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# Rural Change and Spatial Reorganization in Sri Lanka

Barriers against development  
of traditional Sinhalese local communities

Curzon Press

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SOME NOTES TO THE READER

In order to facilitate the study of this book it is necessary to define and clarify some concepts and abbreviations used in the text.

- A) Ceylon vs. Sri Lanka. European rendering of the native name, Sri Lanka, is traditionally Ceylon. This rendering was officially used during the British period, but Sri Lanka was revived as the official rendering when it became a republic in 1972. In this book both forms are used. When describing events basically concerning a period previous to 1972, the rendering of Ceylon is used. In the case of events concerning more recent years, the form, Sri Lanka, is used.
- B) Central place vs. town. As is the case in the Western world, Sri Lanka has communities of varying size with a varying number of central functions. These agglomerations may vary in size from a population of a few hundred up to nearly one million.

Central place is a concept that has been used by a number of geographers in central place theory during the present century. Many attempts have been made to apply central place theory to communities in Western countries.

I consider it unwise to use the concept, central place, too frequently in Sri Lanka, as the structure and functions of the indigenous urban centers differ when compared to European conditions. Instead, the concept, town, will be used unless a situation is described where a town explicitly has important central func-

tions. In section 4.3.1. there is a classification of various types of urban settlements.

- C) Local community vs. village. In this book the concept local community is considered to have a broader meaning than the concept village. The reason for this is that most settlements that can be observed from a motor road are more recent and therefore cannot be called traditional. Only traditional communities with a specific social and economic structure ought to be called villages, although they might have undergone some important change. In section 4.3.2.1 there is a broad description and classification of occurring types of rural settlements in Sri Lanka.
- D) Village maps. No professional land surveyor has been engaged for the construction of the village maps in Part II of this book, and I have used no instruments myself for the survey work. For this reason the maps of the four villages surveyed are not exact to such a degree that they can be used for the planning of detailed engineering or similar work. On the other hand, they are sufficiently representative to constitute a basis for social and economic planning. The information contained in the maps has been collected during interviews with all families in the villages, and numerous hours have been spent walking in the villages and their surroundings, sketching the area step by step. These sketches have been corrected continuously during the field work periods in the villages, and from them I have finally been able to construct the maps. Distances and the relative location of houses, roads etc. have been paced out. The official maps with a scale of one inch to the mile (revised by the Survey Department in Sri Lanka), have also been used as a basis.

E) Abbreviations and terms appearing in the text.  
At the end of this book there is an index that will serve not only as a reference to authors, phenomena or proper names cited in the text, but also as glossary of terms or abbreviations appearing in the text.

F) Conversion tables of measures used in this book

1) Length

1 mile	=	1.609 km
1 foot	=	0.305 m
1 inch	=	25.4 mm
1 km	=	0.62 mile
1 m	=	39.4 inches = 3.28 feet

2) Area

1 sq mile	=	2.590 km <sup>2</sup>
1 acre	=	0.405 ha
1 sq foot	=	0.093 m <sup>2</sup>
1 sq inch	=	645.16 mm <sup>2</sup>
1 sq km	=	0.386 sq mile = 250 acres
1 ha	=	2.5 acres

3) Mass

1 lb	=	0.454 kg
1 oz	=	28.350 g

4) Measure of capacity

1 bushel	=	0.036 m <sup>3</sup> = 36 l
1 gallon	=	4.546 l
1 hl	=	2.75 bushels

5) Weight losses by husking of paddy

10 kg paddy (unhusked rice) equals 6,6 kg rice.



## FOREWORD

Development aid is a concept that can be interpreted in many ways. From a general point of view one might say that the concept implies technical or humanitarian aid given to economically weak countries or regions. Huge sums of money are each year fed into various agencies, which transform the financial input into practical aid. More comprehensive projects are generally followed up by a thorough evaluation to map out the effect of aid, which is normally measured in solely economic terms in the absence of better and more comparative measurement variables.

Before the implementation of development projects, preliminary economic and social investigations are generally carried out to facilitate the realization of the planned project and give optimum results for the aid input. In order to analyse the possibilities of reaching the grass root level with various forms of development projects, I have chosen to carry out a study in Sri Lanka focusing on the efficiency of attempts at development at the local level. The efficiency of aid and the results of efforts at development are judged differently due to the level chosen for investigations. Many reports from various disciplines have treated questions on development at national and regional levels. The main fields of interest for which financial aid has been given are industrial development, strengthening of the infrastructure, exploitation of natural resources, and the like. The local level has traditionally drawn the attention of social anthropologist and representatives from adjacent fields.

Other disciplines might well attach greater importance to considerations at the local level, in studying questions of development. Countries receiving aid have primarily

agrarian economies, and thus a proportionate amount of aid should be given to rural development in the agricultural sectors.

It is both valuable and urgent to develop geographical methods for analysing and explaining development problems at the grass root level. A major reason for this is that the concept of development can often be differently understood, according to the level of analysis under consideration.

The ultimate recipients of various aid efforts are individuals at the local level. It is of major importance to stress ways in which these people can be mobilized and engaged, and to extract from them an assessment of the type of aid they regard to be most needed to improve their future living conditions.



# I. GENERAL OBJECT OF THE STUDY

## 1 INTRODUCTION

### 1.1 Basic aim of the study

This study, describing rural problems in Sri Lanka, was initiated by a visit to the country in 1968. During a month that year, data concerning the population problem and family planning programmes in the country were collected for a Geography thesis. During 1968 contacts with a rural development organization, Sarvodaya Shramadana, were also established. At that time, the movement, being only ten years old, had comparatively limited financial resources available to carry out development projects. Yet its efficiency seemed to be fairly high according to the impression from work camps in a couple of villages. As time passed the organization increased in size and the number of project villages grew. In 1972 I spent about three months in Bundala, south eastern Sri Lanka, a village connected with the movement since 1971. During the first period, the development programmes in this village seemed to have succeeded but the success hoped for ended in failure. Reports from other villages and a number of personal visits to villages connected with Sarvodaya 1972 indicated that some community development programmes succeeded while others failed.

Some people assumed hastily that failures of some village projects could be explained by too rapid growth of the movement and, the problems of organization because of this.

Results from proceeding studies indicated, however, that the reasons for failure might be of another nature. Though the rural areas of Sri Lanka apparently need to be developed it is not evident that projects will succeed, however well planned they might be. By far the important obstacle seems to be unfavourable preconditions for development in many rural villages of Sri Lanka. To elucidate this problem an investigation of social and economic problems and their

interdependence from a geographical point of view was carried out in four Sinhalese villages. It was the basic aim for the materialization of the following study to find out the obstacles for a general improvement of living conditions of villagers in Sri Lanka. Of practical reasons it was necessary to limit the study to four Sinhalese villages and from the conclusions drawn by this survey to suggest a possible model of explanation.

1.2        A statement about the relationship between the less fortunate countries of the world and the more fortunate countries

The Third World was up to the time of the oil crisis at the end of 1973 considered by many as maybe the most appropriate designation for the group of nations regarded as the less fortunate on earth. The ways and means of describing the origins of disparity between fortunate and less fortunate countries in the world are as numerous as the attempts to do it. This is automatically done when one searches for an objective explanation for the fact that some countries are more developed than other. Gunnar Myrdal says that within social science, each investigation of a social problem - however limited it is in its extent - is and must be determined by values. A disinterested social science has never existed and can not exist in the future for logical reasons. (Myrdal, 1968). Most of the less fortunate countries have previously been colonies of European countries and bear witness of this relationship in many ways today. Much of western technology, administration and political systems have been introduced into and has spread in these former colonies, which in most cases reached formal independence during the years 1945-1962.

The heavy impact of the technologically advanced European culture taught people in the poor countries to be influenced by western thoughts and therefore start to imitate European social, economical and technological behaviour in important matters. Post war Western Europe and North America experienced an economic rehabilitation which later

led to the establishment of a number of welfare states characterized by advanced technology with highly mechanised production.

In many of the ex-colonies a process of impoverishment has taken place especially among the rural masses. Underdeveloped countries are not underdeveloped by tradition, but they are the victims of a state of an underdog relationship which has become permanent to more technologically advanced countries, which improve their wealth at the expense of the poor countries. This study attempts to clarify how this is possible.

2 THEORETICAL ASPECTS ON MODERNIZATION  
AND DEVELOPMENT

2.1 The Third World, The Fourth World and some of  
their problems within a theoretical frame.  
Main aspects: the concepts of Development  
and Modernization

2.1.1 Development and development studies

Does all change constitute development? This question is undeniably both controversial and confusing.

It is confusing in many senses, one being that development is a concept which it has never been possible to define accurately. Numerous scientists, journalists, teachers and others involved in the discussion of the actual and possible course of socio-economic transformation in poor countries have given their views on what development should constitute. For a further discussion see Frank (1975 ), Brookfield (1973), Lundqvist (1975) and Myrdal (1968 ), to mention a few contributors.

The developing countries of the world need help from developed countries in order to develop. This axiom has been upheld throughout the world for a long time. However, it implies that developing countries are poor. Today, even this is not completely true. Judging from the GNP figures, the per capita income in some developing countries is higher than that of many developed countries. Kuwait is a good example of this fact, as it has the highest GNP value per capita in the world in 1975. It is not even evident that all developing countries desire "aid" from the developed nations.

Recent works within this topic distinguish between the Third and the Fourth World. The Third World comprises developing countries with a GNP per capita not below a certain US dollar value and possessing attractive raw materials.

The Fourth World comprises the poorest countries lacking natural resources. This leads us to the question how our approach to the non-industrialized nations has changed during the last decades.

In the 1940's and 50's there was much talk of the under-developed countries in the world. This term was used to indicate countries or regions (colonies) which, due to insufficient industrialization or lack of rationalization in the agricultural sector, were unable to attain annual gross national incomes above a certain level. In due course, as the discussions proceeded concerning suitable models for the development of under-developed countries, these nations gradually came to be called developing countries and this was the current term during the 1960's.

When the cold war ended with the Cuban crisis in 1962, a new era characterized by a will to mutual recognition of existing spheres of influence arose between the Western powers and the Eastern bloc. The cultural revolution got under way in the People's Republic of China in 1966 and reached its climax in 1967. When conditions had been stabilized once more within the country's borders, China consolidated her position as a 'dark horse' in big power politics. In other words, China acted more and more in the role of a big power and the two earlier dominating big power blocs and their allies began to reevaluate their policy towards China.

Since the six-day war in the Middle East in 1967, the SALT negotiations, the events in Prague in the Spring of 1968 with Soviet intervention as a result and the Indian-Pakistan conflict in 1971, and especially the mutual agreement that was countersigned by 35 nations in Helsinki in August 1975, it has become ever more apparent that a factual recognition of spheres of influence exists between the USA and her allies on the one hand and the Soviet bloc on the other. Former U.S. president Nixon's visit to China also indicated a softening-up in the political relations between these two powers. After the

Second World War we have also witnessed the Japanese miracle with an explosive technical and economic development.

To-day, a severe deterioration of the environment is a major threat to the Japanese nation and it seems to be becoming more and more urgent to emphasize human, social and ecological problems within long-term planning in order to avoid an otherwise inevitable catastrophe.

All these events in the Western World, the Soviet bloc, China and Japan have been reflected in the developing countries and their choice of a model for development. They also contributed to the institutionalisation of the concept the Third World.

At the end of 1973, the oil crisis spread throughout the world. A great amount of information was circulated about how the developed countries were hit by this crisis, whereas much less was known concerning how the poorest countries suffered, despite the fact that the damaging effects were generally far more serious among them. The formation of the OPEC organization also affected US policy and may also be a contributing reason for the US withdrawal from Indo-China.

We can henceforth speak of the Third World as comprehending those countries where economic development can take place self-sufficiently, while the Fourth World is represented by these countries where economic progress only with great difficulties can be realized without assistance from the outside, regardless of the model chosen for development. As a starting point we might know where the need for development is most acute. However, there is no answer to the question of how to achieve development. Moreover, it is far more difficult, not to say even impossible, to delimit and define the concept 'development'. One reason for this is that, in every situation where the topic is dealt with, it is handled by different actors in various conditions and aimed at describing desire goals, but for different receivers, be they people, institutions, regions or ecological conditions.

A first step in approaching the concept of development might be to elucidate how development should be studied, and further how the concept ought to be treated in a geographical context. Brookfield (1973), wrote:

"A dualism of approaches to the study of the Third World is reflected in the work of geographers rather more than that of most social scientists, but it must be breached if we are to make progress. My belief is that the dialectic among geographers of the Third World has led to no synthesis because it has been misplaced. One group has accused their more generalizing, numbers-orientated colleagues of superficiality, false interpretation and undue restriction of approach because of the constraints of data. In return, it has been alleged that the others are idiographic, methodologically primitive or incapable and theoretically weak, but the confrontation misses the essential point." (Brookfield, 1973, p 15).

From the above it can be understood that there is a contradiction between those geographers choosing a quantitative approach on the one hand, and those preferring a qualitative analysis on the other. Regardless of the method chosen, it is perhaps necessary to involve both aspects of development, qualitative and quantitative change.

Another important matter concerning development studies is of the level of approach, as problems in this context are of a very different nature depending on the level of study chosen.

"It is difficult to understand the causes of the major differentiation present in the modern world. To contribute as a geographer to this highly relevant field of study it is necessary to work at both macro and micro levels, and build theories from the ground." (Ibid. p. 16).

It is thus important to shed light upon what effects a development policy at the macro level causes at the micro level. What might be regarded as a step forward at the

national level could well be a failure for chosen individuals at the micro level. The Green Revolution is perhaps the most well-known example of this fact.

".... the superior development of some is not paid for by the exploitation, that is, by the deliberate degradation of others." (Brookfield, 1973. p. 8) Quotation from Wilson, 1940).

It seems clear that there is no standard answer to what development is, and how to delimitate its use as a concept, unambiguously describing a process of change towards desired goals. The concept must be composed in regard to the context in which it is used and by whom it is used.

A possible way of doing this is to identify three different bases for the application of the concept:

- 1) The first concerns those persons or groups using it. What interests do they have and what strategies or development models do they favour?
- 2) Secondly, it is important that development can mean one thing in industrialized countries and another thing in non-industrialized countries or regions. Needs may vary considerably. A distinction must also be made between the Third World and the Fourth World.
- 3) Thirdly it is of greatest importance to elucidate how development should be studied. A process of development can either be studied by a qualitative method or by a quantitative method.

We have now skimmed the surface regarding the concept of development, and to plunge deeper it is necessary to link theoretical reasoning about development to the concepts modernization and socio-economic change. However, it is not a major aim of this study to engage in a thorough attempt at explaining some disputed concepts, and hence this theoretical part will not be exhaustively developed.



2.2 An attempt to explain the dynamics of modernization, development and social change

2.2.1 Concepts of development, modernization and social change

Theories around the conceptual complex of modernization/development have occupied a great number of writers in this century and the number of definitions and explanations of the concepts involved are almost as numerous as the authors themselves. I do not intend to give an exhaustive account of the various schools of opinion but instead illustrate a few of the most well-known trends of opinion, on the basis of which certain fundamental points of view can be established as to what actually constitutes development in the Third World and what, in my opinion, it really ought to be.

When dealing with the process of development/modernization, its driving force, course and effects one very easily lapses into hair-splitting of the type 'Which came first, the chicken or the egg?' Henry Bernstein (1971), describes modernization as ... 'a total social process associated with (or assuming) economic development in terms of the preconditions, concomitants, and consequences of the latter ... this process constitutes a universal pattern'.

Lerner (1958) for his part maintains that modernizations is ... 'the social process of which development is the economic component'. Whatever opinion one holds regarding the meaning of development/modernization it often seems to be a question of guiding and governing processes. In order either to reject or accept this supposition the concepts of social change, modernization and development must be analysed as well as their mutual relationship. It is beyond the scope of this study to suggest definitions of universal application. The clarifications of the concepts involved must for the time being be regarded as operational. We are compelled to re-

duce some of the earlier fields of application of the concepts in order to produce terms which are practicable, considering the purpose of this study. It will also become apparant that social change, development and modernization have different meanings, depending on the level of analysis chosen. In what follows, attention will be focused merely on two different levels, namely the macro level and the micro level.

Disregarding the different levels, the figure on the following page gives a diagrammatic example of the relations between the three concepts of change.

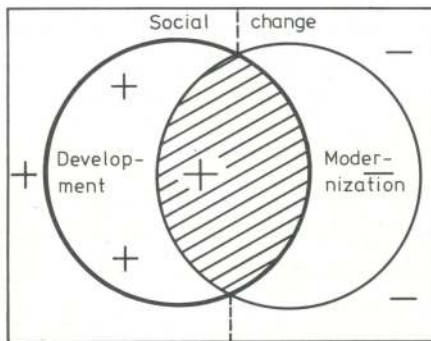


Figure 1. The mutual relationship as well as the positive and negative values of the three concepts of change. For further explanations see text below.

Social change is the overlapping concept. This term refers to the process, by which a society is changed in time either with regard to structure or function. This concept can be applied both in a negative and a positive sense, seeing that it comprises all changes, even if they result in deteriorated conditions. An illustration in historical times of such negative changes can be found in the decline and fall of the Roman empire. Another macro perspec-

tive can be obtained by observing the course taken by the process of industrialization in modern times. At the same time as industrialization has created superior methods for the employment and maintenance of a growing population, it has also given rise to the most serious environmental problems hitherto facing mankind. Many of the political problems in the world can also be indirectly explained by man's increased eagerness to industrialize. An example of positive social change is perhaps the breakthrough of the Age of Enlightenment in Europe in the 17th and 18th centuries. Finally it should also be said concerning the concept of social change that it is descriptive, i.e. the term should be used to describe fictive or actual changes of or in society.

Development, as a concept, is subordinated to social change. Already at the outset it must be pointed out, that this concept should be regarded as a stipulative term and therefore have a positive meaning. By this we can understand that development is a purposeful, governed process and that the guiding forces behind the process have a clear purpose for their actions. This should not be regarded as a pragmatic definition. Instead it must be evaluated for each area within which it is applied. The word positive means that the forces which press on development, regardless of whether it is a question of an entire population or merely a group of people have a certain progress with their intentions.

Development in the Third and Fourth World should thus imply a successive solving of the problems facing various countries within this category. One instance of such a development is success in increasing the production of a primary food product in a country at a faster rate than the growth in population. A reasonable result of such a development is a reduction in price of the commodity involved, which naturally above all benefits the low-income section of the population.

Obviously, the use of the word 'positive' in connection with development is highly charged with values. Hardly any

'development' is exclusively positive if you consider all the effects. For the time being, therefore, this concept should be regarded as related to certain aims. This means that one speaks of actual development in cases where a process of change has taken place in accordance with previously determined goals. In this respect the applicability of the concept differs from that of modernization.

Modernization is a descriptive concept comprising both positive and negative values. This is shown diagrammatically in Figure No 1. The circle of modernization has a segment which lies within the negative part of social change. By modernization I mean simply the creation and diffusion of innovations. As an illustration of modernization one can point out for instance the expansion of the pharmaceutical industry. The positive effect of this expansion is the extinction or decrease of cases of a large number of diseases which had in previous years been the curse of mankind. A negative effect is the ever-growing abuse of medical drugs, which is, in some cases, leading to large groups becoming addicts.

An example which can show the principal differences in development emanates from India. The women in a large village had a lot of trouble with their washing. They had to clean it down by a river in the neighbourhood. However, at the same time this task gave them an opportunity to meet one another and exchange various gossip while working by the river. As a result of a well-meaning initiative from outside, a number of small wash-houses were built in the village with the obvious purpose of facilitating the women's work. However, it turned out that the women's desire to meet and talk with one another was greater than their need for less work with the washing and, as a result, the wash-house were hardly used.

When evaluating the project with the wash-houses we can establish the following:

- A/ Aspect of modernization. The aim was to modernize the 'washing facilities' in the village. This aim was achieved by the erection of new and functional wash-houses.
- B/ Aspect of development. The aim was to reduce the burden of work for the women by facilitating their washing arrangements. This goal was not achieved due to the fact that, from the outset, the social aspects of the problem had been disregarded.

### 2.2.2 Development in a dual economy

In most technologically non-advanced countries, i.e. the Third and the Fourth Worlds, many social scientists maintain the opinion that a dual economy has been the result of frequent contacts with the industrialized world. A dual economy implies a contradiction between modernized and traditional sectors in the economic systems of the non-industrial countries, which leads to an unbalanced development situation. A dual economy might be understood as a centre-periphery relationship, where the centre is the overlapping level represented by the site of major investments and most important administrative and governing institutions. The absolute centre at the national level is normally the capital. The periphery constitutes all the back-wash areas i.e. the rural realm, populated by often poor rural inhabitants contrasted with a few well-to-do families. This periphery situation is not a universal phenomena for the Third and Fourth Worlds, though it is the most common case. I can also be said that the dual economy systematized an observed contrast between the structure and behaviour of foreign controlled and indigenous economic systems. (Brookfield, 1973):

"Griffin argues that dualism obscures the interdependence of the whole economy and regards the pervasiveness of dualistic theory as responsible for a widespread bias in favour of the so-called modern sector in investment policy. He views the division of economy into 'traditional' and 'modern' sectors as unhelpful and demonstrates that the usual assumptions made about the former can without difficulty be shown to be erroneous." (Brookfield, 1973. p. 6 ).

