of Tenants	%
REGION X	5,012	1.9	4,302	5.5	750	2.4
Agusan del Norte	451	.2	116	.1	2	-
Bukidnon	2,452	.9	2,887	3.7	420	1.4
Camiguin	-	-	15	-	-	-
Misamis Occidental	404	.2	458	.6	214	.7
Misamis Oriental	337	.1	478	.6	79	.3
Surigao del Norte	-	-	201	.3	33	.1
Agusan del Sur	1,368	.5	147	.2	2	-
REGION XI	4,242	1.6	1,093	1.4	1,051	3.4
South Cotabato	1,617	.6	107	.1	533	1.7
Davao del Norte	1,077	.4	396	.5	137	.4
Davao del Sur	1,179	.5	43	.1	58	.2
Davao Oriental	369	.1	80	.1	6	-
Surigao del Sur	-	-	467	.6	317	1.0
REGION XII	2,350	.9	4,656	6.0	666	2.2
Lanao del Norte	1,573	.6	521	.7	102	.3
Lanao del Sur	-	-	-	-	-	-
North Cotabato	777	.3	3,268	4.2	301	1.0
Maguindanao	-	-	802	1.0	4	-
Sultan Kudarat	-	-	65	.1	259	.8
PHILIPPINES	259,348	100.0	77,950	100.0	30,671	100.0

Table F-4

AMOUNT OF RICE AND CORN LANDS (HECTARES) AFFECTED
BY OLT BY REGION AND PROVINCE

	1973		1974		1975	
	Area (ha.)	%	Area (ha.)	%	Area (ha.)	%
REGION I	11,417	7.9	1,620	3.6	2,599	13.1
Abra	-	-	-	-	-	-
Benguet	-	-	-	-	-	-
Ilocos Norte	421	.3	484	1.1	749	3.8
Ilocos Sur	611	.4	401	.9	219	1.1
La Union	372	.3	-	-	239	1.2
Mt. Province	-	-	-	-	-	-
Pangasinan	10,013	6.9	735	1.6	1,392	7.0
REGION II	14,340	9.9	3,098	6.9	1,955	9.9
Batanes	-	-	-	-	-	-
Cagayan	6,163	4.3	1,443	3.2	553	2.8
Ifugao	26	-	41	.1	2	-
Isabela	7,307	5.1	1,301	2.9	1,244	6.3
Kalinga-Apayao	593	.4	165	.4	22	.1
Nueva Vizcaya	251	.2	81	.2	52	.3
Quirino	-	-	67	.1	82	.4
REGION III	56,307	39.0	18,414	41.1	7,253	36.5
Bataan	275	.2	377	.8	236	1.2
Bulacan	4,417	3.1	1,074	2.4	163	.8
Nueva Ecija	33,254	23.0	9,585	21.4	2,742	13.8
Pampanga	7,379	5.1	4,094	9.1	903	4.6
Tarlac	9,702	6.7	3,080	6.9	3,092	15.6
Zambales	1,280	.9	204	.5	117	.6
REGION IV-A	1,470	1.0	477	1.1	87	.4
Manila	-	-	-	-	-	-
Rizal	1,470	1.0	477	1.1	87	.4
REGION IV-B	7,413	5.1	3,007	6.7	1,245	6.3
Batangas	406	.3	716	1.6	335	1.7
Cavite	1,213	.8	367	.8	52	.3
Laguna	2,221	1.5	233	.5	42	.2
Marinduque	-	-	117	.3	-	-
Occidental Mindoro	1,785	1.2	656	1.5	565	2.8
Oriental Mindoro	782	.5	114	.3	98	.5
Palawan	28	-	4	-	-	-
Quezon	865	.6	628	1.4	151	.8
Romblon	113	.1	172	.4	2	-

Table F-4
AMOUNT OF RICE AND CORN LAND (HECTARES) AFFECTED
BY OLT BY REGION AND PROVINCE
cont'd.