On the other hand Singer (1970) insists that ... the co-existence of two economic structures is 'chronic and not merely transitional' and that disparities may be widening. To Singer, the fundamental force in dualism is the sharpening localization of scientific and technological advance both within countries and much more fundamentally between countries.

Thus it is possible to identify the centre-periphery phenomena both at the national and international level. Dualism, here interpreted as economic unbalance, can be identified within a country both at the macro and micro level, but observation of the phenomena is more easily done at the micro level. Long term plans, trade statistics, annual budgets and other information for the macro level can often be unreliable, especially in non-industrialized countries. Surveys carried out in rural areas, parts of cities or other small regions can uncover social and economic contradictions that expose a dual society at the micro level. One aim of this study is to present a case of dualism, viewed on overlapping as well as local levels, represented by Sri Lanka.

B.H. Farmer, who has worked for several years with research in Sri Lanka, links the pluralistic society and dualistic economy in the country with its colonial past. He argues that a plural society is the social accompaniment of a dual economy; and since the latter is, almost by definition, a product of colonialism, it is implied that a plural society also has followed imperial flag. (Farmer, 1968).

The interpretation of the concept dualism has, though, been unsatisfactory and insufficient so far in many respects. It seems difficult, even impossible, to use the concept for holistic explanations of conditions in developing countries or relations between developed and developing countries whatever the level for analysis that is chosen.

The interpretation of the concept dualism has been unsatisfactory and insufficient so far in many aspects though. It seems difficult or even impossible to use the concept for holistic explanations of conditions in developing countries or relations between 'developed' and 'developing' countries whatever the level for analysis that is chosen. Frank (1969) argues:

"The dualist theory ... (is) inadequate because the supposed structural duality is contrary to both historical and contemporary reality ..." "Dualism is not only theoretically inadequate because it misrepresents and fails to analyse the capitalist system on the international, national, and local levels, but also because it fails to adhere the standards of holism, structuralism, and historicity. Dualists contravene holism in explicitly setting up two or more theoretical wholes to confront single social whole which they can not or will not see." (Frank, 1969. pp. 41-42).

According to Frank it seems as dualists merely can create a fragmented view of global phenomena and merely observe the structures of parts. The significance of this theoretical argument is that it is possible to relate the situation of a poor peasant in a developing country with events on the world market. The conditions for an individual - the micro level - can be determined by events taking place on the international market - the macro level - as was observed in many countries during the oil crisis, 1973-74 (Hettne, 1975).

### 2.3 Social change and inequality

Inequality is a phenomenon that can be observed either as economic imbalance between regions or social and economic differences among groups or individuals in a community. For a long time problems of inequality among groups and individuals have been tackled by representatives for marxist as well as liberal ideologies.

Regional inequality has not drawn much attention to itself until recently, though it is an acute and very important problem. The nature of regional problems are very different if non-industrialized countries are compared with industrialized countries. The nature of regional economic differences among

individuals and groups tend to be more accentuated in the former group of countries, regional differences also appear more striking in non-industrialized countries. One reason for this might be that the instruments for regional planning are normally well developed and efficient in industrialized countries, while there often is a lack of coordination between different regions regarding overlapping planning. This in its turn might be a consequence of three facts:

- A) An increased flow of migrants, capital and other resources from rural areas to urban sectors. (Lundqvist, 1975. p. 24).
- B) Lack of an efficient official policy supporting regions lagging behind.
- C) Insufficient communication and transport net.

The economic gap is widening between countries as well as between individuals in various countries. Every global crisis occurring in the future will accentuate this tendency unless there will be a redistribution of resources between nations and a conscious policy aiming at equality within nations. Frank (1975) has concluded that underdevelopment no less than development itself is the product and motive power of capitalism.



3 A GENERAL DESCRIPTION OF SRI LANKA

3.1 Geographic particulars

3.1.1 Location

The island of Sri Lanka, shaped like a pear, dangles from the southern tip of India. It lies between latitude  $5^{\circ} 55'N$  and  $9^{\circ} 50'N$  and longitude  $79^{\circ} 42'E$  and  $81^{\circ} 53'E$ . Sri Lanka is separated from the Indian mainland by the Palk Strait to the north and the Gulf of Mannar to the west. For centuries Sri Lanka was the crossroads for sea traders and explorers from both east and west. Some of Alexander the Great's companions came three hundred years before Christ; Ptolemy, the Greek astronomer, physician, mathematician and geographer, came some hundred and fifty years after Christ and drew the first map of the island; (Ptolemaeus, 1508) Fa-Hien came from China in circa 300 AD; Arab merchants, Marco Polo and Vasco da Gama also visited Sri Lanka.

3.1.2 Physical geography including climatic conditions

Geologically, Sri Lanka is a fragment of the ancient block of Peninsular India. About nine-tenths of its area is underlain by Archean metamorphic and crystalline igneous rocks: the Khondalite series of metamorphed quartzites, schists, and limestones, granites and gneisses. In alluvial deposits from the Khondalite gemstones are found, but the only substantial mineral export is graphite. The sandy coastal belts are important for their agricultural qualities, often giving rise to a narrow belt of coconut or palmyra. The common soil, though, is the latosol covering four - fifths of the area. Latosols are typical for a number of tropical countries. The latosols in Sri Lanka are deeply weathered and strongly leached, which results in a low plant nutrient and organic matter. (Bancil, 1971).

The relief of Sri Lanka is characterized by low lands near the coast and in the northern central part of the island, while a mountain area with peaks up to 2.524 m (Pidurutalagala) is located in the southern central region of the country.

Three physical regions can be clearly distinguished,

- A) the Dry Zone low country in the south-eastern, eastern, north central and northern part of the island,
- B) the Wet Zone low country in the southern and south west regions,
- C) the Hill country, which almost completely falls within the Wet Zone, in the southern central area.

The vegetation differs considerably in all three regions. Paddy fields, coconut and rubber plantations dominate in the low country Wet Zone. In the hill country hardly anything remains of the indigenous vegetation except the Sinharadja rain forest in Sabaragamuwa Province. Tea plantations dominate the scenery in the hill country, especially in the higher altitudes. In the eastern hill country soil erosion is very common but vegetable cultivation, in the form of horticulture, is predominant. Terraced paddy is also found in many parts of the hill country. Jungle and scrub lands dominate in the low country Dry Zone mixed with paddy fields which are watered by tank irrigation and with slash-and-burn (chena) cultivation.

The climate of Sri Lanka can be divided into two regions, the Wet Zone and the Dry Zone. In the Wet Zone rainfall can amount to anything between 2 000 and 5 000 mm per annum during two monsoons, while the precipitation rarely exceeds 1 800 mm in the Dry Zone, which normally gets rainfall only during the northeast monsoon between October and April. The humidity is high in the Wet Zone, while it is low in the Dry Zone. The temperature ranges between 25° and 35° in the Dry Zone, and 24° and 32° in the Wet Zone. In the hill country, though, the temperature can fall below 10-12° during December-February, and it is fairly cool but not cold during the rest of the year.

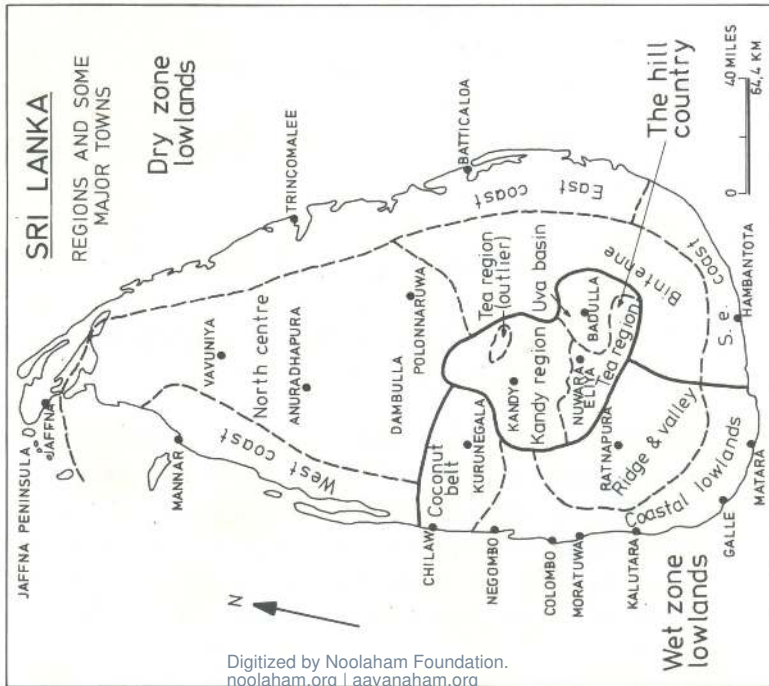


Figure 2 Ecological regions, climate zones and major towns in Sri Lanka.

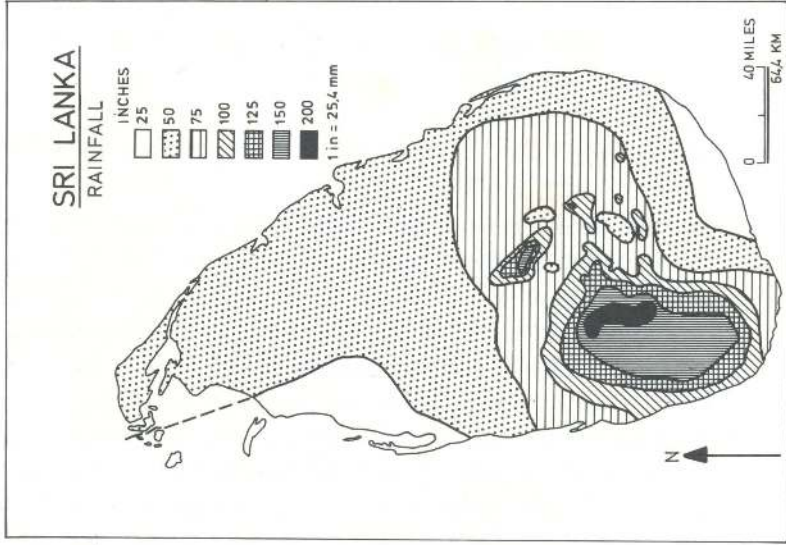


Figure 3 Annual rainfall in Sri Lanka

- 1) The Wet zone lowlands
  - a) South west coastal Lowlands
  - b) Coconut belt
  - c) Ridge and valley country
  
- 2) The hill country
  - a) Kandy region
  - b) Tea region
  - c) Uva basin
  
- 3) The lowland Dry Zone
  - a) Jaffna Peninsula
  - b) West coast
  - c) East coast
  - d) Southeast coast: Hambantota
  - e) Bintenne
  - f) North centre

3.1.3 A brief comment on the agricultural population

Agriculture

By tradition, Ceylon has always been a country of farmers. The biggest caste is the goyiagama which means farmer. The Ceylonese caste system is inverted in the sense that the Goyiagama is also the highest caste. About 50 % of the work force today is employed within the agricultural sector; this figure does not include those employed in the plantation sector who fall within the remaining 50 % of the working population. It is difficult, though, to give any exact figures as a great proportion of the farming population only works with agriculture during certain times of the year and work within the other sections during the rest, mostly as casual labour. Unofficial figures state that about 40% of the work force is partly or completely unemployed.

The most important agricultural product for domestic use is paddy, rice being the staple food for the Lankese people. For the rural population, rice accounts for over 40% of the daily calory intake and 35% of the protein intake. (Poleman et. al. 1973).

Agricultural conditions will be treated more extensively in section 4.

3.2 Population

3.2.1 General particulars, settlement pattern and religion

Sri Lanka is by many considered an overpopulated country with roughly 15 000 000 people living on 66 000 km<sup>2</sup>, but if one studies the population distribution, there is cause to reconsider that conclusion. The Wet Zone area covers only about 20 % of the area, but nearly 80 % of the entire population is settled in this region. In figures this will

show that about 12 000 000 people are living on 21 000 km<sup>2</sup> (31 % of total), which gives an average density of 580 inhabitants per km<sup>2</sup>. For the Dry Zone, the figures are 3 000 000 distributed on an area of 45 000 km<sup>2</sup> (69 % of total) with an average density of 67 inhabitants per km<sup>2</sup>. (Bancil, 1971, Sievers, 1964). It should also be noted that there are two important settlement clusters in the Dry Zone, the Jaffna area in the extreme north, and the east coast. The competition for space is thus very high in the Wet Zone, while there are important land reserves in the Dry Zone.

Pluralism is characteristic of the inhabitants of Sri Lanka which is divided into a multilingual, multiethnic and multi-religious society. The main ethnic groups are Sinhalese (73%), Sri Lanka Tamils (11%), Indian Tamils (9.5%) and Moors (7%). Small minority groups are Burghers, who are descendants from the Portuguese and Dutch colonialists. Eurasians, Malyas and Veddhas, a tiny remnant of the aboriginal population.

The Sinhalese, of north Indian origin, are Indo Aryans and speak an Indo-European language. The bulk of the Sinhalese population are Mahayana buddhists. Mahayana is considered to be the purest form of Buddhism.

The Tamils originate from southern India and are ethnically Dravidians. The Ceylon Tamils came to Sri Lanka centuries ago during wars and the Indian Tamils, most of whom have not been given a Ceylonese citizenship, were imported as plantation labourers by the British. The majority of the Tamils are Hindus and speak a Dravidian language completely different from Sinhalese.

The Moors constitute a mixture between Sinhalese or Tamil people and Arabic tradesmen, who came to Sri Lanka in early times. They speak a mixed Sinhalese-Tamil and Arabic dialect and most of them are Muslims. It should also be mentioned that about 7 % of the population are Christians of various ethnical origins.

All ethnic groups, except the Veddhas, have more or less been integrated into the national economy. The Veddhas though, now numbering only a few hundreds and whose traditional culture stands at a very low technological level, have kept to hunting and collecting until very recently. Now they either continue to hunt and collect and become extinct or try slash-and-burn cultivation and survive under extremely meagre conditions. Veddhas and other south-Asian rest groups entered (South Asia) before the Indo-Arians.

The various ethnical groups are very unevenly distributed. The Wet Zone low lands are dominated by the Sinhalese, except for the Colombo district, where the population is fairly mixed. The mountain region is characterised by a mixture of Sinhalese and Indian Tamils. Ceylon Tamils are concentrated to the Jaffna area and the east coast, where many Moors also have settled. The Moors are to be found all over the country, and in many cases they play a dominant role within the retail trade sector of smaller central places. In the rest of the Dry Zone, the Sinhalese population dominates. This ethnical difference has created serious conflicts between the various groups, a matter that will be given more attention later.

### 3.2.2 Demographic development

The demographic history of Sri Lanka is both an interesting and disputed topic. The population is believed to have amounted to anything between 6.5 to 17 millions during a peak of the ancient culture about 1150. The correct figure has been disputed by many and there is no reason for me to penetrate this question here.

During 700 years the population decreased and the British colonialists believed that there were less than 900 000 people in the beginning of the 19th century.

In modern times, the demographic pattern of Sri Lanka has been similar to most of the other ex-colonies of the world. A high crude death rate combined with a fairly high crude birth rate until the late forties resulted in a slow natural increase, which increased rapidly, when the mortality decreased on the late 1940's.

Some of the first known statistical figures were collected from an archive, Public Records Office in London, and give an interesting, though, somewhat underestimated picture of demographic conditions and distribution. (See the appendix).

It seems plausible that the population was bigger in 1827, than the British colonialists assumed. Most of the people lived as peasants in inaccessible villages off the main tracks. However, the long demographic cycle indicates a large population that starts to decrease dramatically and then turn to a rapid increase.

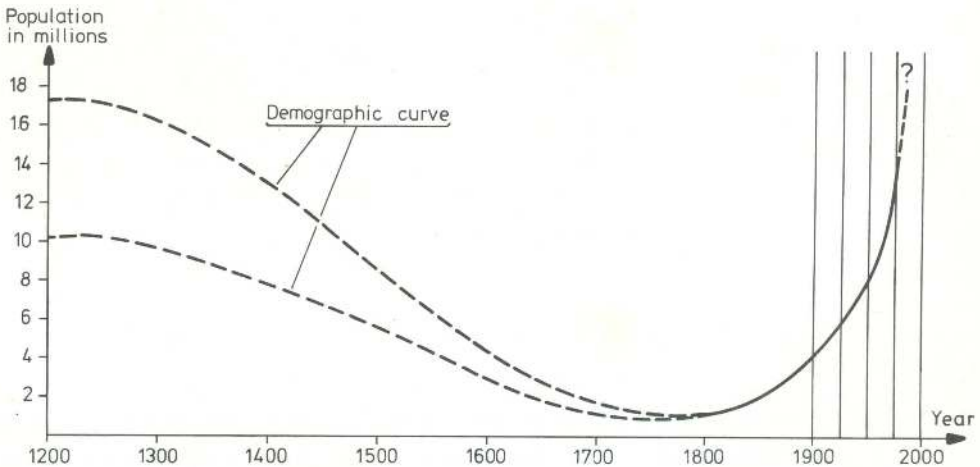


Figure 4 . Assumed decrease and proved increase of Ceylonese population during 800 years.

Since about 1820 there has been a steady but initially slow increase in population. Until 1946 the natural increase was very reasonable, sometimes the ratio between the crude birth rate and the crude death rate has been negative. The total population increase was noticeably affected by the British import of Indian Tamils as plantation workers. In 1971 nearly 10 % of the entire population were Indian Tamils. (Dept. of Census and Statistics, Colombo 1973).

The average annual rate of population increase for the period 1901-1945 was 1.3 %, but for the period 1946-1971 it increased to 2.3 %. The slow trend of increase broke in 1946. The most important reasons for the more rapid growth rate is that an antimalaria D.D.T. campaign was begun throughout the country in 1945, and at the same time antibiotics were introduced and medical dispensaries were opened in their hundreds and the new medicines and other treatment were given at them.

Table 1. Population Growth in Ceylon, 1830-1975

Year	Population ('000)	Year	Population ('000)
1830	960	1921	5 304
1840	1 400	1931	6 053
1850	1 590	1946	7 122
1860	1 880	1953	8 290
1871	2 820	1963	10 646
1881	3 044	1971	12 748
1891	3 330	1973	13 370
1901	4 031	1974	13 660
1911	4 702	1975	13 960

Source: Jones & Selvaratnam, 1974. Bencil, 1971.

UN Demographic Yearbook, 1975.

There are also demographic factors involved in this dramatic increase of population growth, but these are of less importance in this context, and will not be treated here. In conclusion it might be interesting to compare earlier settlement patterns with the spread of people during the modern growth period. In early times the bulk of the population inhabited the ~~Dry Zone but the Wet Zone~~ low land and



mountain areas were very sparsely populated. Large areas of the Wet Zone was completely uninhabited. From the early 19th century the major population increase took place in the Wet Zone and there is reason to believe that there was even a further decline in the Dry Zone, people being attracted to migrate from there to labour opportunities in the Wet Zone, especially on the plantations. Not until the pressure on land was understood in the Wet Zone, was there any major interest to develop the Dry Zone. In the late 19th century, however, efforts under British authority to restore tanks and the encouragement of people to settle as re-colonization scheme farmers in the Dry Zone were taken under the Land Ordinance Acts. (Government Press, Colombo, 1967).

At present the crude death rate of Sri Lanka is low compared with other in south or south east Asian countries. The figure for 1972 is 8 ‰. But as crude birth rate is also comparatively low, 29.5 ‰, the natural increase is not very rapid. From 1950 the trend is a decreasing natural increase from above 27 ‰ to a figure just above 20 ‰ 1975. Whatever opinion one might have about the rapid population growth, whether or not it is beneficial for Sri Lanka, it is explained by the decreased maternal death, infant death and crude death rate, caused by the improvements within the health sector mentioned above. It must also be concluded that the British either encouraged or even were responsible for these demographic changes.

### 3.3 History of Ceylon

#### 3.3.1 Prehistoric and ancient Ceylon

Almost nothing is known of the earliest history of Ceylon. A few quartz implements and some tools have been found and are believed to have belonged to the aboriginal Vāddōs or Veddhas, of whom a few hundred are still living in remote parts of the island. These tools date back to the palaeolithic age and the Veddhas show ethnical relationship with primitive tribes like Toalas of Sulawesi and the Batin of

Sumatra. The Veddhas are believed to have entered Ceylon when there still was a land bridge with India. (Nicholas and Paranavitana, 1961. Ariyapala, 1956).

The advent of the present main population, the Sinhalese, is only known through the Pali chronicles and other epic records. To what extent these chronicles tell the truth or are merely tales is not known. It is believed that the first sea borne invaders, the Aryans from northern India, were commanded by a Prince Vijaya and that they arrived in the 6th century B.C. The first historical facts about a higher culture record the Ruhunu kingdom in south east Ceylon which was founded by King Mahanaga in the capital Mahagama 307 B.C. Some ancient ruins still remain in this area from that time. (Wikramatilleke, 1963. Nicholas and Paranavitana, 1961).

In the first century B.C. it is known that most of the Dry Zone was inhabited, with the highest density around the ancient city Anuradhapura. The hydraulic society, a culture based on an irrigation system, hierarchially arranged, was established here. (Leach, 1959. Mendis, 1957. Nicholas & Paranavitana, 1961). Southwestern Ceylon, today the most densely populated region of the country, is not known to have been inhabited at all before the 10th century from which date the first inscriptions to be found in this area. During the ancient period the small tank irrigation system was integrated into a structure where the major tanks were the main irrigation centres. The first construction of large tanks marks the foundation of the greater Sinhalese cultures.

Penetrating the history of Ceylon can be compared with exploring the Roman catacombes in the sense that like an innumeral number of mazes there are innumeral kings, places, events, wars, capitals, administrative servants and rising and falling cultures and, once having entered into this multitude of facts, it is very difficult to systematize them and find all links and connections. It is not possible to tell the history of Ceylon adequately in a few pages, but

some facts of interest bearing on the topic of this book deserve to be mentioned.

3.3.2 The Anuradhapura and Polonnaruwa periods.  
Development of the traditional, social  
and economical structures in rural areas

"Not even a little water that comes from rain must flow into the ocean without being made useful to man."

Parakrama Bahu I, 1153-1186.  
King of Ceylon.

The early Anuradhapura period is the first period of advanced civilization in Ceylon and it flourished from the time when the first large tank was constructed during the reign of King Vasabha (65-109 A.D.). From this period onwards, it is possible to follow the path of the establishment of the high cultures based on the feudal irrigational civilization. Feudalism in ancient Ceylon is not to be mistaken for and considered equal to mediaeval European feudalism. Asian feudalism is of a specific character. (Sofri, 1975). Definition of land owning differed quite a lot between Europe and i.a. South Asian societies in the mediaeval era. In South Asia in many instances the duties attached to a piece of land rather than the economic output defined the control of a particular plot. The Anuradhapura culture was further advanced during the reign of King Mahasena (276-303 A.D.), who was responsible for the construction of the first colossal tanks. Although the history of Sri Lanka is both fascinating and complicated to understand, it is of little importance to penetrate it thoroughly in this context. Some general descriptions and tendencies, though, are very important for understanding the rural economy of today; present day situations can be traced back to the mediaeval era. The traditional village of Sri Lanka still bears witness from the agricultural system of the ancient Anuradhapura and Polonnaruwa cultures, as will be seen later (Ryan, 1958). Buddhism was introduced very early to Ceylon, probably in the third century B.C. (Nicholas & Paranavitana, 1961); traditional chronicles (e.g. Mahavimsa) relate that Buddha himself visited the island. As in India, the caste system also de-

veloped in Ceylon, determining the future position for every man and woman at birth. "Caste did not originate in Ceylon, it was transplanted in concept and grew both by infusion and maturation", (Ryan, 1953. p. 5).

The caste system of Ceylon did not resemble the Indian caste system closely. It is doubtful if the Sinhalese society was ever organized after the conventional fourfold caste hierarchy, i.e. the Brahmana, Kshatriya, Vasiya and Sudra divisions, as in India. (Siriwera, 1972). In Ceylon the caste system is, and has been as far as known, inverted; i.e. the highest caste, Goyiagama (farmer) is also the biggest. But not only people belonging to the Goyiagama caste are, or have been farmers. The king sometimes rewarded caste services by grants of land. It is known that a goldsmith (Acarih) in the service of Parakrama Bahu VI (1412-1567) was given a plot of land to cultivate by the king in return for services he had performed. (Ibid, p. 3). In this way, there is reason to believe, many farming villages were founded. This might be the explanation of why two of the research villages describes later, though, being traditional peasant settlements, are not of the Goyiagama caste. Though, people of one caste in modern Sri Lanka might not have performed their traditional duties for centuries, they are themselves as well as people in their neighbourhood clearly aware of their origin. Buddhism and the caste system have been interwoven and remain an important part of the social structure in the traditional villages of Sri Lanka.

A self-supporting economic system within a closed feudal structure developed in Ceylon, and the civilization of this period was essentially located in the north central, south-eastern and eastern parts of the country, i.e. the Dry Zone. The south-western or Wet Zone part of the island, which today is the most densely populated area, was then the least developed sector. At that time people in Dry Zone rural areas depended very little on other parts of the country or the central government.

It was a subsistence, non-monetized economy and there was hardly any need of internal and/or foreign trade. The mass of the people grew their own food, built their own houses, and made their own furniture and clothes. Rice, which was practically neither imported nor exported, constituted their staple diet and, except for a few coconut trees, spice bushes and vegetables, agriculture in the early period was restricted to paddy. (Bancil, 1971. Mendis, 1957).

When the British colonialists entered Ceylon they found that the old Sinhalese cultures had been of a remarkable extension, with a land tenure system allowing a high degree of selfsufficiency. This selfsufficiency was based on the usage of irrigation works and it was assumed that the southern plains of Ruhuna, of which at the end of the 19th century only one-hundredth part (5 000 acres) was cultivated, in early times had a high population density. Blair (1902) was responsible for a survey of over 1 500 square miles in this area and found thousands of abandoned tanks, elaborate series of channels from anicuts on the larger rivers, enough to assume that not much of the flood water ever reached the sea.

Two types of plots were held by the village family: high land and low land. Paddy land (Kumbura) was the most valuable and to each plot there was an appurtenance garden and shifting cultivation land attached, which provided the basic domestic requirements of a family - rice, coconuts, vegetables, betel and areca nuts, firewood, pasture, honey and game. Lowland and highland plots, not always indicating different altitudes, complemented each other and were inseparable elements of a village holding. They provided a household with all necessary items except such as salt and clothing. (Pieris, 1957, p. 41 f).

If these quotations are understood literally, one might believe that villagers of precolonial Ceylon lived an independent life free from any obligation towards any superior authority. By this time Ceylon was a kingdom, and no kingdom can exist without vertical linkages downwards into the society. The villagers were the base of a feudal hierarchy, where the king was the top. Further, the landowning system was organized in a hierarchical way. At the top of the feudal

state was the king, and all land under his control, nindagam, was formally owned by him. Beneath the king were the princes, who each in their turn had a number of feudal noblemen subordinated to them. This system went all the way down through the hierarchy to the village level, where each farmer claimed ownership over the plot which he cultivated. The Rajakariya system was an old form of cooperation and exploitation which was upheld by landowners in the old feudal society. It forced villagers to leave a share of their crops to their superior landowner, and under certain periods in other ways, e.g. by day labour, to contribute to the landlord's welfare. The aristocratic landowners were responsible for the prince's and the king's welfare and distributed goods and services to their courts. These also gave landowners a certain share of their annual income to the king and the princes, but had another set of landowners subordinated to them, who in their turn gave their contribution to them. This system went all the way down to the grassroot level where small peasants, artisans and labourers were linked to the feudal system. (Öhring, 1975).

Tenancy is a key word for the explanation of the Rajakariya system. Every caste and class, holding land properties, was bound to the plots of land by a chain of services and duties. From the highest to the lowest, civil and judicial administration of government was enforced in order to regulate the pursuits of agriculture, and even to carry on offensive or defensive wars.

The highest property-right in land an individual could have was the *p r a v e n i* right, which conferred heritable title, but even then some personal service or payment in money or kind was associated with the land. Rajakariya attached duties to the land and not the person. Failure to perform rajakariya rendered the land *p u r a p p a d u*, which means that a new claimant was liable to the service attached to the land. (Pieris, 1957)

The feudal system can be illustrated by a diagram showing the feudal hierarchy of the Kandyan Kingdom:

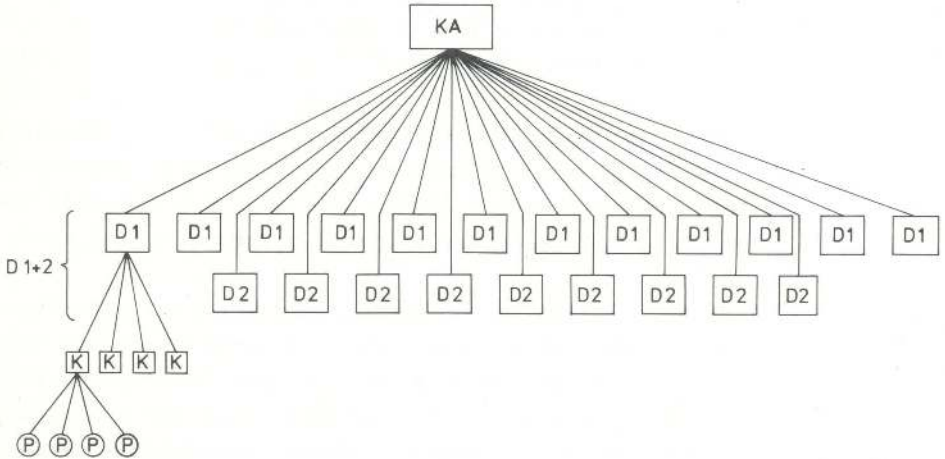


Figure 5 . The administrative organization of the Kandyan Kingdom.

Explanation of the figure: KA = Kings' Authority  
D1 + D2 = 21 divisions  
D1 = provinces or disavanes placed under a governor or disava  
D2 = 9 districts or ratas placed under a rate mahatmiya  
K = korale or territorial division  
P = pattu, composed of a number of villages

The official of the korale was obliged to collect revenues of the villages in their pattu. (Pieris, 1956). Each part of cultivated land was de facto owned by a number of people vertically linked to each other. It is necessary

to revise the concept ownership with reference to this. The concept ownership as it exists in modern Sri Lanka, is derived basically from Roman-Dutch law, which currently defines ownership as:

"Dominion or Ownership is the relation protected by law in which a man stands to a thing which he may: a) possess, b) use and enjoy, c) alienate."  
(Siriwera, 1972. p. 6).

From this quotation, derived from a modern standard legal text book, it is understood that ownership today in Sri Lanka means a higher degree of formal control over the property than what was allowed in precolonial times.

Returning again to the question of tenurial security, it is obvious that a farmer could be deprived of his land not only by putting himself into debt. On the other hand a security system in the villages protected the farmers and secured his harvests by mutual obligations between farming families doing agricultural work under a kind of permanent cooperative scheme. This system was known as k a y e.

This cooperative system must be viewed against the background of a society where there was no thrive for cultivable land and consequently no interference in proprietary rights, nor any struggle for individual ownership of land. Each man's rights and obligations were defined by custom, and no family could subsist without fulfilling their obligations. Neither sympathy nor charity were given to those who failed in doing so.

If, however, illness, death or other valid circumstances kept somebody from going to his field, this did not deprive him or his family of their share even if others worked the land. The people who helped a man or a family in this way could rely on reciprocal assistance from that man or his family when they required labour. (Pieris, 1957).



A big community built up, like medieval Ceylon, in this manner, with the feudal society, the irrigational hierarchy, the rajakariya and kayye system is a very closed entity and at the same time very strong as long as it is not threatened by invaders, disease, catastrophe or internal disturbances. This is what happened, though, from time to time, within the high cultures of Ceylon, and it resulted in serious decline and conquest by invading powers. From time to time the Anuradhapura Kingdom was molested by south Indian Tamil warriors and for some periods these invasions even led to complete conquest. For nearly seventy years the Sinhalese society was part of the Cola Kingdom of south India; the Colas were finally driven out by Vijayabahu 1070. (Ariyapala, 1968). Again Anuradhapura was attacked and the capital was shifted to Polonnaruwa, which grew to be the major city during a flourishing period of Ceylonese history.

### 3.3.3 General decline and collapse of the precolonial Sinhalese civilization

The zenith of Sinhalese civilization is considered to have been during the reign of King Parakrama Bahu I, 1153-86, who resided in Polonnaruwa. He was responsible for the construction of numerous temples, monasteries and tanks. He also managed successfully to resist invasions from southern India and to maintain internal order and unity. See quotation page 27 ). The only major irrigational project after Parakrama Bahu I seems to have been an anicut on the Kospotu Oya in the time of Bhuvanaika Bahu IV 1341-1351 (Codrington, 1971). After the death of King Parakrama Bahu I in 1186 there was a steady decline of the Sinhalese culture. Ceylon became disunited and politically divided into three kingdoms: A) Raja-rata (Northern and northern central regions, and parts of the hill-country. B) Dakkhina-deśa (Southern and western regions and parts of the hill-country. C) Ruhuna-rata (Southern Province, south-eastern and eastern regions). (Ariyapala, 1968).

Several sources record the 13th century as the period of a rapid decline of the Sinhalese culture, and this century

is most probably the time for a steady decrease of the population which more or less seems to have continued up to the 19th century. The reasons for the decay has for a long time been a disputed topic among scientists as well as laymen. There are numerous theories but the number of written sources is limited. In fact it is plausible to accept that most of the theories contain some truth about them. One tendency is evident, though. The main centre of power shifted gradually from Polonnaruwa and the Dry Zone towards the western coast and the Wet Zone, and at the same time Ceylon became divided into the three kingdoms. Between 1235 and 1815 Ceylon had several capitals competing for power without success. What was then the reason of the decay? There are three basic theories:

- I) The spread of the anopheles-mosquito from southern India to irrigation tanks and canals and canals in the Dry Zone, making malaria rapidly epidemic in Ceylon.
- II) Repeated invasions of Tamils from southern India, which piece by piece led to the division and decay of the Sinhalese culture.
- III) Colonial powers destroying the Sinhalese culture by transforming the economy and seizing political power.

Let us look at the first theory, that the spread of malaria in the Dry Zone was the main reason for the decay. There is no doubt that the tank system with thousands of artificial lakes and ponds constituted a perfect breeding place for a water-borne parasite. But scientists who have treated the subject seriously do not generally blame the decay on the tiny anopheles mosquito. Codrington (1971), Nichollas (1971) and Murphy (1971) claim that malaria became epidemic only after the decay. It might be that malaria, to some extent, caused the cultural and economic decline. (Brohier, 1934. Farmer, 1957 and Paranavitana, 1971).

People began to abandon the tanks and villages during the 13th century, either temporarily or permanently, and when the fields came to lie fallow and the jungles to regain cultivated land, malaria was spread from area to area, preven-

ting people from returning to their former settlements. (Liyanagamage, 1971). Thus malaria seems to have been a consequence of the decay instead of causing it.

The second theory blames the cultural decline on the Tamils of southern India, who invaded Ceylon several times, but more successfully managed to get strongholds from the 13th century onwards. This reason might be the most important one, as a number of written records tell of the vast consequences of the repeated invasions of the Tamils. These wars were supported by Tamil warriors already settled in Ceylon, originally there to defend the Sinhalese king, but changing sides back to their own ethnic group. At the beginning the invaders were defeated, but soon the feudal structure and administrative body of the Sinhalese kingdom weakened and the Tamils founded their own kingdom. Anuradhapura was at this time nearly completely abandoned and the capital was shifted from Polonnaruwa to a place near Kurunegale in the Wet Zone low land. Once the structure of the feudal society was disrupted, it gradually broke down, leaving more and more land to lie fallow, and pest and disease began to torment the settlers of the Dry Zone. (Indrapala, 1971. Codrington, 1971, Paranavitana, 1971. Roberts, 1971. Mendis, 1957).

Famines, followed by pestilence, caused by the failure of crops due to prolonged and disastrous floods, and the damage to irrigation works caused by the floods are surmised by others to have been the cause of the ruin of Rajarata. But ...

"The decay of the ancient Sinhalese civilization was caused primarily by the collapse, as a consequence of the foreign invasions and internal discord."

(Paranavitana, 1971, p. 52).

What role did colonial invaders from Europe play? It seems as if the decay already had gone quite far when the Portuguese entered Ceylon in 1505. It has been confirmed that the administrative structure of the Sinhalese society was merely a simple inherited remnant of the governing body three or four hundred years earlier. The Portuguese also recorded widespread pestilence and fever, which was said to have

started about 300 years before their arrival. There is no doubt that the colonial invaders further disunited and weakened the Sinhalese society, but it seems as if the major decay of the classical Sinhalese civilization was already past at their arrival. (de Silva, 1972).

Though, not often mentioned, there are a couple of other contributions to the discussions of what really caused the decline of the Sinhalese civilization, and they deserve to be mentioned. Soil conditions are believed to have been affected negatively during the period of civilization with its intensive utilization of land for cultivation. Fifteen centuries of unfertilized mono-cultivation had exhausted the naturally poor soil. (Wikkramatileke, 1963. Murphy, 1957). At the same time increased slash-and-burn (chena) cultivation and deforestation, followed by serious soil erosion and impoverishment of cultivated land contributed to a serious decline of the fertility of cultivated land and hence yields. The famines, that are believed to have broken out during the 13th century, might have been caused by this misuse of land. Salinity and alkalinity of the soil must have been the result, deteriorating preconditions for an efficient utilization of cultivable land. (Roberts, 1971. Wikkramatileke, 1963. Murphy, 1957).

Bearing all supposed reasons of the decay of the Sinhalese civilization in mind, it is plausible to conclude that they in one way or another were interrelated and when these threats simultaneously struck Ceylon, it resulted in the final destruction of the cultural and economic entity. As well the interplay of factors causing the decay, there is an interplay of traces or indicators to explain it:

- A) Trade was dominated by foreigners. Simultaneously with the decay, the degree of self-sufficiency decreased, and external and internal trade became more important, which is indicated by the increased spread of coins. Trade came to be dominated by Arabs, Chinese and Tamil-Moor muslims.

- B) Administrative decay. In a modern country a complex administration is not necessarily an indicator of advanced level of development. The complexity of the Sinhalese society during its peak period, however, is assumed to indicate an advanced civilization. The disintegration of the Ceylonese administration was already recorded by the Portuguese.
- C) Debasement of coins. Silver coins were plastered with a thin cover of gold.
- D) Decay in stone work and buildings. All important ruins and stone works in Sri Lanka are from the period before the 13th century.
- E) End of irrigation works. Parakrama Bahu I, 1153-1186, was the last king during whose reign any major irrigation works were constructed.
- F) Chronicles, inscriptions and records. All written sources that tell about the history of late medieval Ceylon, have one common denominator. With no exception do they review this era as a period of decay.

### 3.3.4 The Portuguese and Dutch in Ceylon

The history of the colonization of Ceylon begins with the landing of the Portuguese in 1505. At that time Ceylon was divided into three large kingdoms: Ruhunu, Kotte and Jaffna. The Portuguese met no powerful resistance, but they did not conquer any territory at the beginning. Between 1505 and 1551 the king of Kotte were allied with the king of Portugal. Kotte then became a Portuguese protectorate until 1598. The king of Jaffna became a Portuguese vassal in 1542. Between 1598 and 1658 the Portuguese ruled directly the regions they controlled. No part of interior Ceylon was conquered until 1815, however, and only the coastal belts were exposed to change and interference. The Portuguese did not change to any considerable extent the forms of government they found in these areas. They did not rule these territories according to the laws of Portugal ....'In fact the Portuguese period may be looked upon as a continuation of the developments that took place after the abandonment of Polonnaruwa as the capital of Ceylon and the consequent disappearance of the old divisions, Rajarata, Udarata and Ruhunarata.' (Mendis, 1957, p. 50).

The chief interest of the Portuguese seem to have been the extension of trade from Ceylon. Cinnamon and other spices were probably the most important items. The Portuguese contributed little to the progress of the country, but introduced some innovations. New methods of warfare, new furniture, round tiles and dresses were introduced. Of major importance was the missionary activity, led by Franciscan friars. The Roman Catholic faith was in many cases forced upon the people of Ceylon through war and punitive expeditions. Buddhist Vihares and Hindu Devalas were destroyed. The whole period can be summarized as a period of further decline, no real progress taking place in any part of the country.

In the middle of the 17th century there was a clash between the Portuguese and the Dutch, which led to the ejection of

the Portuguese from Ceylon in 1658. The Dutch came to control a smaller area than the Portuguese though, also restricted to the coastal regions.

The Dutch improved the standard of building construction and also founded three important ports, which came to grow and become central places: Galle, Matare and Trincomalee. They also developed agriculture in many regions by repairing irrigation works and also improved communications mainly by the construction of canals. The Dutch also introduced the Protestant form of Christianity, the Dutch Reformed Church, which still numbers a small percentage of the population as followers today. The rule of the Dutch in the areas they controlled resulted in a considerable reorganization of the traditional administration, and a school system was established as well. Roman-Dutch law was introduced and a printing press was started.

For the Dutch as well as the Portuguese, trade in mainly spices and precious stones was important but no real effort was made to reorganize the whole economy of the areas they controlled. A monetary system was established, though, and farmers were encouraged to cultivate cash crops like cardamom, coconut, pepper, cinnamon and coffee. (Mendis, 1957).