	1973		1974		1975	
	Area (ha.)	%	Area (ha.)	%	Area (ha.)	%
REGION V	15,317	10.6	4,830	10.8	2,207	11.1
Albay	2,133	1.5	1,193	2.7	566	2.9
Camarines Norte	335	.2	61	.1	30	.2
Camarines Sur	10,351	7.2	2,845	6.4	1,252	6.3
Catanduanes	-	-	90	.2	15	.1
Masbate	1,636	1.1	177	.4	30	.2
Sorsogon	862	.6	464	1.0	314	1.6
REGION VI	13,628	9.4	4,113	9.2	1,098	5.5
Aklan	109	.1	87	.2	14	.1
Antique	355	.2	121	.3	65	.3
Capiz	1,569	1.1	1,172	2.6	187	.9
Iloilo	8,905	6.2	1,408	3.1	217	1.1
Negros Occidental	2,690	1.9	1,325	3.0	615	3.1
REGION VII	5,659	3.9	3,526	7.9	1,579	8.0
Bohol	878	.6	43	.1	130	.7
Cebu	3,727	2.6	2,419	5.4	1,004	5.1
Negros Oriental	1,054	.7	1,064	2.4	445	2.2
Siquijor	-	-	-	-	-	-
REGION VIII	12,830	8.9	482	1.1	476	2.4
Leyte	11,407	7.9	268	.6	423	2.1
Southern Leyte	-	-	49	.1	-	-
Eastern Samar	102	.1	33	.1	6	-
Northern Samar	574	.4	18	-	30	.2
Western Samar	747	.5	114	.3	17	.1
REGION IX-A	2	-	-	-	-	-
Subu	2	-	-	-	-	-
Tawi-Tawi	-	-	-	-	-	-
Basilan	-	-	-	-	-	-
REGION IX-B	340	.2	273	.6	198	1.0
Zamboanga del Norte	-	-	72	.2	40	.2
Zamboanga del Sur	340	.2	201	.4	158	.8

Table F-4
AMOUNT OF RICE AND CORN LANDS (HECTARES) AFFECTED
BY OLT BY REGION AND PROVINCE
 cont'd.

	1973		1974		1975	
	Area (ha.)	%	Area (ha.)	%	Area (ha.)	%
REGION X	2,165	1.5	2,244	5.0	362	1.8
Agusan del Norte	235	.2	92	.2	3	-
Bukidnon	915	.6	1,213	2.7	148	.7
Camiguin	-	-	39	.1	1	-
Misamis Occidental	297	.2	295	.7	129	.7
Misamis Oriental	174	.1	311	.7	42	.2
Surigao del Norte	-	-	221	.5	37	.2
Agusan del Sur	544	.4	73	.2	2	-
REGION XI	2,366	1.6	534	1.2	429	2.2
South Cotabato	705	.5	33	.1	215	1.1
Davao del Norte	574	.4	102	.2	55	.3
Davao del Sur	836	.6	41	.1	44	.2
Davao Oriental	251	.2	67	.1	4	-
Surigao del Sur	-	-	291	.6	111	.6
REGION XII	1,284	.9	2,161	4.8	357	1.8
Lanao del Norte	946	.7	307	.7	97	.5
Lanao del Sur	-	-	-	-	-	-
North Cotabato	338	.2	1,477	3.3	155	.8
Maguindanao	-	-	345	.8	3	-
Sultan Kudarat	-	-	32	.1	102	.5
PHILIPPINES	144,538	100.0	44,779	100.0	19,845	100.0

APPENDIX G
ACTUAL AND PROJECTED IRRIGATED LANDS
BY REGION

Tables:

- G-1 Irrigated Rice Lands: Actual and Projected,
Ilocos, 1966 - 1975
- G-2 Irrigated Rice Lands: Actual and Projected,
Cagayan Valley, 1966 - 1975
- G-3 Irrigated Rice Lands: Actual and Projected,
Central Luzon, 1966 - 1975
- G-4 Irrigated Rice Lands: Actual and Projected,
Southern Tagalog, 1966 - 1975
- G-5 Irrigated Rice Lands: Actual and Projected,
Bicol, 1966 - 1975
- G-6 Irrigated Rice Lands: Actual and Projected,
Eastern Visayas, 1966 - 1975
- G-7 Irrigated Rice Lands: Actual and Projected,
Western Visayas, 1966 - 1975
- G-8 Irrigated Rice Lands: Actual and Projected,
N. and E. Mindanao, 1966 - 1975
- G-9 Irrigated Rice Lands: Actual and Projected,
S. and W. Mindanao, 1966 - 1975

Table G-1

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, ILOCOS, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75*	INDEX ACTUAL/PROJECTED
1966	144,710	79,230	65,480	45.25		
1967	132,290	85,180	47,110	35.61		
1968	140,950	65,160	75,790	53.77		
1969	129,190	71,470	57,720	44.68		
1970	144,820	68,280	76,540	52.85		
1971	127,410	45,010	82,400	64.67		
1972	158,920	63,030	95,890	60.34		
1973	322,140	184,100	138,040	42.85		
1974	351,370	214,780	136,590	38.87		
1975	338,500	211,870	126,630	37.41		

* Unable to determine with much confidence because of large tracts of new land opened up, from 158,920 ha. in 1972 to 322,140 ha. in 1973. The absolute numbers of irrigated land has, however, increased steadily from 1966 to 1975.

Table G-2

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, CAGAYAN VALLEY, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	354,390	219,120	135,270	38.17		
1967	265,520	119,990	145,530	54.81		
1968	296,760	165,880	130,880	44.10		
1969	271,980	143,760	128,220	47.14		
1970	314,040	102,180	211,860	67.46		
1971	361,170	148,600	212,570	58.86		
1972	383,910	185,300	198,610	51.73		
1973	359,340	166,590	192,750	53.64	223,006	.86
1974	392,570	168,180	224,390	57.16	257,757	.87
1975	414,810	194,270	220,540	53.17	278,794	.79

r = .571

Table G-3

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, CENTRAL LUZON, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	519,310	288,890	230,420	44.37		
1967	602,060	229,450	372,610	61.89		
1968	628,010	267,720	360,290	57.37		
1969	608,840	237,280	371,560	61.03		
1970	634,750	307,430	327,320	51.57		
1971	641,490	287,160	354,330	55.24		
1972	657,760	385,510	272,250	41.39		
1973	451,310	208,160	243,150	53.88	222,315	1.09
1974	506,550	200,630	305,920	60.39	244,461	1.25
1975	500,640	209,830	290,810	58.09	236,602	1.23

r = .272

Table G-4
IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, SOUTHERN TAGALOG, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	467,290	324,910	142,380	30.47		
1967	466,990	238,680	228,310	48.89		
1968	529,740	291,220	238,520	45.03		
1969	538,080	261,640	276,440	51.38		
1970	345,370	191,880	153,490	44.44		
1971	387,080	206,140	180,890	46.73		
1972	410,700	233,850	176,850	43.06		
1973	432,440	265,520	166,920	38.60	211,809	.79
1974	446,250	277,690	168,560	37.77	223,794	.75
1975	447,040	270,010	177,030	39.60	229,466	.77

r = .378

Table G-5

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, BICOL, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	366,910	231,960	134,950	36.78		
1967	300,980	134,420	166,560	55.34		
1968	314,560	179,960	134,600	42.79		
1969	300,320	126,280	174,040	57.95		
1970	357,960	193,940	164,020	45.82		
1971	298,480	143,690	154,790	51.86		
1972	273,560	136,150	137,410	50.23		
1973	305,980	155,310	150,670	49.24	164,862	.91
1974	340,530	170,490	170,040	49.93	187,939	.90
1975	347,780	204,000	143,780	41.34	196,461	.73