The distinction between low-country Sinhalese and up-country or Kandyan Sinhalese emanates from the time of the Portuguese and Dutch, 1505-1796. In Kandy, an independent kingdom was established and supported, separated completely from those areas under foreign influence. In the Kandyan kingdom, extending over most of the island, traditional culture, habits and administration were preserved, while the low country, controlled by either the Portuguese or the Dutch, was changed and influenced little by little by the rulers. No major transformation took place even in the low country Sinhalese society, however, up till the beginning of the 19th century. The reason for this might be interpreted as lack of ambitions among the Portuguese and Dutch rulers, who failed to conquer the whole of Ceylon or to adjust the conquered areas to their economic systems. As

we shall see, the British tried to and eventually managed to transform and adjust the whole of the economy and the administrative system to fulfil their needs in the 19th century.

What was then the main reason of the comparatively low degree of Portuguese and Dutch penetration of the Ceylone-se society as compared with the British? This question can partly be explained by the fact that during the Portuguese and Dutch periods of colonization, the Netherlands and Portugal were pre-industrial societies. There was no need or demand to open up new and external markets for mass produced goods or any need to cover an extensive domestic market or production sector with raw materials or plantation products in the metropolitan countries. Neither was there any serious pressure on land, stimulating or demanding full scale emigration. Thus it has to be concluded that Portuguese and Dutch interference seems to have been rather superficial in Ceylon, while that of the British more or less led to a total transformation. This will be examined in 3.3.5.

### 3.3.5 The British conquest and transformation of Ceylon

#### 3.3.5.1 The take-over, 1796-1818

By the end of the 18th century rivalry between Britain and the Dutch Republic had increased. Britain had been defeated in North America in 1781-82 and in 1781 war broke out between Britain and Holland. Contributing factors were the alliance between Holland and France against Britain and the increasing rivalry between Britain and Holland within the overseas trade sectors. The British were at this time also competing with France for total control of India. Ceylon, the coasts of which were controlled by the Dutch, was considered a key base. The French revolution in 1789 led to a conflict between France and Holland, and Holland was occupied by the French in 1795.



This was a perfect opportunity for Britain to conquer the Dutch territory in Ceylon. Military action was accompanied by diplomatic negotiations with Kandy; the third British mission was sent to Ceylon for this purpose. In 1796 the Dutch were expelled from Ceylon by the British, who gained the formal control at the Peace of Amiens in 1802.

Between the Kandyan kingdom and the British protectorate, serious conflicts emerged, resulting in numerous skirmishes and finally in 1815 there was a full scale clash between British forces and Kandyan troops which led to the defeat of the latter. For the first time in nearly 600 years, Ceylon was united, but this time under a foreign conqueror.

### 3.3.5.2 Early phase of transformation, 1796-1833

During the first decades of British rule in Ceylon the traditional government, the old administrative system and the Rajakariya system ( Kings' Duty ) were still predominant. Cinnamon seems to have been the most important item of trade even for the British in the early 19th century. Cultivation of cash crops and free enterprise was discouraged; and as long as Rajakariya was utilized for the construction and the maintenance of public works, this picture could hardly change. (de Silva, ed., 1973).

Administration in the early phase was mainly concentrated to Colombo, as lack of safe and suitable communication facilities did not allow senior colonial officers to travel comfortably around the island, nor to reside in most of the provincial areas. (de Silva, ed., 1973). The link between the colonial administration and the provinces was maintained by the traditional Sinhalese headmen or principals of administration, no westernized Sinhalese elite yet having been educated. To a great extent, British authority must have been upheld with the help of military power. One important change, though, was that after 1818, the Kandyan Provinces were united with the rest of the country under one administrative body.

Trade was monopolized to begin with under the British East India Company, and no private enterprise was allowed. There was no way for the British to legally control cultivated land in hands of local owners nor to collect land or production revenues to any great extent as long as Rajakariya remained. It was as if somebody owned a locked house, not being able to enter it as the former owner has kept the key.

The Maritime Provinces, among them Ceylon, were brought under the Crown in 1802, and the British rulers now were allowed more freedom of action. In 1812 there was a regulation permitting Europeans to control up to 4 000 acres of land. After the incorporation with the Crown, a free trade sector began to develop, but commerce could not expand extensively as long as Rajakariya remained. Rajakariya involved an intricacy of relations in the traditional society, excluding foreigners or other domestic ethnic groups from the traditional economic and service spheres in the Sinhalese society. All land that was not nindagam (holdings in exclusive control of the proprietor) became Crown land under the British, however, after the defeat of the Kandyan king in 1815. Especially in the mountain region there were waste land reserves, and coffee plantations started to spread out on the hillsides.

The caste system was intimately interwoven into the Rajakariya system and Goyiagama (cultivators) was the biggest caste. To begin with, the British made no attempt to abolish either the caste system or the Rajakariya system. Instead they used it for their own benefit. The Rajakariya system obliged the people, in accordance with their caste, to perform duties to the king ... "King's Duty is greater than service to the Gods" ... (de Silva, 1973. p. 60).

When the king was overthrown in 1815, Rajakariya was deprived of its most important reason for existence. The British took advantage of this at the beginning and as cinnamon trade was the most important economic activity in the early British colonial period, the Salagamas (cinnamon peelers) were then subordinated to the British

Crown instead of to the Kandyan king. (Percival, 1803. Vimalananda, 1973). The Salagamas were completely involved in the cinnamon commerce as labourers with a status nearly as low as serfs. When the economic interest moved from the cinnamon trade to plantation cultivation, Rajakariya again appeared as a serious obstacle for the economic expansion of the British in Ceylon.

3.3.5.3 From the Colebrooke reforms to the general decay of the traditional agricultural sector, 1833 to about 1900

In the late 1820's a commission was set up by the Colonial Office to investigate how the economic, legislative and administrative sectors could be reorganized to fit British purposes and aims better, and to integrate the colony of Ceylon more into the British economy. One intention was also to substantially decrease the extraordinary power and influence possessed by the Governor of Ceylon. William Macbean George Colebrooke and Charles Hay Cameron were responsible for the report.

Naturally, the true intentions of the commissions were not originally presented in plain language; the real purpose was not known until the Colonial Office officially released the proposals of the commission. The final report proposed very comprehensive alterations of the Ceylonese economy and society:

- A) Administration. Executive and judiciary power should be divided between two different government bodies. The present division of administration into three systems: a Tamil, a Sinhalese and a British, should be amalgamated into one (British) system. For this purpose, representatives from the Ceylonese elite should be given an English education and hopefully form a new modernized capitalist class, responsible for important duties as civil servants under British control.

B) Economy. The Rajakariya system should be abolished. The principal officials and aristocrats should be canalized into an English administrative and capitalist system, where they should form the new elite.

Trade and commerce should be freed to fulfill these aims and government influence should be decreased with the emergence of a capitalist economy. The control of all land should now fall under the British who could form rules for land revenues and production taxes.

Of course, there were also other recommendations in the formal report, but the abolishment of Rajakariya was the most important. The proposals were, in their essential parts, approved by the Colonial Office and became known under the name The Colebrooke Reforms in 1833. For the first time in history the Ceylonese society was reorganized thoroughly by a foreign power, and the British were now free to rule under the cover of claimed legitimacy.

In the early 19th century state control of important economic enterprises in Ceylon was nearly complete. Land was not to be alienated to foreigners, among them the British, and there was a trade monopoly. However, the state monopoly on the most important trade product, at that time cinnamon, was abolished and a plantation sector slowly began to take form. From the beginning, the British inherited and took advantage of the rules of the Rajakariya system. In both the Maritime and Kandyan Provinces, a system of service tenure existed, whereby services were attached to the persons who enjoyed a piece of land, or to whom it was transferred or granted; while in the Maritime Provinces (and possibly even in the Kandyan Provinces) non-service tenures had also developed, there were no rights of ownership in the European sense of unqualified possession; different individuals or collectives could have rights or privileges over the same plot of land.

The policy of the British from the 1830's and onwards was to rely on private enterprise and the interplay of market forces as a means of developing the land. But without regulations for controlling tenure, capitalists would not invest in the development of land. Security of tenure was considered a prerequisite for capitalist enterprise, whether by European or native, plantation-owner or smallholder. One obstacle for private enterprise in rural areas was the difference between Europeans and the Sinhalese in interpreting the concept ownership. With the Colebrooke reforms much of the ambiguities, as seen by the British, were modified or vanished. But still a system of control of cultivated land prevailed, preventing a capitalist economy from expanding over rural areas. The concept of share-ownership (share = pamguva) in the Sinhalese social structure, produced such schemes of cultivation as the tattumaru system where the subsections of a tract (yaya) or wet paddy fields (mada idam) are rotated among the share-owners within the limits imposed by physical features and the need for the economies imposed by size in the actual process of cultivation. (de Silva, 1973. Obeysekere, 1967).

The subsistence economy and the sharing system in rural areas excluded the possibilities of paddy land transactions, at least for outsiders, for whom it must have been nearly impossible to buy any village land. The kayye system, which regulated the organization of labour on village land was also a factor which contributed to the exclusion of external interest in the rural economy. (For an explanation of the concept kayye, see part 3.3.2). One attempt to integrate the rural economic system with a national economy was made through the Land Ordinance Act, No 21 of 1844, which was directed against undivided ownership, but only in a limited way. Again in Land Ordinance Act, No 10 of 1863, another attempt was made to abolish this system. A consequence of this can be understood from the following quotation:

"Many share-speculators, however, also had long-run objectives of consolidating their shares by instituting a partition suit. In this way, the traditional goals of prestige and power could be combined with the economic interest of putting the land to better use. Partition suits were filed under the terms of Ordinance No 10 of 1863. In practise, this Ordinance permitted any shareowner to compel partition of a piece of land even though the other shareowners were opposed to it."

(de Silva, 1973, p. 151).

Thus it seems as if the effects of Land Ordinance Act No 10 of 1863, were perhaps the main reason for the destruction of the kayye system as a general phenomenon in the villages of Ceylon. Another way of linking up rural areas to the colonial administration was the introduction of a grain tax system in 1818, prescribing all landowners to give 1/10 of their annual paddy crop. (Excluding Sabaragamuwa and Kegalle districts, giving only 1/14 share because of their loyalty during the Rebellion 1817-18). In the Maritime Provinces, however, taxes were also extended to lands sown with other grains. This grain tax was moderate, though, compared to another colony in contemporary South Asia. In India the share was generally one-half of the crop.

A consequence of the limited grain tax was that the revenues were too small compared with the efforts of collecting them. The grain tax system was therefore abolished in 1892. But a very important factor for the capitalization of the economy in general and especially within the agricultural sector was a monetized exchange and market system. The final and successful penetration of the traditional rural economy was the expansion of a monetary system, which also involved artisans and peasants in rural areas. Capitalist development caused and was itself a consequence of the monetization of the economy. Market transactions which had involved barter exchanges in a previous era took a monetary form during the 19th century. The extension of communications, the development of cash crop cultivation, and an increase in economic specialization contributed towards this. Monetization was also encouraged by the influence of new consumer goods like textiles, kerosene

oil and safety matches, items that were spread to the bulk of the population even in rural areas.

Not only unused land came to fall under the regulations of Crown Land, but also a rather large part of land that was used as an important source for complementary contributions to the villagers diet. This land was used for slash-and-burn cultivation of maize, paddy, sorghum, manioc or other crops that constituted a supplement to crops and grains harvested on the garden (gewatte) or paddy (mada idam) land. In Ceylon the lands on which techniques of swidden agriculture or shifting cultivation were employed were known as h e n a or h e n, and the anglicized rendering eventually settled on the term c h e n a. Land that was chenaed was subject to natural processes of regeneration and developed secondary growth, either scrub or secondary forest, or both in succession. Within 15 or 20 years after chena cultivation, therefore, an allotment could also be called forest land. But it was not primary (i.e. primeval) forest. In contrast to several other countries, these dry farming operations were generally practiced by a peasantry who also participated in the cultivation of wet rice fields and gardens on a perennial basis. Chena cultivation was economically more important and more extensively prevalent (related to the population) within the Dry Zone. (de Silva, 1973).

The British colonial administrators did not see any advantages in chena cultivation, and they considered instead chena cultivations as native encroachments and wanted to protect forest land from swidden cultivation by prohibiting the practise. By doing this they hoped to convert the practitioners to the cultivation of more permanent and remunerative crops, particularly wet paddy cultivation. It was claimed by the colonial authorities that people by devoting much of their time to chena cultivation, where Kurakkan (Finger Millet or Elusine Coracana) was a major crop, and was considered to be of inferior nutritional value, caused the disease parangi (yaws) which prevailed in the Dry Zone.

Instead, it was claimed, forests could be used for timber exploitation (de Silva, 1973). In brief, the British tried to abolish chena cultivation, claiming that peasants were devoting their labour to the cultivation of inferior crops, causing diseases of malnutrition, instead of cultivating more nutritionally efficient crops. The truth is that chena is and has been a complementary agricultural activity, permitting the practitioners a supplement to their normal diet. (See page 109). Among the common cereals of Ceylon, kurakkan (*Elusine coracana*) has the highest value of calcium and riboflavin (Poleman et al. 1969). For those who owned paddy and garden land it was an important supplement and for those owning no other land it constituted a kind of security in periods of unemployment. It has been shown that the bulk of the population in Sri Lanka has a deficit of calcium. This deficit is maintained as long as there still is a lack of milk products in the country, but probably also because of altered cultivation pattern, i.e. less cultivation of kurakkan on chenas.

Even the Dutch attacked the habit of chena cultivation, though, not in large scale, by converting chena land into garden small-holdings in the Wet Zone. The British pursued a more conscious policy, by trying to regulate chena cultivation and stimulate the expansion of paddy cultivation. After the 1850's the British were responsible for the restoration of destroyed or damaged large tanks. The motives of this was to stimulate trade and industry, generate more revenue and raise the output of paddy to try to achieve self-sufficiency. To what extent they succeeded in their efforts is doubtful, which is indicated by the following figures for the import of rice:

Period	Population (millions)	Bushels	kg/inh
1837-41	ca 1.4	908 779	about 25
1882-86	ca 2.7	5 659 041	" 78

(One bushel rice = 36 l = c 39 kg).

Another reason was the desire to put an end to the cultivation of kurakkan on chenas. The settlements who gained any benefit from these restorations were mainly recent



(re-colonization schemes) and not traditional villages, though; the settlers of the latter probably experienced some disadvantages from this policy. The benefit of tank restorations were also concentrated regionally, and unique increases of population took place in these areas.

Table 2. Cultivated food crops and cash crops area in Ceylon 1830-1962

Year	Area (000 acres)		Total	Index	Per capita cultivated area (acres)	Index
	Food crops	Cash crops				
1830	-	-	417	100	0.43	100
1840	-	-	588	146	0.42	98
1850	-	-	722	166	0.45	105
1860	-	-	928	196	0.49	114
1871	860	214	1074	251	0.45	105
1881	700	977	1677	288	0.61	142
1891	686	1158	1744	314	0.58	135
1901	791	1334	2125	372	0.60	140
1911	742	1768	2510	428	0.61	142
1921	959	1839	2798	469	0.62	144
1931	926	2300	3221	553	0.61	142
1946	960	2262	3233	694	0.48	112
1962	1303	2323	3626	1077	0.35	81

It is obvious, though, that the increase in the acreage of cultivated food crops has not in any respect kept pace with the increase of population. The largest expansion falls within the plantation sector. If figures are deducted for per capita cultivated area of food crops this fact is unambiguous when observed during a more extensive span of time.

The standard of living in the villages of the Dry Zone of 19th century was often low.

Almost all large irrigation works were damaged, but many smaller village tanks remained, supporting small dispersed villages or hamlets with irrigation water. The economy of these tiny communities was stagnant and their inhabitants maintained a precarious existence where *chena* (slash-and-burn cultivation) played a vital role for the agriculture. (de Silva, 1973)

In the early days, the irrigation system of a region constituted a whole, which formed a base for a society where numerous local communities were functionally integrated. After the period of decline only scattered village settlements remained, and, as there was a general decline of the whole culture, it must be supposed that there also was a decline within the smaller communities. But there is also reason to believe that the British policy during the 19th century rendered a further decay to the local communities. The settlement pattern of the Dry Zone was disrupted when roads and railway broke into what was once a closed subsistence economy. Many peasants left their traditional activities and settled in roadside villages where they earned a living in small trades or as casual and plantation labour. (Wikkramatileke, 1963).

One cultivation sector that benefited from the British policy during this period was the plantation sector, which developed very rapidly, to a great deal facilitated through the new regulations promulgated during the 19th century. In 1843, arecanuts, cinnamon, coconuts, coffee and tobacco accounted for 91 % of foreign exchange incomes. (Bancil, 1971).

Cinnamon. The output from cinnamon plantations continued until the end of the 19th century, from when there was a decrease of its importance for the Ceylonese economy.

Coconuts. During the Portuguese and Dutch periods coconuts were cultivated more extensively as a commercial crop, and products from the coconut plantations were exported mainly to India. During the 19th century, cultivation of coconuts were further developed primarily by Ceylonese planters.

Coffee. The first crop to play a major role in the colonial economy was coffee, which could be cultivated extensively after alienation of land to British planters was permitted. There was a very rapid expansion of coffee plantations from 1830 to 1869. In 1870, though, coffee leaf fungus, (*Hameleia Vastatrix*) spread rapidly, devastating nearly every acre of coffee plantation until 1890 in the central highlands.

Table 3 . Acreage of land planted with coffee

Year or period	Acres
1847	50 000
1871-72	196 000
1878	273 000
1881	256 000

Source: Bancil, 1971.

Tea. Tea took the place of coffee as the major plantation product in the last part of the 19th century. The first tea plantations were started in the late 1860's. (For a more thorough description of the importance of tea plantation for the Ceylonese economy see part 3.4).

For the development of plantations and irrigation schemes, clearing of forests, building up of communications, and construction of buildings, indigenous labour was required. The demand for labour supply was hard to meet, though, as the Sinhalese were not in general willing to work permanent-

ly, but only seasonally, as hired labour. The bulk of the regular labour force on the coffee plantations was, instead, drawn from the Tamil districts of southern India, mainly Madura, Tinnevely and Tanjore. Poverty and unemployment in South India provided people willing to emigrate to Ceylon and work for a very meagre wage with a status close to that of a serf. The Tamil labour force was mainly recruited from the low castes. In 1871 the number of imported Tamils were 123 000, and increased to 195 000 in 1881 and further to 235 000 in 1891.

With the expansion of plantations and the communications network of the coffee era, the demand for central control of the administration increased. It was not possible to extend a thorough colonial administration when there were no communications or service facilities in the provinces. Another obstacle was the lack of western-educated indigenous civil servants.

In the beginning of the British period, native officials, the hierarchy of Mudaliyars, were used, as they wielded great influence over the mass of the people. The efforts to educate an indigenous cadre of civil servants were intensified, especially after the Colebrooke reforms; and a school system was built up, but it was hampered by the caste system from the beginning. Strong forces in the Sinhalese community - the traditional elite of bikkhus (Buddhist monks)-, vedaralas (teachers of traditional Sinhalese culture) and mudalalis (traditional merchants) and other influential traditional elite groups were opposed to the anglofication of Ceylon. To become a civil servant, knowledge of English and a partly English education was compulsory. But the resistance was not maintained successfully for a long time. The colonial administration was built up step by step.

The provinces were subdivided into a varying number of districts, the total number being twenty-one, of which fourteen were administered by an officer appointed as Assistant Government Agent, while each Government Agent had sole charge of the principal district of his province.

The Government Agent became the chief representative of the government in his province and he was mainly responsible for the following duties:

- a) To maintain law and order in his province, and (through the native headmen ) to keep the people loyal to the government.
- b) To collect government revenues and to disburse government payments (through District Revenue Officers).
- c) To serve as chief executive officer of the government, to implement the laws of the land, and to perform or supervise the performance of specified duties on behalf of government departments which did not have a provincial organization of their own.

The native chiefs formed an integral part of the administrative structure at the district level and below. Districts were divided into chief headmen's divisions (110 in all); and these in turn into 613 sub-divisions under superior headmen and 4 000 or so villages and sub-divisions of villages under village headmen. (de Silva, 1973, pp. 218 f). During the 19th century the old Sinhalese, Tamil and British administrations were transformed into one colonial administrative body, bringing the whole economy and all the citizens under one organization.

The plantation economy in Ceylon developed rapidly during the 19th century up to the early 20th century, and large acreages of land were alienated between 1867 and 1922.

Table 4. Development of tea plantation in Ceylon, 1867-1922.

Year	Acreage	Export Lbs	Value £
1867	10	-	-
1875	1 080	1 438	160
1895	305 000	98 581 060	3 286 035
1905	390 000	170 183 558	3 970 950
1915	409 000	215 632 727	8 163 855
1922	418 000	2 392 249	9 735 763

Source: Bancil, 1971.

The development of the plantations was protected and promoted by the new regulations and the new colonial administration, while the villages generally fell into a situation of further backwardness and economic insufficiency.

The Waste Lands Ordinance of 1897 was intended as a solution to two problems: encroachment on Crown waste lands (see page 47 ), and the alienation to European and capitalists of waste land in the vicinity of villages by some of the villagers themselves. (de Silva, 1973). The Land Ordinances of 1844, 1863 and 1897 limited the capability of the village economy from development and even from further survival. The peasants of 19th century Ceylon experienced the following phenomena:

... "there was also a thriving market in private land. Transfers of private land were not confined to large allotments and cash crop holdings. They extended to holdings planted with garden crops and wet paddy. Since several of these holdings were held (with great regional variation) in undivided shares under the Tattumaruru system and its variants, a market in land-shares was activated. The creation of a land-share market was due largely to the following factors: an increase in the population; the scarcity of land under the new administrative dispensation; the development of a cash-crop oriented economy and an increase in the number of people with a surplus of cash for investment in shares; and the application of Roman-Dutch laws of bilateral inheritance together with more uxorilocal (binna) marriages, both of which created more absentee share-owners and out-residents in a village." (de Silva, 1973. p. 150).

With the land-share market there was a new phenomenon involved; buying and selling of shares in the T a t t u m a r u r u land or s h a r e s p e c u l a t i o n. "Share speculation .... involved the manipulation of people as well as of the legal system and the moral jural norms accepted by village residents. Furthermore, the conflict between the pre-British jural norms of the Kandyan Sinhalese and the new legal norms (especially the rules of inheritance) gave share-speculators more room for manoeuvre and thereby contributed to the growth of a competitive struggle for land-shares." (Ibid, p. 150 f. Same phenomena also described by Obeyesekere 1967).

A conclusion of the results of British policy in Ceylon during the 19th century is that the social and economic structure and entity of traditional local communities were more or less completely damaged.

"The complexities of Sinhalese custom were incomprehensible to the British. To be sure, they probed diligently and recorded customs as diligently. But the tendency was to bid such complexity riddance. Their policy was to achieve simplification through definition and codification, they desired tenurial conditions to be cut and dried and classified." (de Silva, 1973. p. 120).

- a) Rajakariya. The abolition of Rajakariya in 1833 undermined both the economic as well as the social foundations of the traditional caste edifice.  
(de Silva, 1973 p. 173).
  
- b) Kayye. With the Land Ordinance No 10 of 1863 cooperation on land was replaced by competition for allotments. This was done by placing regulations on the ownership and control of land and by more or less abolishing the old sharing system of land.

The destruction of Kayye and Rajakariya resulted in a number of changes in the living conditions in the villages. By replacing a solely barter exchange and subsistence oriented economy through raising of the interest for cash crop cultivation, effected especially through the Land Ordinance of 1863, there was a clear tendency towards the dissolution of the caste system, while a class system began to emerge. Capitalization of agriculture and a general spread of monetization seem to have resulted in dependency instead of self-reliance in the villages. There are clear indications of a rapidly increasing import of food for the period, despite British efforts to increase food production by for instance the resoration of large tanks. The restriction on, and from time to time prohibi-

tion of, chena cultivation must also have been to the disadvantage for the village economies as a whole.

In the last part of the 19th century, plantation cultivation was a very rewarding undertaking in Ceylon, consequently favoured by the British colonial policy; and the plantation sector, especially tea cultivation which increased rapidly, became the most important economic activity.

The traditional way of agriculture was hampered and discouraged by this policy, and (it seems as if) the traditional villages underwent a permanent process of underdevelopment, on and off, aided by the promulgation of various restrictions and regulations.

Before the Colebrooke reforms, Ceylon was basically an agrarian economy, producing crops mainly for consumption. The abolishment of Rajakariya paved the way for the development of commerce; and the development of the plantations led to immigration of Europeans and Indians into the island. The government and administration was united over the whole island; and the opening of plantations led to the development of communications. The Colebrook reforms facilitated an extensive establishment of plantations, which in its turn led (indirectly) to the widespread decay of economic and social structures in traditional rural settlements. Before 1833 there were hardly any towns besides Colombo, Galle, Jaffna and Kandy. Due to Robert Knox (1958) only five major cities existed in the 17th century in Ceylon with, except for Colombo and Kandy, about 40-50 houses. In each of the five cities there was a King's Palace, probably being the main reason for its existence or survival. Most of the present day main central places are marked out on a map in Knox's book, though, they in the 17th century seem to have been of minor size and importance. The villages, though, often poor, were on the whole self-contained and self-sufficient. Three classes of people existed in rural settlements: bikkhus (buddhist monks), chiefs and peasants, and among the last a number of craftsmen.



Hardly any roads linked the different provinces with each other. If there were any roads they were barely passable: in 1803 it took the British ambassador one month to reach Kandy from Colombo, a distance of 67 miles, a journey that today takes about three and half to four hours by bus. The British changed the society of Ceylon from a cooperative, feudal structure into a competitive, commercial one.

The development of plantations, communications and trade made it necessary to diffuse and extend the influence of government and strengthen the impact of provincial administration. This demanded the urge on further education of civil servants for the colonial administration and building up of service systems in provincial administrative centra. It also led to the establishment of the Department of Surveyor-General, the Public Works Department, the Postal Department, Harbour and Customs Department and the Agricultural Department.

Central towns started to grow up as a consequence of this and the expansion of the plantation sector. In the central places, traders opened shops, transport agents set up forwarding establishments, and craftsmen and artisan left neighbouring villages and established workshops. The towns that came into existence provided a market for the surplus produce of the peasants. The expansion of communication facilities developed new relationships with the growth of trade. Various parts of the country were joined to each other, through the increasing interest from people in other localities than their home place. A further consequence of the expanding trade and commercial sectors was that the Tamil and Sinhalese communities were, to an increasing extent, functionally linked to each other. This was also true of the Moors and other ethnic groups. The 19th century was the era of the comprehensive transformation of the old Ceylonese society and the total fall of the remains of the feudal culture. The impact of the British interest in the economic advantages of exploiting Ceylon, aided by the Colebrooke reforms in 1833 and Land Ordinances of 1844, 1863 and 1897, were the major incentives to this development.

#### 3.3.5.4 Brief remarks on recent historical events 1900-1972

The economical development in Ceylon during the 20th century will be given special attention in part 3.4 and only some events are briefly commented on here. In general, there was a continuation of development trends from the previous century. The commercialization of agriculture, the increased spread of modernities, the expansion of communications and plantations, the extension and differentiation of administration and other 19th century phenomena were established as characteristics of the 20th century development of Ceylon.

The introduction of a parliamentary system, mainly through the Donoughmore reforms in 1931, and the emergence of an indigenous party political system were new features in modern Ceylon.

The fourfold division of the rural settlement pattern continued, and it constitutes of plantations, traditional villages, recolonization schemes and squatter settlements. (See chapter 4 for further explanation). The efforts to repair old irrigation works created re-colonization scheme settlements and the further development of a communication network resulted in increasing squatter settlements along the road sides. (For a further explanation of this, see part 4.1).

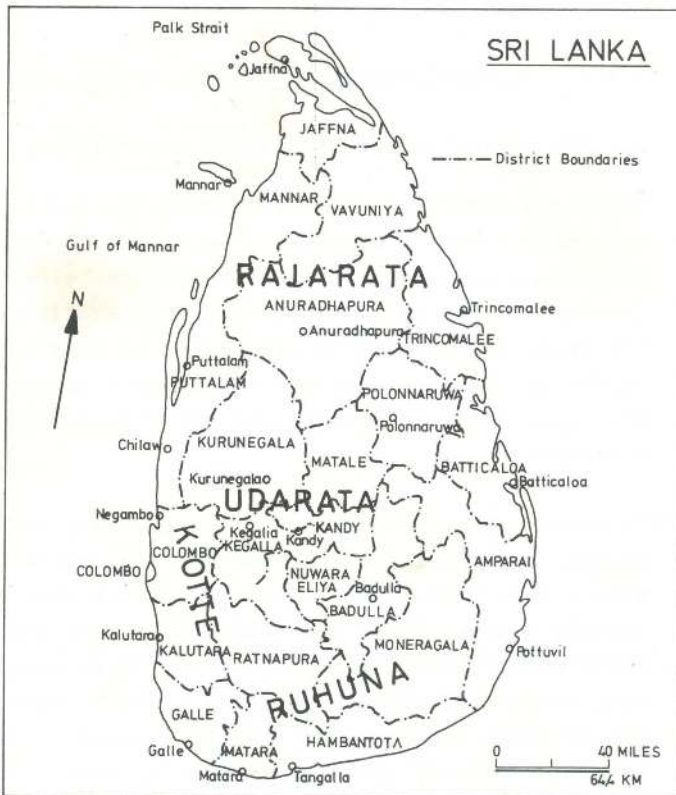
The inflow of immigrant Indian labourers populated the areas devoted for plantations. In the traditional villages, people managed to eke out a living, though, under increased difficulties, but even in these settlements there was a considerable population increase in spite of outflow of villagers to towns and other settlements.

On the 4th of February 1948, Ceylon became formally independent, though, nearly completely economically dependent on England. Ceylon is still a member of the Commonwealth.

Ceylon became Sri Lanka on the 22nd of May 1972, Queen Elizabeth was replaced by president William Goppalawa as head of the State, but the economic dependency remains.

Figure 6

Administrative boundaries.  
Districts of Sri Lanka.  
The major kingdoms during the pre-British colonial period are written with capitals.



### 3.4 Recent economic events in Ceylon (Sri Lanka)

It would be unnecessary for the purpose of this study to make an extensive study here of the dramatic changes that have taken place in Sri Lanka's economy since W W I but some economic events that have, directly or indirectly, affected the rural areas will be treated.

By the time that Ceylon achieved formal independence the general economy was prosperous compared to other South or South-east Asian countries and this situation continued until the late fifties, despite a number of political disturbances occurred. Many clashes between Tamil and Sinhalese groups took place and quite a few people were killed in racial riots. The political situation stabilized gradually, but economic conditions started to deteriorate slowly.

#### 3.4.1 General post-war economic trends, 1945-75

##### 3.4.1.1 Major import and export commodities

The rapid growth of population that started after 1946 in combination with a negative development in terms of trade for Ceylon from late fifties and onwards slowly led the country towards an economic dead end. Statistical figures for trade and production are, as in so many other poor countries, rather uncertain and in many cases there might be reason to believe that they are stipulative rather than descriptive.

It seems clear, however, that the quantity and prices of the country's three primary products - tea, rubber and coconuts - have fallen, while prices for its most important imports - rice, flour and crude oil - have rocketed on the world market. The dependency on the three export products - tea, rubber and coconut products - which constitute about 90% of total exports, has tied the country to a dependent economic activity pattern, especially during the last decade.

Revenues from exports have only increased at a very slow rate as the export volume as well as world market prices for Sri Lanka's major export commodities have been more or less stagnant or have even fallen.

On the other hand the imports have increased considerably, - not only price paid for each volume unit but for total volumes as well. The negative balance between exports and imports has weakened the economy of Sri Lanka very badly especially during the last 5-year period. To illustrate this statement, figures for the most important export product, tea, can be compared with figures for the most important import commodity, rice, for the period 1969-1974.

Table 5 Development of the relationship between the most important import commodity, rice, and the most important export product, tea in Sri Lanka during 1969-74.

Year	RICE		TEA	
	Metric tons (000 <sup>~</sup> )	Value (1000 US\$)	Metric tons (000 <sup>~</sup> )	Value (1000 US\$)
1969	264'	36 988	201'	177 616
1970	545'	60 521	208'	187 963
1971	339'	37 787	207'	192 142
1972	266'	23 283	203'	187 900
1973	344'	42 250	206'	196 040
1974	297'	108 070	175'	202 987

Source: TRADE YEAR BOOK/FAO/1975

The negative development of the rice/tea relationship during recent years should also be related to the population increase. For nearly three decades there has been a free weekly rice ration for adults, except for those who pay income tax. As self-sufficiency in rice production has not been possible, a large share of the consumed rice has been purchased abroad and has increased with the growth in population.

On the other hand, the amount of and prices for exported tea are of the greatest importance as they constitute the major share of exports, 50-60% of the total. The price development of tea is also important as related to the price development of import commodities.

It is impossible to clarify the complicated relationship between prices of imported and exported commodities, volumes of traded goods, the increase of the population, unemployment, agricultural production, petroleum prices etc. Each sector or problem must, initially be studied individually:

#### Major exported goods

- A. Tea. The acreage of tea plantations of high quality has not increased considerably during the last three decades, mainly because of limited land reserves above 4 000 feet of elevation. This is especially true for the last twenty years. For this reason the export volume has been stable. If revenues from tea export is converted into rupees, the prices on tea have not increased to any considerable extent during the last thirty years either, which is mainly explained by the fact that the Ceylon rupee has decreased in value as compared to U.S. dollar or British pound. Prices for Ceylon tea has also in most cases been dictated at tea auctions in London. The packing process has also been done in England for most of the tea grown in Ceylon (Sri Lanka).
- B. Rubber. The output of rubber plantations is restricted by climatic and soil conditions and consequently the plantations are confined to the medium hill country of the Wet Zone, up to 2 500 feet. (The Economic Development of Ceylon, 1953). The first plantation was started in 1867 (Bancil, 1971) and was among the first in Asia. Today Sri Lanka has a share of about 5% of the world production. (Bancil, 1971). During the

Table 6 The development of prices and shipped volumes of Sri Lanka's major export commodities, 1960-1974.

Commodity		Year						
		1960	1965	1970	1972	1973	1974	
	Area under tea ('000 acres)	582	594	597.5	597.2	607.5	605.0	
TEA	Export volume (Metric tons)	185.874	224.283	208.383	202.795	205.911	175.153	
	Export value ('000 US \$)	230.093	254.007	187.963	187.900	196.040	202.987	
	F.O.B. Prices (RS/lb)	2.67	2.45	2.44	2.77	-	-	
RUBBER	Area under rubber ('000 acres)	668.9	669.2 (1964)	569.8	568.8			
	Export volume (Metric tons)	106.410	100.450	160.657	129.591	160.755	128.405	
	Export value ('000 US \$)	79.460	63.850	73.877	42.922	91.776	110.752	
	F.O.B. (RS/lb) Prices latex crepe)	-	-	1.26	.97	-	-	
Coco-nut products	Area under coconuts ('000 acres)	1.150 (1962)	1.152 (1967)	1.152	1.152	-	-	
	Export volume (Metric tons)	55.820	52.872	49.118	49.372	37.706	39.300	d <sup>x)</sup>
	Export value ('000 US \$)	15.050	17.287	16.476	12.848	17.225	33.000	d <sup>x)</sup>
	F.O.B. prices	-	-	.91	.72	-	-	c <sup>xx)</sup>

Sources: FAO Trade Yearbook, 1975. Production Yearbook, 1975.

d) = desiccated  
c) = copra

last years, the acreage has not increased to any considerable extent, but world market prices have developed favourably and revenues from exported rubber nearly tripled between the years 1972 and 1974. (The Far East and Australia, 1975-76).

- C. Coconut products. The third most important export product and plantation crop is coconut. Sri Lanka is one of the world's leading exporters and produceras of coconuts and coconut is also a key factor in the indigenous traditional economy. Coconuts are believed by many to be an indigenous plant in the island. During the last 100 years there has been a five fold increase in the acreage of coconut plantations, but during the last few years there has been no real increase. There has been a moderate increase in the prices of coconut products during the last decade but there has not been an increase in the volume of export.

Major imported goods.

Rice. At the early 19th century the import of rice was started in a more organized way. Burma was the major source of rice purchases and the imports of rice increased more than five times during the forty years between 1840 and 1880. (See page 48). Although rice is the staple food item in Sri Lanka, a large part of the consumption has had to be covered by imports. One of the most crucial problems for Sri Lanka today is to achieve self-sufficiency within the paddy cultivation sector.

Two factors limit the increase of paddy cultivation: In the Wet Zone there are no major land reserves and in the Dry Zone, where there are large unexploited areas, one has to rely on irrigation. The costs of labour and capital are high for repairing and constructing irrigation works and during the last few years, droughts have resulted in decreased harvests. It is possible though, to increase the



the crop considerably by improving the techniques of cultivation. Normally between 15 and 40% of the total rice consumption has to be covered by imports, and the import volume is determined by the fall out of the annual paddy harvests.

Sri Lanka's economy is very vulnerable because of the dependency on rice imports, a fact that is visualized by the economic events during the increase of prices on petroleum products 1973/74. Within one month, December 1973, world market prices on rice more than tripled. The effect of this was that imports increased from U.S. dollar 42 250 000 in 1973 to U.S. dollar 108 070 000 in 1974 (FAO Trade Yearbook 1974). Still it was not possible to import enough to cover the domestic demand.

Flour. The second most important import commodity is wheat flour, as there is hardly any local production of wheat. Before World War II only about 16 000 tons of wheat flour was imported annually, but the shortages of rice has stimulated imports of flour, which has multiplied during the last twenty years. If the volume is considered, even more wheat flour than rice has been imported during the years 1970-1974. As for rice, the world market prices on wheat flour increased rapidly between 1973 and 1974. In 1970 Sri Lanka imported 620 419 metric tons of wheat flour and paid the equivalent of 45 763 000 US \$ for that import. The wheat flour import increased slightly to 648 030 metric tons in 1974, but the expenses spiralled to 145 965 000 US \$ - three times as much as in 1970! Also other foodstuffs are imported as onions, chillies, dried fish, meat etc., but they are not treated separately here. All in all, not less than 51% of total imports constituted of food products in 1974. A relative figure that might give Sri Lanka a place in Guinness Book of Record's as compared with other countries food imports. (FAO, Trade Yearbook, 1975, tab. 172).

Petroleum products. From the 1930's Sri Lanka has gradually become more and more dependent on petroleum products for its existence, but the petroleum products have been cheap and

useful for the production of the country. To run factories, transports of goods and people and produce electricity and other energy, the cheap petroleum products has been to the advantage for Sri Lanka. In 1960, only 3% of the total imports constituted of petroleum products (Sievers, 1964). The heavy price increase of petroleum products during the so called energy crisis 1973/74 hit Sri Lanka very badly. Although not enough petroleum products were imported in 1974 to cover the domestic demand their share of the total imports were nearly 20%. Even such a short spell of time as three years, indicates the dramatic development.

Table 7      The imports of petroleum products in Sri Lanka as compared to the total import, 1972-1974. (Million RS).

	1972	1973	1974
Total imports (a)	2 065	2 715	4 554
Petroleum products (b)	38	295	905
(b) as a percentage of (a)	2	11	19

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Sources: Statistical Pocket Book of the Republic of Sri Lanka, 1973. South Asia and Far East, 1975).

#### 3.4.1.2 Agricultural production

To decrease the import of food items great efforts have been done to stimulate the agricultural production to an overall increase. This is also clearly indicated in the Five Year Plan, where much stress is laid upon the agricultural production. (The Five Year Plan, 1972-76). Still the food production has not kept pace with the population increase. As rice is the staple diet for the Lankese people, special attention will be given to the paddy production sector.

Paddy. For centuries a meal of mainly rice two or three times daily has been more or less a neecessity for a family in Ceylon (Sri Lanka). Whenever there has been a shortage of rice in the country this has given rise to disturbances and turbulences, even riots. Of this reason all ruling governments have tried to cover a domestic production deficit with imports. But the domestic rice production has been stimulated simultaneously through various stimulating or even compulsory measures. It seems however if much of these attempts have failed as there still are vaste land reserves but the pressure on cultivated land has increased during the last decades.

Table 8 Ratio of rural population to cultivated area, 1946-69.

	Agricultural area (000' acres)	Rural population (000' people)	Number of rural persons per cul- tivated acre
1946	4 267	5 712	1,34
1962	4 667	8 446	1,81
1969	4 827 (est.)	9 736	2,02

---

Source: Jones and Selvaratnam, 1974.

If production figures for annual amount of harvested paddy are considered, it is possible to observe a slight increase, even if there are clear fluctuations from year to year. These fluctuations are explained by the fact the result of the paddy harvest is strongly related to the precipitation. If it rains less than normal one year, then the harvest is less than normal that year. For the Dry Zone a relative drought might be fatal, as it might entail that paddy cultivation is only possible during the Maha season, which is the main paddy cultivation season.

Table 9 Rice production and population in Ceylon (Sri Lanka) during selected years between 1934 and 1975.

Year	Rice production ('000 tons)	Population (millions)	Prod/capita (kg)
1934-38	416 (mean figure)	5.64 (1936)	73.8
1951	564	7.88	71.8
1952	494	8.07	61.2
1953	553	8.29	66.8
1961-65	967 (mean figure)	10.65 (1963 census)	90.8
1965	764	11.16	68.5
1966	981	11.43	85.8
1967	1 158	11.70	99.0
1968	1 359	11.99	113.3
1969	1 376	12.25	112.3
1970	1 616	12.52	129.1
1971	1 396	12.80	109.1
1972	1 312	13.08	100.3
1973	1 312	13.37	98.1
1974	1 603	13.66	117.3
1975	1 154	13.96	82.7

Sources: FAO Production Yearbook, 1975. tab. 4. UN Demographic Yearbook, 1960.

The paddy production expanded rapidly during the 1950's up to about 1968, but after that year it seems as if production figures are falling back as compared to the population increase.