r = .381

Table G-6

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, EASTERN VISAYAS, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	323,480	265,420	58,060	17.95		
1967	346,850	300,060	46,790	13.49		
1968	349,780	248,000	101,780	29.10		
1969	382,940	277,650	105,290	27.50		
1970	256,580	192,620	63,960	24.93		
1971	252,950	178,370	74,580	29.48		
1972	275,830	197,710	78,120	28.32		
1973	232,330	164,390	67,940	29.24	76,227	.89
1974	241,650	177,960	63,690	26.36	84,384	.75
1975	266,860	201,620	65,240	24.44	98,792	.66

r = .728

Table G-7

IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, WESTERN VISAYAS, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	377,870	312,570	65,300	17.28		
1967	333,200	238,700	94,500	28.36		
1968	376,210	295,520	80,690	21.45		
1969	384,900	279,720	105,180	27.33		
1970	397,810	325,420	72,390	18.20		
1971	420,570	285,460	135,110	32.13		
1972	417,930	323,990	93,940	22.48		
1973	370,560	290,700	79,860	21.55	99,051	.81
1974	419,560	326,850	92,710	22.10	115,127	.81
1975	438,910	349,000	89,910	20.48	123,553	.73

r = .277*

Table G-8
IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, N. AND E. MINDANAO, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	145,090	123,860	21,230	14.63		
1967	180,850	132,490	48,360	26.74		
1968	207,630	166,490	41,140	19.80		
1969	248,650	162,120	86,530	34.80		
1970	194,330	138,250	56,080	28.86		
1971	212,960	111,130	101,830	47.84		
1972	229,860	134,240	95,620	41.60		
1973	251,200	208,090	43,110	17.16	124,319	.35
1974	272,790	177,660	95,130	34.87	147,879	.64
1975	294,050	197,510	96,540	32.83	173,284	.56

r = .869

Table G-9
IRRIGATED RICE LANDS: ACTUAL AND PROJECTED, S. AND W. MINDANAO, 1966-1975
(Hectares)

YEAR	TOTAL RICE AREA	RAINFED	IRRIGATED	PERCENTAGE IRRIGATED	IRRIGATED LANDS, PROJECTED 1973-75	INDEX ACTUAL/PROJECTED
1966	410,130	302,760	107,370	26.18		
1967	467,380	264,860	202,520	43.33		
1968	460,020	314,690	145,330	31.59		
1969	467,250	289,410	177,840	38.06		
1970	467,780	247,710	220,070	47.05		
1971	410,570	236,560	174,010	42.38		
1972	437,910	258,450	179,460	40.98		
1973	386,500	227,960	158,540	41.02	180,843	.88
1974	465,530	228,820	236,710	50.85	227,458	1.04
1975	490,250	289,020	201,230	41.05	249,684	.81

r = .615

APPENDIX H

PRICES RECEIVED BY FARMERS FOR
PALAY ORDINARIO, PALAY SECOND CLASS,
WHITE CORN, AND YELLOW CORN

2 Tables:

- H-1 Implicit Price Index for Gross National Product
- H-2 Average Prices Received by Farmers
for Palay Second Class, in Selected Regions
- H-3 Average Prices Received by Farmers
for Palay Ordinario, by Region
- H-4 Average Prices Received by Farmers
for White Corn, by Region
- H-5 Average Prices Received by Farmers
for Yellow Corn, by Region

Table H-1

IMPLICIT PRICE INDEX FOR GROSS NATIONAL PRODUCT (1966 = 100)							
1966	1967	1968	1969	1970	1971	1972	1973
100.0	106.5	111.9	117.0	133.7	150.2	160.3	188.5
						247.4	267.1

Source: Philippines, National Economic Development Authority,
1979 Philippine Statistical Yearbook (Manila: NEDA, 1979), pp. 180-181.