The relative increase of paddy production during the 1950's and 1960's can to a great deal be explained by improved technology and the introduction and spread of fertilizers. Better seedlings, row seeding, transplanting combined with weed destruction and improved implements are some other of the reasons for the improved harvests. The increased output per acre harvested paddy explains the general production increase.

Table 10 Paddy yield per acre in Ceylon (Sri Lanka) during three selected periods.

<u>Year</u>	<u>Yield/acre (bushels)</u>
1956/57	31.8
1960/61	36.5
1966/67	41.4

Source: Möller, 1972.

These figures might compensate the negative development of persons per cultivated acre in table 8, but it is doubtful whether the yield per acre can increase at a faster rate in the future, than the increase of persons per cultivated acre. Before any general economic improvements are possible, agricultural and especially the paddy production must increase at a faster rate than hitherto.

Table 11 Index numbers for agricultural production in Ceylon (Sri Lanka), 1963-1973 (1961-65 = 100).

	<u>1963</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Food	102	116	115	115	116	122
All commodities	101	117	115	115	115	119

Source: U.N. Statistical Yearbook, 1975. tab. 25).

#### 3.4.1.3 Terms of trade and employment situation

Up to 1960, the value of exports in Ceylon exceeded the value of imports. After that year, however, the trade balance has developed increasingly negative for the country, and this tendency has been strengthened dramatically during the last few years.

The opinion among people in Sri Lanka in recent years is that the economic situation is worsening each year at a fast rate.

It has been claimed that the rapid economic deterioration in the late sixties caused, for a short period, the relatively successful JVP (Janatha Vimukthi Peramuna), left-wing revolt attempt in April 1971 (64 New Left Review, 1970. Pacific Affairs, 1970). The general economic decline frustrated people and, because of the troublesome situation, the Prime Minister, Mrs. Bandaranaike, who won the election in 1970, could not fulfill the reform promises made during the pre-election campaign as soon as planned. A relatively small nucleus of active JVP members could therefore mobilize a large number of people in the provinces.

Table 12. Development of the external trade as compared to terms of trade in Sri Lanka, 1967-74. (Million rupees, excluding gold).

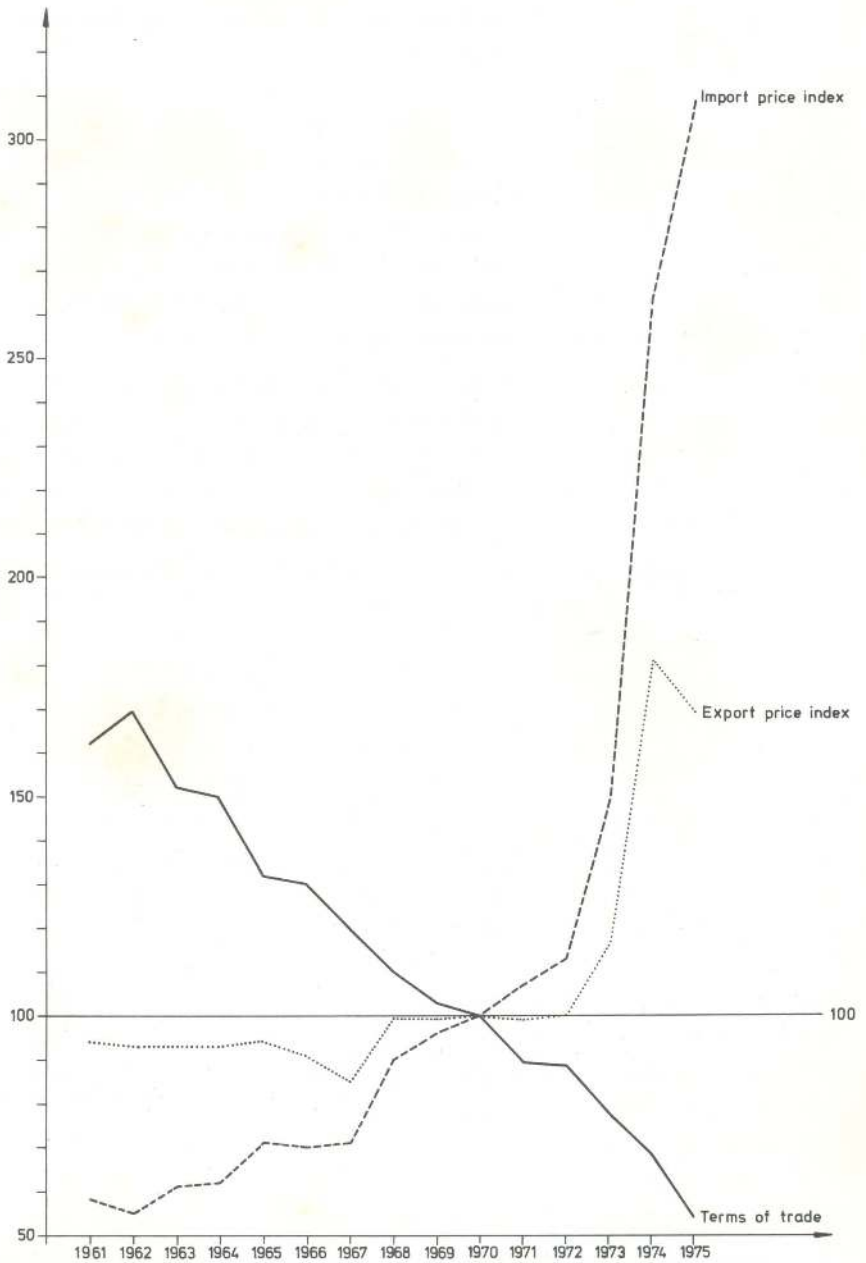
	1967	1968	1969	1970	1971	1972	1973	1974
Imports	1 738	2 173	2 543	2 313	1 986	2 064	2 715	4 554
Exports	1 690	2 035	1 916	2 021	1 946	1 939	2 617	2 862
Exports - Imports	-48	138	-627	-292	-40	-125	-98	-1692
Terms of trade	120	110	103	100	89	89	78	69

Sources: Trade Yearbook/FAO 1975. Asia 1974 Yearbook. Statistical Pocket Book of the Republic of Sri Lanka, 1973.

The worsened economical problems in recent years have had repercussions on the entire society, and it was also felt by peasants and wage labourers out in villages as will be seen later in this book.

Throughout the sixties and beginning of the seventies, unemployment became an increasingly severe problem for Sri Lanka. The development of the employment situation can only be explained accurately by a thorough description of the interplay between various economic, social and demographic factors, but to simplify the whole problem, let us assume that the increasing unemployment in recent years must be strongly correlated to the general economic development. At any instance, the relative number of unemployed has increased at a faster rate than the work force.

Figure 7. Sri Lanka Terms of Trade, 1961-75. 1970=100  
Source: FAO/Trade Yearbook 1975.



It has been discouraging to talk with Lankese people about their economy, as everybody I have been discussing more thoroughly with concerning this problem has said that "things were much better in the fifties, but now the economic situation is terrible."

It seems as if the development of the trade balance has brought the country into an economic cul-de-sac and there is reason to consider if the three plantation crops tea, rubber and coconuts should be given further priority in the long-term planning (The Five Year Plan, 1972-76). This question is reasonable as long as it is found necessary to maintain the present import structure.

Between the years 1957 and 1968 the total work force increased by 41 %, while the number of unemployed increased by 57 % during the shorter period 1961 to 1968. In later years, the gap between the increase of the total work force and the increase of the total number of unemployed has widened.

Table 13 Increase of registred unemployment in Sri Lanka, 1961-75. (000')

Year	unem- ployed	year	unem- ployed
1961	151.0	1969	306.0
1962	151.0	1970	381.0
1963	152.4	1971	419.7
1964	159	1972	440.3
1965	181.1	1973	457.7
1966	224.7	1974	489.3
1967	249.5		
1968	265.6		

Sources: UN Statistical Yearbook, 1975. Statistical Pocketbook of the Republic of Sri Lanka, 1973. Bancil, 1971.



3.4.2 Concluding remarks about the recent economic development in Sri Lanka

Sri Lanka has had an amazingly unfortunante economic development during the past one and a half decades. No earthquakes, serious hurricanes or homicides have hit the Lankese people in recent years, but still it seems as if a kind of slow disaster process has tormented the people of the island during the last five years. This affliction has been of an economic nature and is apparently so far invincible.

A very unfortunate interplay of factors, uncontrollable for the leading forces of the country at the end, has spiralled the country deeper and deeper towards severe impoverishment. The Achilles' heel of the economy may have been hit during the so-called oil crisis in 1973/74.

More or less overnight some serious set-backs hit Sri Lanka in December 1973. Between December 31 in 1973 and January 1st in 1974 the petrol price rose from RS 6:50 per gallon to RS 12:50 per gallon, and rice prices increased with over 300% during December 1973. These two events caused the most severe problems for the people in recent years, with a possible exception for the 1971 rebellion.

Many people claim that Sri Lanka could be a flourishing country if the resources could be used properly, as there i.a. are big land reserves. The most important restraint for a rapid economic recovery is explained by the present trade structure. In 1974 61% of the total value of the import constituted of foodstuffs, mainly rice and wheat flour. Another 20% of the import value was paid for petroleum products. The imports had to be paid for with revenues mainly from the export, which for a long time has been dominated to about 90% by tea, rubber and coconut products, commodities that for a number of years have developed a negative price trend compared to the import commodities.

The economic problems of Sri Lanka has affected almost every citizen in the country, but the obstacles for economic improvement can be of another nature if they are identified at the local level, which will be observed in the village surveys.

4 AGRICULTURAL SYSTEMS AND SOCIO-ECONOMIC  
CONDITIONS IN RURAL AREAS OF SRI LANKA

4.1 General remarks

Agriculture is the basic economic sector of Sri Lanka. It sustains 52 per cent of the total employed work force, and 90 per cent of the country's foreign exchange earnings are obtained from three plantation crops - tea, rubber and coconut. (Compare with part 3.4.1.1 p.60).

Table 14. Agricultural population and population economically active in agriculture 1960 and 1970 in Sri Lanka.

Year	Total population	Agricultural population	Economically active population		
			Total	In agriculture	Per cent in agriculture
1960	9 890 000	5 543 000	3 295 000	1 847 000	56.1
1970	12 603 000	6 591 000	4 059 000	2 123 000	52.3

Source: FAO Production Yearbook, 1975.

The bulk of the economic activity is thus centred around agriculture, though the plantation sector is given a conspicuous investment priority. In earlier days plantations were developed by private capital and enterprise and Government investment was restricted more or less completely to the infrastructure. Peasants were as a rule neglected and received no economic contributions or encouragement from the Government to improve their situation. However, there have been re-settlement schemes or re-colonization schemes where maybe 100 000 people have settled on new allotments in the Dry Zone, cultivating paddy land cleared during large irrigation schemes. This type of project was initiated in the mid 19th century by the British (see part 3.3.5.3), who undertook the repairs and restoration of ruined tanks and

anicuts to increase paddy cultivation, The works were continued by Ceylonese authorities, but the targets set were never achieved. The steady increases of the amount of paddy imported during a long span of time indicates this.

In the traditional villages or the local communities the peasants continue to eke out a meagre existence. To a large extent, the position and standard of the Ceylonese peasant today is a consequence of the British rural policy of 19th century.

#### 4.2 Agricultural conditions and development

Most of the inhabitants of the 17 000-23 000 settlements, (Bancil, 1971. Öhrling, 1975). that can be classified as villages with more or less traditional socio-economic structures, have not experienced any major benefits during the last century as increased standard of living, or improved economic security or brighter future prospects. The traditional rural sector is, and has for a long time been neglected. Of course, in the villages one might find a few transistor radios, wrist watches, books, bicycles and even one or two sewing machines, but as a whole, the living conditions of peasant families have not improved. Rural Development Societies and Village Committées have been established but, generally speaking, they lack financial means for any important undertakings. Government policy, may it be under the British or the present system, has not paid any major attention to the traditional rural areas, on the contrary there are many instances where the interests of governments bodies and the villagers have clashed. One clear example of conflict is the government policy directed against chena cultivation by villagers. From the Colebrooke reforms in 1833 (see part 3.3.5.3) to the latest Five Year Plan, efforts have been made to circumscribe the habit of villagers to cultivate on chenas along with other types of agriculture.

The negative attitude to chena cultivation is still very distinct in the opinions that are reflected in the recommendations for utilization of crown lands as late as 1953:

- a) The system is wasteful of forests. Too frequent clearings result in a profound change in the composition of the forest, the tendency being towards inferior timber species, or to shrubs and grass. It has been partly responsible, coming as it does from the past, for the destruction of large tracts of valuable forests, especially in the Dry Zone. This has also led to the degradation of the soil, resulting in the establishment of uneconomic and infertile grasslands chiefly in the Eastern Province and Uva where large tracts of forest land, through chena and subsequent fires, have reverted to man and illuk.
- b) In recent years, there has been an increase of chena cultivation in steep, rocky land or within catchment and stream reservations in the Wet and Montane Zones in both forest and patna lands. This has to be arrested if our catchment areas are to be preserved and earthslips prevented.
- c) In chena cultivation, agricultural productivity is lower than in any other system. Results are not commensurate with the labour expended on felling the jungle, burning it, erecting stockades, living and watching the growing crops far away from the cultivator's home. It is a fallacy to say that the chena system is an easy mode of agriculture. It is hard method of wresting a living from the land. After all this effort, the chena cultivator will get less produce than from a properly cultivated plot of land.

(Report of the Committee on Utilization of Crown Lands. Ceylon Government Press. March 1953).

The Forest Department at present intends to carry out a major reforestation scheme on former chena land. (The Five Year Plan, 1972-1976. Colombo, 1971).

But within two sectors there has been notably improved conditions during the last decades;

1) The Public Health Sector.

It is possible for each individual to receive medical treatment for the moderate price of 25 cents. (1 R = 100 = about 0.15 U.S.\$).

2) General Education.

In most rural villages there are schools for primary education, but many of the pupils do not attend regularly.

When travelling along the roads in the countryside, one rarely sees traditional village communities. Although, the houses often are made of clay with thatched roofs and tools most commonly used at work are hoes, knives and axes, but the settlements along roads are normally of another kind. A traditional village is commonly a social and economic entity and is often of considerable age. Road constructors avoided village land, and because the villages, as a rule, are not situated very close to roads or railways, this maybe a contributing factor towards their neglect. But what is a village? To understand the problems of a village, the concept village must be defined:

"The Sinhalese term *gama*, used in certain contexts to signify landed property or estate, also designated a collection of land-holdings. Since the word *pamgawa* or *wasama* connoted a single holding forming part of the *gama*, the latter term maybe defined as a collection of land-holdings aggregated in one place and comprising a village in the usual sense .... Hence the term *gama*, translated as *village*, will be understood to connote an inhabited village .... The village, so defined, was not an administrative unit as such, and in Kandyan times the village ... was part of a *pattawa* which in turn was a subdivision of a *koral*, and it was these latter which were the units of state administration to which officials were attached." (Pieris, 1956. p. 39).

The most typical traditional village systems are mostly found in the Dry Zone, and this type of settlement will be more accurately described in part 4.1.3.

In traditional villages, or local communities, output per cultivated unit of land has not increased substantially during the last decades. This is especially true for paddy as transplanting and fertilizing is not yet a common practice. For those without land, (the wage or casual labourers form an important group in many villages), wages have increased at a slower rate than costs of living.

Table 15 . Development of farm wages and retail prices of food in Sri Lanka 1964-1973.  
I = Male workers. II = Female workers.  
RP = Retail prices. 1970 = 100.

	I	II	RP
1964	82	85	78
1965	84	86	79
1966	84	85	80
1967	85	88	83
1968	97	100	89
1969	97	100	94
1970	100	100	100
1971	102	123	102
1972	125	109	108
1973	115	131	122

Figures compiled with data from FAO Production Yearbook. 1974.

When computed, the figures show that the increase of retail prices of food from 1964 to 1973 was 36 %, while wages increased with 27.5 % for male workers and 35 % for female workers during the same period. If figures for the period 1971 to 1973 are compared, they show that retail prices increased with c. 20 % while wages for male and female workers increased with 11 % and 5.5 % respectively. To these poor figures must also be added to decrease of free rationed rice for each person over 1 year which was cut down from two lbs (1 lb = 0.454 kg) to one lb in December 1973, thereby further deteriorating living conditions for the lowest income groups. This cut was indirectly caused by the oil crisis, which also was the reason for a number of other serious set backs for the economy of Sri Lanka.

It is obvious that recent economic development has not been favourable for the village economies of Sri Lanka, especially not since the oil crisis and food crisis in 1973 and 1974.

Rural investments by the government or by private companies have mainly been allocated to the plantation sector and other agricultural schemes. Exceptions, though, are the Village Expansion Schemes, where a fairly large number of villagers acquired new plots from Crown Land, simultaneously with the extension of irrigation works in their villages. The major efforts though, were directed on Recolonisation Schemes, (see part 4.1 and part 3.3.5.3) and Middle Class (land) Alienation, but neither of these projects seems to have achieved the long term goals hoped for. (Wikkramatileke, 1963. Datta-Chaudhuri & Lefebvre, 1971). Inability to achieve rural development and self-sufficiency within the food production sector is a serious problem in present day Sri Lanka, food items constituting 40-60% of total imports.

This problem has been inherited from the days when it was more profitable to give priority to the plantation sector, and export its products, while the domestic paddy sector was neglected as rice was cheaply imported from Burma.

#### 4.3 Settlement patterns

##### 4.3.1 Urban

Before 1833 there were hardly any towns in Sri Lanka except for Colombo, which was the centre for colonial affairs and administration. Building up the plantation economy, the construction of roads and the extension of administration to the provinces were the main reasons for a growing urbanization in Ceylon. But it would be wrong to assume that there has been any rapid growth of central places or fast increase of population in those that already existed. As late as 1971, four people out of five lived in rural areas.

Table 16 . Urban population and number of central places in Sri Lanka 1901-1971.

Year	Urban population 000	Number of towns	Percentage of total population in towns
1901	414	28	12
1911	no data	no data	13
1921	"	"	14
1931	"	"	14
1946	"	"	16
1953	1 239	81	18
1963	2 016	90	19
1971	2 842	90	22

Sources: Panditharatna 1964. Statistical Pocket Book of the Republic of Sri Lanka, 1973.

Though urbanization in Ceylon has neither been a rapid nor a dynamic process, it has had a great impact on conditions in the traditional villages of Ceylon, as will be seen in



part 6.1.

Various types of urban communities have either been founded or have increased their importance, because of their functions, and some places have lost their former importance.

In modern times only Colombo harbour could accommodate the modern vessels and consequently the port functions of the other port towns declined. But some along the western coast continued to grow as residential, sociocivic and administrative centres like Galle, Matara, Kalutara and Negombo.

The development of roads and railways, which improved internal access, led to the growth of several junction towns of varying size and importance in the interior. Some historic towns of the Northern Plain experienced a phase of revival associated with the restoration of irrigation works, and archaeological monuments. These developed as civic centres and headquarters in the drive towards the rehabilitation of the once neglected Dry Zone. The plantation industry explains the growth of several collection and distribution towns. The centralization of Kachchery administration in provincial capitals and district centres stimulated the growth of several towns with administrative functions. Spacing between towns came to be 10-20 miles in the South-West Region and about 20-30 miles in the least urbanized North-Central, North Western, Uva and Sabaragamuwa provinces.

When urban areas are classified formally according to government rules and administrative functions, municipalities, urban councils and town councils are distinguished. A three-fold functional classification seems more reasonable, distinguishing city, town and small town as the three types of prevalent central places:

- A) Cities. Agglomerations of urbanized areas with various functions. Highly centralized with an important impact on the surrounding region. Different types of residential areas

and centres of shifting quality with a high supply of shops, workshops, public utilities, offices or other central functions. One or more CBD's with banks, warehouses, general offices and departments. Well developed network of roads and streets with public and private transports. Population above 250 000. Industrial areas on the fringes. (Only Colombo can be considered as a city in Sri Lanka).

- B) Towns. Relatively large agglomerations, with small shops, public utilities, government offices, and houses which can be recognized as constituting on a small scale distinct residential areas. In addition to main roads also the development of side streets with 5 000-100 000 inhabitants. (Wikkramatileke, 1963).
- C) Small towns. Smaller agglomerations commonly found at road junctions. Their size depends on both the volume of trade and the volume of traffic. Few residential houses, except those associated with the commercial establishments. Linear arrangement of buildings along the road-side. (Wikkramatileke, 1963).

Due to the very slow economic growth since World War II, Ceylon, like India, experienced a slow rate of urbanization. It is also believed that there will be a slow increase in the near future of the proportion of Sri Lanka's population living in urban areas (Jones & Selvaratnam, 1972). It is obvious though, that towns constitute the centres and the villages the periphery of the provinces. When the periphery is linked to the centre, this mutual relationship creates a major impact on social and economic conditions in the villages, as will be seen in the later part of this work. As a rule, the towns and townships of Sri Lanka are very similar to each other, considering their structure and functions, be they dominated by Tamils, Sinhalese or Moors.

#### 4.3.2 Rural

##### 4.3.2.1 General settlement patterns

Unlike urban settlement in Sri Lanka, the rural communities do not show a homogenous settlement pattern. There may be differences due to ethnical, ecological, economical or other variations. For the rural settlements or villages of Sri Lanka, there are a number of possible solutions to the problem of classification. They can be classified according to:

a) Location

1. Contour villages, e.g. ridge and hilltop villages
2. Non-contour villages, e.g. road-way villages

b) Shape

1. Strip villages
2. Cluster villages
3. Dispersed villages
4. Single farmsteads

c) Land use and economic activities

- E.g.:
1. Fishing villages
  2. Irrigated sedentary villages

d) Degree of commercialization of economic activities

1. Subsistence villages
2. Partly commercial
3. Commercial villages

e) Religion or ethnic groups

- a. Buddhist
- b. Hindu
- c. Christian
- d. Muslim
- e. Sinhalese
- f. Tamil
- g. Moor

(Freestone, 1974).

A very important dividing line is drawn between traditional settlements and those more affected by change or recent types of rural settlement patterns; the former one of principle importance for this study. Wikkramatileke (1963) distinguishes eight types of rural settlement systems, and it is obvious that some of them were affected by changes of political and economic nature during the 19th century, and consequently more varied than recent types of settlements. Living conditions differ in various types of settlements, but for a traditional peasant, some specific norms and values distinguish him from other groups of rural population:

...."The farm is the source of the next meal; but agriculture is not of the cook-book type wherein so many inputs of land, labour and capital are applied to yield a predetermined output. Farming is a way of life that is traditional as the village in which the farmer lives, and to which he is intagnibly connected although he may be forced by circumstances to leave it and migrate to the town or the city"....  
.... (Freestone, 1974, p.83).

The eight types of rural settlements, as described by Wikkramatileke (1963), are examples of community types in south-eastern Sri Lanka, but they are also representative for the whole country. The criteria of selection are basically of geographical nature, dividing traditional and non-traditional types of settlement patterns from each other. By traditional settlements, I mean those community types that existed prior to the transformations described in part 3.3.5.

#### Settlement patterns of rural Sri Lanka:

- A) Agglomerated Rural Settlements. This type is characteristic of the alluvial tracts, especially in the wetter parts. The dwellings are situated on the edges of the ricefields in small clusters. Where the population is dense, one village gradually merges into the next. In some places, the pressure of popu-

lation has resulted in the gradual dispersion of the settlement, and individual homesteads are sometimes found on the higher ground above the more densely settled area. Both low land and high land settlement types can fall into this category.

- B) Nucleated Tank Settlement. These are characteristic of the Dry Zone. The population is compacted into a small area below the tank bund, and the dwellings are so placed as to enable the maximum use of the irrigable area for rice cultivation. This settlement is most evident where settlement is based on a limited supply of water from smaller tanks.
- C) The Estate Settlement. This compact type of settlement results from the particular layout of living quarters for estate labourers. The labourers are housed in l i n e s which are attached single-room dwellings. These lines are normally of a very low standard.
- D) Fishing Settlement. These consists of small clusters of poorly constructed dwellings and are found at intervals along the coast. Some of them are not permanently inhabited, as the fisherfolk migrate from the south-east coast to the south-west coast during the period of the North-east Monsoon.
- E) The Disseminated Lowland Settlements. The pattern here is one of scattered dwellings on permanently cultivated plots and is more common in the wetter areas. This type of settlement is characteristic of much of Giruwa Pattu West, where citronella is cultivated as an unirrigated cash crop by peasant farmers. Similar settlements are found along many of the roads in the area. These settlements have

grown haphazardly, each family building its homestead without regard to any settlement plan.

F) The Disseminated Upland Settlement

In the upland tracts this kind of settlement is found on land that is not irrigated and in areas with steep hills the dispersal is directly due to the lack of level land for building homesteads. In more favourable areas the land is permanently settled, but in others the land maybe abandoned after a few years.

G) Chena settlements. These are generally temporary settlements. The dwellings are set up by the shifting cultivator. In many cases the chena has no dwelling, and the peasant uses a watch hut built on a tree. The chena cultivator may sometimes build a permanent building by the road side for his family.

Only until recent years has chena formed an independent agrarian economy.

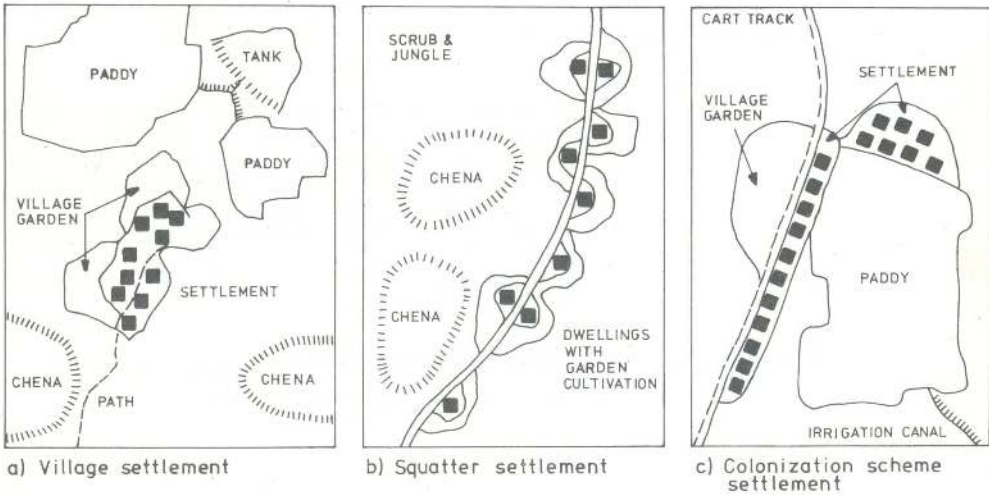
(Wikkramatileke, 1963).

H) The Colonies. This form of settlement is a relatively new feature in the rural areas. The government, in the course of its program of rehabilitating the Dry Zone, has given areas of land, each with a model cottage, to peasant families.

Only the A, B and D types of settlements are of pre-British origin in Sri Lanka. The rest of the settlement types that are found on the island comes mainly from the changes during the 19th century. If the plantation and coastal types of settlements are excluded, it is possible to reduce the number of types of settlements to those depicted in fig 8.

The cases in this study concern local communities, by which it should be understood that Squatter Settlements

Figure 8 Farming settlement systems of Sri Lanka.



Source: Öhrling, 1975.

and Colonization Scheme Settlements will be excluded from analysis. The traditional village constitutes either of an Agglomerated Rural Settlement or a Nucleated Tank Settlement, if the classifications on pages 84-6 are used. Using the same terminology, squatter settlements constitute either Disseminated Lowland Settlements, Disseminated Upland Settlements or most often Chena Settlements.

#### 4.3.2.2 The traditional Dry Zone settlement pattern

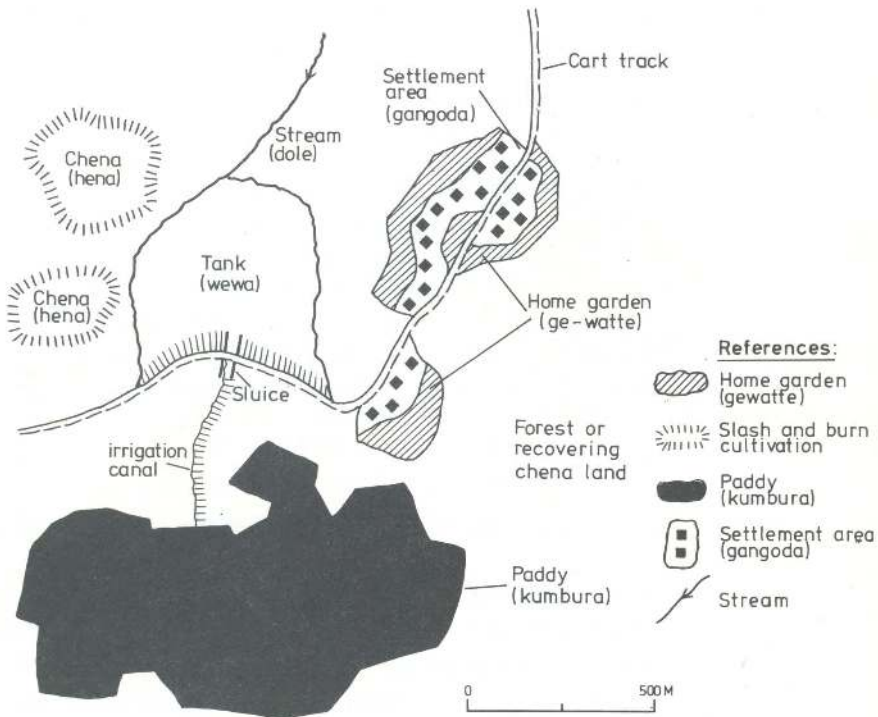
There is a very clear border line between the Wet Zone and the Dry Zone, not only because of climatological factors, but also because of the consequences of these climatic variations. In the Dry Zone, it has always been necessary to store water from the unevenly distributed precipitation to achieve as high agricultural output as possible, while these problems normally do not exist for cultivators in the Wet Zone. This basic difference has had an important impact on.

the settlement pattern as well as the agricultural systems in the two zones. A clear distinction of the agroclimatic differences is the important role played by perennial crops in the Wet Zone agro-systems, while annual crops dominate in the Dry Zone. (See part 13).

"In the villages it was felt that no other undertaking could compare to the acquisition of rice land, in terms of productivity and prestige. All other investments were considered risky, and unless one succeeded in becoming very rich they did not enhance one's social position."

(Yalman, 1971. pp. 37-39).

Figure 9      The settlement pattern and agrosystem of a traditional Dry Zone village.

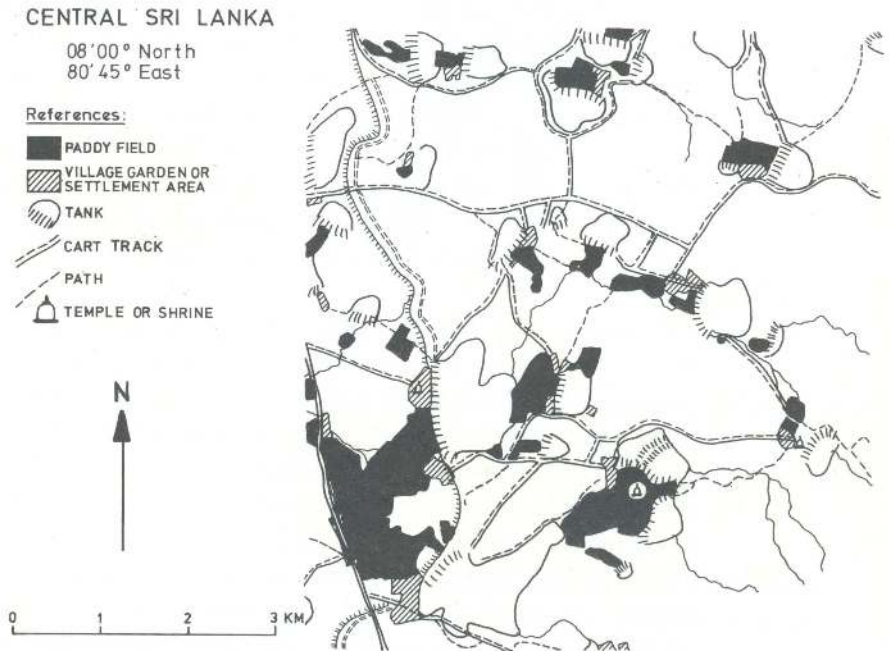




A peasant family that owns a fair amount of each type of land, has employment for the whole year, with no periods for idleness or rest if land resources are to be used efficiently. A household, or cooking unit, normally consists of a nuclear family with one couple and their unmarried children, and not, as in many parts of India, the joint-family. (Domrös, 1974. Ryan, 1958). The huts or houses are either arranged as a cluster dissected by paths or an agglomeration along a cart track, and rarely located along a road for motor vehicles.

The distance between Dry Zone villages is generally long enough to allow a free choice of *g o d a i d a m* (high land) where chena cultivation can be practised without interference or excessive utilization of land.

Figure 10 Pattern of settlement in an area with predominantly traditional villages in the Dry Zone of Sri Lanka.



The population density in Dry Zone village areas is normally comparatively low, amounting to 50-150 inh/km<sup>2</sup>. The greatest danger for agriculture here is the unreliability of sufficient precipitation and not pressure on land.

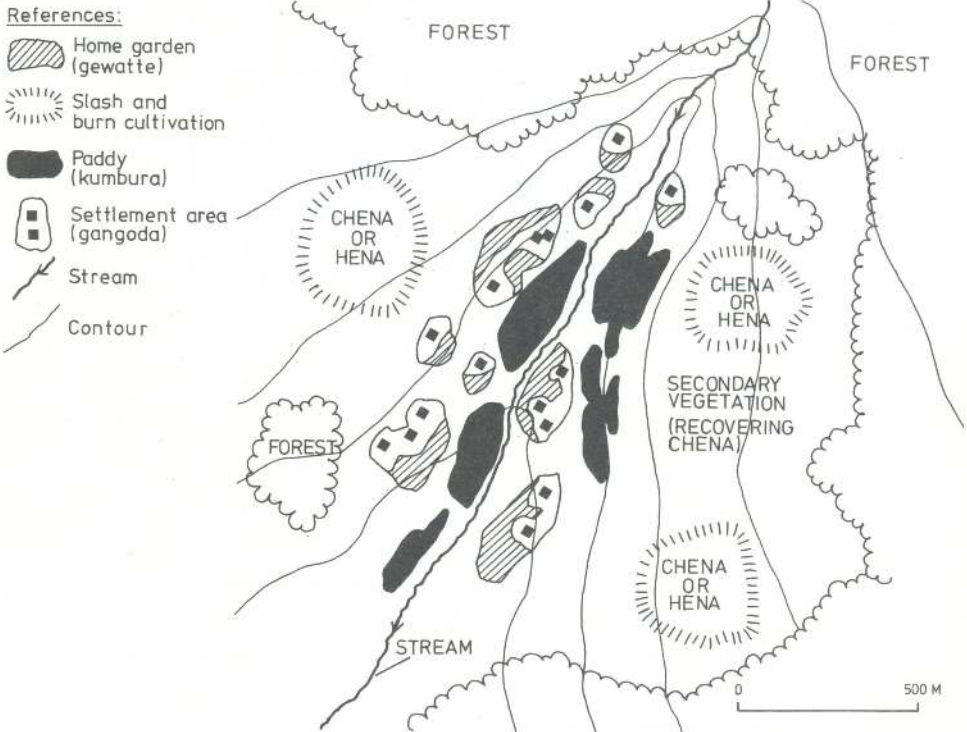
#### 4.3.2.3 The traditional Wet Zone settlement pattern

The traditional form of settlement in the Wet Zone is the Agglomerated Rural Settlement. In the Wet Zone low land population density is generally very high, about 350-500 inh/km<sup>2</sup> being the mean value. Here villages are clustered very densely and often merge into each other. This zone has also been exposed to the influence of colonial powers between 1505 and 1948 and hence little of the traditional socio-economic system has remained. In the mountainous areas of Ratnapura and Badulle Districts population density is lower, about 200 inh/km<sup>2</sup>, and these areas have also been much less affected by change from foreign influence. It is in these areas that villages with a traditional structure can be found. As in the Dry Zone these villages range from semi-commercialized market-gardening communities in the vicinity of roads and central places to isolated villages near subsistence that have undergone little change throughout the centuries. The degree of accessibility seems to be a factor of importance, corresponding with the degree of change in both Dry and Wet Zone communities.

Cultivable land is also divided here in the same manner as in the Dry Zone, the most important distinction being made between high land (goda idam) and mud land (mada idam) of the highest value where paddy is grown. The goda idam land is used both for chena, if such land is available, and for garden cultivation. In the hilly or mountainous areas, the villages are normally located in valleys, where paddy is grown in the lower, fertile parts. Terraced paddy is also common, though the skill in the technique of cultivation of this varies considerably. Chena cultivations are found on hill-sides, where often primary vegetation is almost absent as a consequence of many decades of slash-and-burn.

Huts and houses are normally not so densely clustered, thereby permitting each family a more extensive gewatte or home-garden cultivation. The variety and richness of garden cultivation is much more conspicuous here, than in the Dry Zone, as the agroclimatic conditions are much more favourable for perennial crops especially in the Wet Zone.

Figure 11 Example of settlement pattern and agro-system of a traditional Wet Zone village in the high lands.



As crops grow all the year round, employment conditions are more favourable for the land-owning peasant family here than it is in the Dry Zone.

In the mountain areas, where plantation do not dominate, the traditional settlement is normally found in the valleys, where agriculture is more intensive.

Figure 12

Pattern of settlement in a hill area with predominantly traditional villages in the Wet Zone of Sri Lanka.

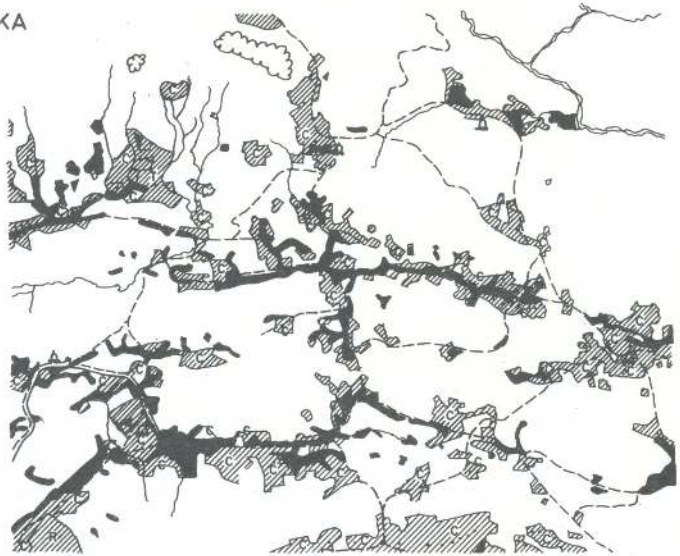
SOUTHERN SRI LANKA

06°20' North  
80°40' East

References:

- Paddy
- ▨ Garden cultivation or settlement area
- - - Path
- - - Cart track
- R Rubber
- T Tea
- C Cinnamon
- ~ Stream
- ☁ Uncovered rocks
- ▲ Shrine or temple

0 1 2 3 KM



From the above sketched map, a settlement pattern with villages, lacking roads but with paths and cart-tracks linking them, can be seen. Paddy is cultivated in the lower parts, supplied with water from streams. Attached to the settlements are garden cultivations where especially cinnamon dominates as the cash crop for this area. This small region is located in the Sabaragamuwa area (Ratnapura district), an area that has preserved most of the obsolete cultivation patterns and living conditions from older days, mainly because of its inaccessibility.

4.4 Socio-economic conditions in traditional  
villages (local communities)

The nucleus of the Sinhalese village is the family, but unlike India it is not the extended or joint family but the nuclear family which is the primary economic and social group. (Ryan, 1958). When children grow up they normally leave the household to get married and settle in a new part of the village. If it is a daughter, she often leaves the village to settle in her husband's home elsewhere returning to her parents' home only to give birth to her first two or three babies. It is also common that an elderly widow leaves her old home, with the help of grown up children, to settle in a smaller house, where she may cultivate a home-garden for her own use, but being supported with basic food items by her children's families. The cultivated land is often formally separated from the widows.

There is a division of labour within families, though not as cut clear as it often is in villages in other developing countries. Domestic work is usually done by the women, such as grinding and pounding rice by hand, cooking, nursing and cleaning. Most heavy work in the fields, such as tilling, ploughing and clearing land is done by men, though the planting of paddy is often done by women. At the harvest, both sexes take an active part in the work. From very young ages, children begin to help their parents at work, unfortunately often neglecting their education. School is free but not compulsory all over the country, and even in small or isolated villages there is normally at least some primary education available.

People in the villages live with the shift between day and night; they get up just before sunrise and get to sleep a couple of hours after sunset, once they have eaten their late meal. This goes on throughout the year, as the length of the day has only a slight variation as in other countries close to the equator. There is normally no week with one or two days off, people only celebrate more important holidays or religious festivals. This is the case also in towns

all over the country, shops and restaurants, especially the smaller ones, opening daily.

In a traditional village with unbiased ownership of land there is no distinct social stratification. Most prestige is ascribed to families with a neat, tiled house, healthy children and a fair share of paddy land, especially if the head of the family is a member of the village council or has important influence on the community.