Table H-2

AVERAGE PRICES RECEIVED BY FARMERS FOR PALAY SECOND CLASS, IN SELECTED REGIONS* (Pesos/Cavan of 44kgs.)										
	1966	1967	1968	1969	1970	1971	1972	1973	1974**	1975***
ILOCOS	16.36	21.37	16.11	17.97	17.10	26.52	29.18	31.26	45.84	48.97
CENTRAL LUZON	19.76	18.68	18.30	19.43	21.37	28.49	30.71	34.06	46.88	47.34
W. VISAYAS	14.97	15.45	14.72	16.33	17.24	27.10	27.97	28.17	40.78	40.88
S.&W. MINDANAO	13.39	14.84	15.30	13.62	17.61	24.00	24.97	28.41	39.05	44.20
PHILIPPINES	15.79	16.63	16.16	16.82	18.70	26.36	28.29	33.07	41.61	43.90

* Wagwag or equivalent

** Adjusted to pesos per cavan of 44 kg., was originally in pesos per cavan of 50 kg.

*** January - August average

Table H-3

AVERAGE PRICES RECEIVED BY FARMERS FOR PALAY ORDINARIO, BY REGION
(Pesos/Cavan of 44 kgs.)

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974*</u>	<u>1975*</u>
ILOCOS	15.53	18.56	16.85	15.76	15.67	24.10	27.10	36.05	41.65	45.43
CAGAYAN VALLEY	14.21	14.70	13.29	14.48	15.15	27.76	25.20	36.14	39.12	42.40
CENTRAL LUZON	17.95	17.56	16.89	17.12	18.75	26.71	28.64	41.39	43.20	43.94
S. TAGALOG	14.36	14.36	15.66	16.98	17.20	20.15	26.59	39.64	40.01	41.49
BICOL	14.42	14.55	13.07	14.63	15.70	21.90	23.72	34.98	36.11	39.56
E. VISAYAS	14.89	16.00	15.24	15.54	15.53	23.54	25.74	29.86	38.03	37.81
W. VISAYAS	14.89	13.62	13.64	15.02	14.96	24.17	26.69	27.26	38.14	38.37
N.&E. MINDANAO	13.82	13.58	13.30	13.64	16.38	24.32	26.15	30.21	40.88	43.67
S.&W. MINDANAO	13.51	14.17	13.53	12.18	14.00	21.92	22.51	26.39	38.44	40.97
PHILIPPINES	14.92	15.21	14.52	14.95	15.66	24.39	26.82	34.89	39.17	41.03

* Average based on monthly prices from January to August; September to December is not available.

** From 1974 on, prices were reported in pesos per 50 kg. sacks of rice. Prices have, therefore been adjusted to conform to the 44 kg. cavan norm.

Table II-4
AVERAGE PRICES RECEIVED BY FARMERS FOR WHITE CORN, BY REGION
(Pesos/Cavan of 57 kg. shelled corn)

	1966	1967	1968	1969	1970	1971	1972	1973	1974*	1975**
ILOCOS	18.24	19.59	16.03	19.20	20.00	29.38	35.91	30.50	60.99	53.75
CAGAYAN VALLEY	15.87	12.01	11.83	15.12	15.63	29.96	28.22	30.30	50.00	58.78
CENTRAL LUZON	18.58	15.84	19.77	17.57	18.39	27.75	27.87	37.42	62.32	***
S. TAGALOG	13.43	13.04	14.06	15.53	14.94	27.91	29.57	34.24	49.51	***
ICOL	15.49	15.99	15.70	14.47	14.87	26.70	28.16	31.66	55.47	58.64
E. VISAYAS	16.63	16.04	15.19	15.96	18.05	27.12	28.15	34.68	59.89	60.15
W. VISAYAS	16.62	14.15	13.10	13.77	17.68	27.79	29.35	31.16	49.93	57.36
N.&E. MINDANAO	15.89	14.76	11.70	12.25	16.45	27.74	26.97	28.49	50.07	54.49
S.&W. MINDANAO	11.71	10.62	12.56	11.90	15.42	26.82	25.05	28.63	51.79	51.97
PHILIPPINES	16.06	14.72	14.17	15.01	16.98	26.69	27.84	30.18	53.68	57.28

* From 1974 on, prices were reported in pesos per 50 kg. sack of corn. These prices have, therefore, been adjusted to the 57 kg. cavan norm.

** Average based on monthly prices from January to August; September to December is not available.

*** Data not available.

Table H-5.

AVERAGE PRICES RECEIVED BY FARMERS FOR YELLOW CORN, BY REGION
(Pesos/Cavan of 57 kg. shelled corn)

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975**</u>
ILOCOS	19.35	22.59	15.77	18.83	24.58	32.50	38.30	30.42	62.08	55.62
CAGAYAN VALLEY	15.58	11.43	12.88	15.25	21.65	30.25	30.24	29.34	48.47	53.21
CENTRAL LUZON	18.28	17.90	18.79	16.42	21.35	***	26.07	40.08	72.17	63.65
S. TAGALOG	15.45	13.63	14.64	15.65	18.84	27.36	35.61	34.50	53.11	57.97
BICOL	15.27	16.10	16.39	15.35	16.99	30.53	31.31	32.25	52.52	53.54
E. VISAYAS	13.98	14.89	13.83	14.64	16.44	***	32.23	45.75	66.56	49.40
W. VISAYAS	15.46	15.58	12.98	15.32	17.31	27.88	29.26	31.49	47.99	55.42
N.&E. MINDANAO	15.69	17.91	10.03	12.67	19.20	36.17	29.83	22.76	46.49	52.31
S.&W. MINDANAO	12.61	9.78	11.69	11.54	17.25	27.75	24.63	28.41	45.42	56.31
PHILIPPINES	16.07	14.79	14.79	15.02	18.79	27.66	30.64	31.92	52.04	54.91

* After 1974, prices were reported in pesos per 50 kg. sack of corn. These prices have, therefore, been adjusted to the 57 kg. cavan norm.

** January - August average.

*** No data available.

APPENDIX I .
REGIONS OF THE PHILIPPINES

REGIONS OF THE PHILIPPINES

The Philippine government increased the number of geographic regions in the Philippines from 1970 to 1975. In 1970 and earlier, the Philippines was divided into 9 geographic regions plus Manila. From 1975 to the present, the Philippines is divided into 12 geographic regions plus Manila. This change affects the Visayan Islands and Mindanao.

As most of the information presented in this report is time-series data (i.e., before 1970 and after 1975), the regional classification used before 1970 has been employed. To accommodate more recent data (i.e., 1975 to the present), the following assumptions were made, as shown in table I-1:

- region VI (before 1970) is considered as being equivalent to regions VII and VIII (after 1975);
- region VII (before 1970) is equivalent to region VI (after 1975);
- region VIII (before 1970) is equivalent to regions X and XI (after 1975); and
- region IX (before 1970) is equivalent to regions IX and XII (after 1975).

The remaining regions in the Philippines were not affected by the change. The assumption made in table I-1 can be checked by examining the map on page vi.

Table I-1

REGIONS OF THE PHILIPPINES

<u>1970 and Earlier</u>		<u>1975 and After</u>	
Region I:	Ilocos	Region I:	Ilocos
Region II:	Cagayan Valley	Region II:	Cagayan Valley
Region III:	Central Luzon	Region III:	Central Luzon
	Manila	Region IVA:	Metropolitan Manila area
Region IV:	Southern Tagalog	Region IV:	Southern Tagalog
Region V:	Bicol	Region V:	Bicol
Region VI:	Eastern Visayas	Region VI:	Western Visayas
Region VII:	Western Visayas	Region VII:	Central Visayas
Region VIII:	N. & E. Mindanao	Region VIII:	Eastern Visayas
Region IX:	S. & W. Mindanao	Region IX:	Western Mindanao
		Region X:	Northern Mindanao
		Region XI:	Southern Mindanao
		Region XII:	Central Mindanao

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