But of what importance are the deference groups, the castes? The origin of caste is mainly a consequence of a functional division of labour, but as agriculture has been the most important and dominant activity in Ceylon, the *g o y i a - g a m a* (cultivator) caste has emerged to be the biggest and the highest caste. Also other castes, with other duties, worked often part of the time on the land, and this has developed into a system where representatives of other castes are today mainly cultivators. Unlike India, where villages often contain Brahmins, other castes and *h a r i - j a n s* (out-castes), the caste structure of a Sinhalese village is normally homogenous. A *w a h a n p u r a* (washerman) village might be exclusively a farming village with no other castes being found there. One village - one caste seems to be an appropriate rule for Sri Lanka. The caste system of Sri Lanka today is not as rigid as in India (though it was formally abolished there in 1948). There is a very clear line of division, though. Inter-marriage as well as social activities between castes is still rare in Sri Lanka. A *h a k k u r u - m a n* (jaggery-maker), is still looked down at by a *goiyagama-man* (cultivator).

"The relations between castes were defined by custom and social usage, and the social distance between different castes varied enormously. The gradations of intercaste regulations were subtle indeed. *G o Y i a - g a m a* people did not scruple to toil in fields belonging to *h a k k u r u* families, but they would on no account have meals in the low caste proprietors' houses." (Pieris, 1956. p. 176).

The head of a village was until 1957 normally elected to be Village Headman, but now the principal is the G r a m a S e v a k a. He is a local who is a headman official appointed by the regional authorities. In many villages the B i k k u (Buddhist priest) acts as the local priest and he is highly respected and well looked after. Religion still has a great influence on social life, particularly in rural areas.

The basic mean of production consists mainly of cultivated paddy land, (mada idam), which is in some cases unevenly distributed, but elsewhere ownership is not biased. In the latter case, kayye (se page 32) is more common, while in the case of a biased landowning system, kayye is replaced by hired labour for those who can afford it.

Another traditional way of controlling and working land is t a t t u m a r u which is commonly found in traditional rural economies. Tattumaruru is a system of joint ownership. A field might belong to three joint-tenants, each cultivating the whole plot every third year. The family cultivating one year takes the whole yield for that year. (Pieris, 1956. Ryan, 1958. de Silva, 1973). The tattumaruru system is admirably suitable as rice is easily stored for three years (Andrews & Freestone, 1974), and when a family is not cultivating rice, they can engage in garden or chena cultivation, contract work or improve their house.

It has been stated that the principle obstacles to an increase of production are the uneconomic size of holdings, joint ownership, the conditions of share-cropping and tenancy, and the poor techniques in farming, all of which are found in traditional villages. (Wikkramatileke, 1963). Other means of production are cattle and machinery used in agricultural work, forest (often unlawfully exploited), and irrigation works.

A village tank is jointly owned but there are strict rules for the use of water, giving priority to those with highest influence so that they irrigate their fields first.

Among other things that are jointly owned in a village are one or more wells, a community centre and a temple.

The sacred Boo-tree, often at the village temple or shrine, is found in most villages. Lastly, it should be mentioned that traditional villages are in many senses closed entities where people have their own values, and where basically a subsistence-oriented and more unified economic system prevails. It is wrong to believe, though, that innovations such as modern, manufactured goods are rejected; on the contrary, radios, wristwatches and nylon clothes, for example, are much sought after. Changes in the way of life, morals and values and methods of production are not easily altered unless influenced by more powerful and important groups within the community.

#### 4.5 Cultivation pattern in traditional rural economies

Paddy cultivation has for thousands of years been the key-factor for the rise and survivals of many cultures in South and South-east Asia. Though the various societies have been differently organized, there are still distinct similarities between paddy-cultivating areas, whether in Indonesia or in Sri Lanka. A traditional paddy-cultivating village in Java often has striking similarities with its counterpart in Sri Lanka. The size of holdings, the construction of buildings, the tools and the social organization does not differ considerably although the distance between the regions is over 2 500 miles. One of the major features of farming in Indonesia is the lack of concentration of ownership of land. This is partly the result of the Agrarian Decree of 1870 which prevented the purchase of agricultural land by any one but Indonesians, and it is partly the result of the widespread system of communal ownership in various forms. (Andrews & Freestone, 1974).

The Colebrooke reforms of 1833 jeopardized the communal ownership of land in Ceylon but still the ownership of paddy land is comparatively even, especially in traditional villages where agriculture is not basically commercialized.



The traditional village cultivation system can be described with five characteristics;

- 1) Relatively advanced systems of rice cultivation. Use of animal drawn tillage implements.
  - 2) Cultivation of rainfed crops under a system of chena cultivation. The use of a forest fallow in arable agriculture as a natural development under conditions of higher rainfall in the tropics represents the only development possible under a subsistence system in such regions.
  - 3) An integrated and diversified system of agriculture (well-yaya, gangoda and chena) which also included a limited use of livestock.
  - 4) A landuse system that recognized empirically the existence of specific land classes. Crops were located according to topographically placed land classes.
  - 5) A social organization that was well adapted to agriculture, which in turn was well adapted to the environment.
- (Bancil, 1971. p. 373).

Though these characteristics describe the village economy as far back as to the precolonial times, it is still possible to distinguish strong similarities with the old system in traditional Sinhalese villages today.

4.5.1 General agricultural system in the Dry Zone And Wet Zone- paddy, garden and chena cultivation

As has been indicated earlier in this part, the traditional cultivation pattern of Ceylon is threefold; Paddy, garden and chena are cultivated simultaneously, thereby allowing the farmer to produce a great variety of crops, thus giving a broad diet for his family, and maintaining full employment throughout the year, unless hindered by the weather. Animal nutrients have played a very limited role in Ceylonese food habits, which might be explained to a great extent by the conceptions taboo derived from Buddhist philosophy, which condemns the slaughter of animals. Cows are kept for dairy products while buffaloes and oxens are kept for labour and transport.

The restrictions on chena cultivation during the 19th century and the commercialization of crops has affected the three-fold cultivation pattern in many areas and it would seem that the variety of crops cultivated in rural villages has decreased. The nutritional conditions, it seems, have been impoverished by the shift from traditional crops to cash crops in agriculture, and in recent years deficit of basic food items has been one of the major problems of Sri Lanka. A similar problem has emerged in other parts of the world, for instance in Africa...:

.... "In many countries of Western Africa, and in Senegal particularly, the introduction of cash crops such as ground nuts, with which to obtain money, has had detrimental effect on food production, and the nutritional status of the area. In fact the monetary resources cannot compensate for the decrease in produce used for home consumption. Recent efforts to give a new impulse to the cultivation of sorghum and pennisetum meet with resistance due to the prestige attached to the cash crops' symbol of modernity and monetary wealth." (de Garine, 1972. p. 145).

In Indonesia the security of the peasants has been harassed in recent years:

"So long as the Indonesians had their rice ladangs the market quotations of New York and London meant nothing to them, but as cash crop producers they began to feel the effect of every fluctuation on the world market."

(Andrews & Freestone, 1973. p. 28).

Ladang is the rotation of fields instead of crops, cleared by means of fire, and for it is this reason often referred to as slash and burn farming. (Andrews & Freestone, 1973).

A large variety of cereals, condiments, vegetables, fruits and yams are cultivated in Sri Lanka, but only the more important sorts will be dealt in this study. For the bulk of the population rice is, and has been from the beginning of civilization in Ceylon, the staple food. Quite naturally the amount of rice produced by each family will determine their future food situation.

#### 4.5.2 Paddy cultivation with examples mainly from the Dry Zone

Rice or paddy (*Oryza Sativa*) is grown under irrigation both on flat land and on terraced hill sides. The greater part of the cultivation is still on small holdings less than two acres in size. Efficient control and management of irrigation water are two basic prerequisites for high yields of rice.

Since the possibility of wet rice cultivation, and in particular the amount of the yields, depends on the water supply for irrigation, as rainfall cannot be taken as a standard indicator of conditions favourable or unfavourable to the cultivation of wet rice in the Dry Zone; especially as a rather high figure for rainfall does not necessarily mean that precipitation is evenly distributed throughout the year (Ruthenberg, 1971. Domrös, 1974). Though rice is the staple food, paddy land does not constitute a major part of cultivable land.

Table 17 Utilization of cultivable land in Ceylon 1962.

	Area (ha)	Percentage of total cultivated area
Rice	455 000	28.3
Plantation crops	929 000	57.9
Annual crops	67 000	4.2
Grassland	13 000	0.8
Other crops	142 000	8.8
	1 606 000	100.0

Source: Domrös, 1974. p. 38 .

The above figures indicate that less than one third of the total cultivated area is reserved for paddy. It also reveals that only about one-fourth of the total area of Sri Lanka is used for cultivation. There are no doubt waste land reserves that could be used for the extension of paddy cultivation to cover the deficit of rice in the country.

Table 18 Degree of self-sufficiency in rice-production as a percentage of total consumption.

Year	1957	1958	1959	1960	1961	1963	1967
%	45	51	47	53	56	59	67

Source: Bancil, 1971. p. 337.

#### Requirements for paddy cultivation

Rice is a crop that demands a fairly high input of manual labour, especially during the times for tillage and transplantation. For irrigated paddy, though, the water supply is the key factor. Most of the paddy is cultivated during the Maha season, October to March (Domrös, 1974, The Economic Development of Ceylon, 1953); but according to other sources Dec/Jan to Jun/Jul (Bansil, 1971). Maha is the period of the north-east monsoon, when the Dry Zone gets the bulk of its precipitation. It is also the period when rivers and streams are filled with water, and from riverwater and rain-fall, irrigation tanks can be filled

and this water can be used for growing paddy. Rice is also grown during the Yala season, April to September, but in the Dry Zone the water supply during these months is in most cases insufficient to permit paddy cultivation. Therefore one paddy yield is normal for Dry Zone areas while two crops of paddy per annum is possible in most Wet Zone areas. This difference in the intensity of paddy cultivation between the two agroclimatic zones is illustrated by the fact that the family paddy fields are normally smaller in the Wet Zone than in the Dry Zone. Rice is an extraordinary crop because it can grow standing in water, an advantage because that eliminates most weeds. (Acland, 1971).

To produce one acre (0.405 ha) of rice in the Dry Zone, about four feet (1.200 mm) of irrigation water is necessary if the cultivation takes places during the wet season (Maha); about six feet (1.800 mm) would be the water requirement during the drier period (Yala) (Domrös, 1974, p. 58). The concept acre/feet is often used to describe the water requirement for paddy cultivation. It indicates how many feet of water that is required for irrigation per acre. (If the figures are translated into the metric system one acre/foot equals roughly 760 mm/ha; one foot = 305 mm, one acre = 0.405 ha). The Yala yield is normally more meagre than the Maha crop, a fact that might be explained by a higher figure for evaporation and water run-off during this period. This is also shown in normal figures for water requirements for cultivation of one acre paddy.

Table 19 Requirements for the growth and maturity of a five months variety of rice plant.

	Maha season crop		Yala season crop	
	Acre feet		Acre feet	
October (1/2)	0.50	April	0.75	
November	0.75	May	1.75	
December	0.50	June	1.50	
January	1.00	July	1.25	
February	0.75	August	0.75	
March (1/2)	0.50			
	4.00		6.00	

Agroclimatic requirements naturally not only consist of rainfall (water supply) but also of other climatic factors, such as thermal conditions, humidity, the duration of sunshine and the length of day play an important role. All these agroclimatic factors have favourable values in Sri Lanka. One example of this is the recommended thermal conditions for paddy cultivation:

Optimal	27 <sup>o</sup> C
Minimum	20 <sup>o</sup> C
Maximum	37 <sup>o</sup> C

Very rarely does the temperature rise above or fall below the maximum and minimum figures, except in the upper hill country. In fact 27<sup>o</sup> C is a temperature close to the mean found in the low lands. To cultivate one acre paddy, not only are agroclimatic conditions and input of power (machine or man/cattle) necessary, but also a certain amount of seeds. In a traditional Dry Zone village, it is reckoned that the normal yield ranges between 25 and 30 bushels per acre (Bansil, 1971). (One acre = 0.405 ha; 1 ha = 2.471 acre; one bushel = 36 l; the specific density for rice is app. 1.1. Translated into metric terms this means an output between 2.692.3 kg/ha to 2.934.4 kg/ha).

#### Types of irrigation

In the Dry Zone the most common method of irrigation is through tanks. As the water supply in the Dry Zone is normally insufficient for two yields of paddy, crop rotation is commonly practised. During the Yala season, rice can be replaced with maize, for instance, which needs less water, but in the long run there is a risk of impoverishment of the soil as fertilizing is not commonly practised.

Another type of irrigation in the Dry Zone is done through anicuts, where a low masonry dam is built across a river or stream for the purpose of checking and diverting a part of the flow out to the fields. Direct irrigation through streams

and channels is also practised, though often the water from these streams and channels is also used to fill tanks. Weels and springs are also used but this is rare. (Wikkramatileke, 1963).

#### Treatment of paddy land in traditonal villages

Agricultural methods in traditional villages are still quite primitive, techniques having changed little during hundreds of years. The plots of paddy land are bounded by small walls of mud and before any work can be done for next season, water is let out into the fields to soften up the earth. After a few weeks the soil is broken up with hoes or by puddling the fields with water buffaloes. Again the fields are kept under water for some time after which the water is let out and the soil is levelled out with the help of buffaloes draggging clod-crushers. Again water is let in and rice is planted. A twelwth or fifteenth of the previous yield has to be kept for seed for the next planting; it is calculated that 2 bushels of seeds are needed for one acre.

Unfortunately, transplanting paddy is not commonly practised in traditional villages, though by doing so the yield may be doubled or tripled. If the seeds are first grown in nursery beds and are then replanted with a distance of about 4 inches between each plant, it is possible to gain a much higher yield. Fertilizing is not commonly practised either, partly because the poorer peasant cannot afford to invest his small capital reserve in comparatively expensive artificial fertilizers, although he would gain by doing so in the long run. It ought to be mentioned, though, that vaste reserves are wasted by allowing all the natural manure to vanish through natural break-down processes. In some areas of Western Africa yields as high as 7 000-8 300 lb/acre (7 800-9 300 kg/ha) are harvested because of efficient cultivation methods. (Acland, 1971).

Clearly an increase in the yields of paddy in traditional villages is possible, but obsolete techniques and the complicated rules of the ownership of land has prevented

possible improvements. It is also evident that rice in many instances is cultivated as a subsistence crop exclusively, and this fact is a serious obstacle for a major increase of output.

#### Dry paddy

Last, it has to be mentioned that rice is also cultivated without irrigation as dry paddy, where the farmer has to rely on an evenly distributed rainfall. The minimum requirement of precipitation recommends a figure of about 750 mm (about 3 inches) as evenly as possible distributed over the months of growth, a period of three to four months; even short dry spells are hazardous. This type of paddy cultivation is naturally a very risky undertaking in the Dry Zone. The temperature requirements are the same as for wet paddy. (Domrös, 1974).

#### 4.5.3 Garden cultivation

Garden cultivation or *gewatte* (homegarden) is practised in most villages throughout Sri Lanka. The preconditions for garden cultivation are much more unfavourable for the Dry Zone villager though, as normally only annual crops are feasible in gardens. The garden land is simply the piece of land lying nearest the farmer's homestead. Further away he has his paddy fields and *chenas*, but his garden cultivation can normally be overlooked from the door of his house.

##### 4.5.3.1 Garden cultivation in the Dry Zone

An interview was conducted with a group of about 20 farmers from a traditional, isolated village (*Bukmitiyawa*) in the eastern Sri Lanka in December 1975. They were asked what they already cultivated as garden crops and what they believed would be possible to grow.



The results of the interview was conducted in a matrix, and the nutritional values for each 100 g was added. The nutritional values were collected from Poleman et al. (1973). For more detailed information, see the appendix, where the edible items that are possible to cultivate, but since some time not in cultivation are put in brackets).

Due to the villagers, the cultivation of a number of garden crops had ceased and fewer items were now part of the daily diet.

This particular village has severe problems from malnutrition and undernourishment, especially among children. Most families lack opportunities to buy or borrow seed for their garden cultivation, and a great number of families cannot cultivate their paddy fields, because they lack seedlings, and even if they can find it, they have no food or money to spend on food, during the period of growth. Instead they take every chance to leave the village briefly to find temporary wage labour, and so neglecting their own land.

Another conclusion is that there are possibilities of expanding the cultivation of perennial crops of important nutritional value, even though the village is located in a typical Dry Zone area, but not where the rainfall is exceptionally low. Domrös (1974) maintains the opinion that perennial crops are, if not impossible to cultivate, at least very unusual in Dry Zone villages. Coconuts, plantains, papaws and mangoes are among the perennial crops that I have observed in about 25 Dry Zone villages. With expanded irrigation and a simultaneous crop rotation the variety of crops could, no doubt, be increased in most Dry Zone areas. Underdeveloped irrigation facilities and bad economic conditions are a major obstacle for increased differentiation of the cultivation pattern in most of the Dry Zone villages.

#### 4.5.3.2 Garden cultivation in the Wet Zone

Insufficient or unevenly distributed precipitation is no problem in the Wet Zone, and this fact facilitates garden cultivation. The more favourable rainfall conditions therefore allow the Wet Zone farmer to maintain a much higher variety of garden crops. Perennial crops are easily cultivated as well as annual garden crops, which allow the Wet Zone farmer to cultivate garden both for subsistence and cash incomes. Pepper, cardamom, cinnamon, tea, rubber, pineapple, kitulpalm, coffee, arecapalm and cocoa were items observed to be cultivated alongside with other fruits, condiments and vegetables by single farmers on garden plots in two of the villages investigated in the Wet Zone. One consequence of this is, of course, that it is easier to be self-sufficient with food items, as most of the crops mentioned above demands very little weeding. (See chapter 10 for further explanation). Chena cultivation, and of course paddy cultivation, are the major possibilities for the Dry Zone farmer to supply the household with food stuffs. Though no written source has been found to support the theory that the diet of a Wet Zone village farmer normally is richer in variety and nutritional value as compared with the Dry Zone village farmer, it seems plausible to believe that this is true.

#### 4.5.4 Chena (Slash-and-burn) cultivation

For most traditional villages in Sri Lanka chena cultivation is a very important agricultural undertaking, and the crops harvested on chenas are usually important additions to the diet of the farmer and his family.

Chenas are cultivated in nearby forests and do not normally interfere with paddy cultivation, as the clearing period, when jungle is burned, is during the dry season. When the monsoon starts, the chenas are sown. There is a wide variety of crops that can be cultivated on chena land. It is advantageous for a family which cultivates chena if one or two sons are teenagers or grown up, because the chena cultiva-

tion has to be weeded and in most cases guarded at night against wild animals that can cause damage to the cultivations.

Chena plots are located in the fringe of the village area, but although they have to be watched around the clock, whole families do normally not move to the field locations, but a single member will spend time there. In the Dry Zone of Sri Lanka a crowded permanent village possessing a small area of land that can be cropped annually often uses chena cultivation for security as an additional food reserve. A group of villagers may co-operatively clear an acreage of low jungle, which has not been cultivated for at least 8 to 10 years and plant maize, sorghum or dry paddy. The practise of swidden agriculture (chena), often considered as both wasteful and inefficient, has some clear advantages for the peasants in Sri Lanka.

Chena does not require water for irrigation, and more important still it is independent of the need for supplies of domestic water as the peasant's dwelling normally is located in the neighbourhood of the irrigated lands. As it usually is practised by the peasant, chena must be considered as an intelligent application of time, labour and limited technology.

Chena cultivation is a hard and precarious occupation, and it is wrong to consider the practise as being due to the indolence of the cultivator. It also reduces soil erosion as a forest cover soon re-establishes itself on abandoned plots and the system also prevents the spread of plant diseases and pests, and combats weed growth. (Wikkramatileke, 1963).

The length of time when one plot can be cultivated with chena might differ. The first year gives the richest yield, by the second year the yield is more meagre and by the third year it is normally very poor. There is also another fact worth noticing; a chena with perennial crops like bananas and papayas can be cultivated for many years, while sorghum and dry paddy rapidly impoverish the soil.

The practising of chena types of cultivation is used also in Indonesia in the same manner.

Here it is called Ladang, and it means the rotation of fields instead of crops, clearing by means of fire, lack of draught animals and manuring, the use of human labour only, employment of the digging stick or the hoe and finally short periods of occupancy of any spot alternating with long periods of non-use of the cleared land. (Andrews & Freestone, 1971). The Ladang system seems to be identical with the chena cultivation in Sri Lanka.

The necessary regeneration period is ten to fifteen years. There is a danger, though, threatening the reliance on a complementary cultivation of chena in any region. If the population of that region increased, the pressure on land would increase and chena land could be used too intensively, resulting in a decrease of the period of recovery and causing a steady decline of fertility. (See figure 13 ).

#### 4.5.4.1 Some crops usually cultivated on chena

##### Manioc or Cassava (Manihot esculenta)

Manioc is widely cultivated, one reason being, simply, that it is very easy to cultivate. The main advantages of manioc are its resistance to drought, its ability to give good yields on poor soils, its resistance to pests and its ability to remain in the soil as a famine reserve. It is a

root-crop that requires very little input of labour, as not many weeds grow among manioc plants.

There are some limitations connected with manioc though:

- 1) Its nutritional value is very low. It consists almost entirely of carbohydrate and fibre.
- 2) It can be dangerous to eat because of its poisonous content if it is not prepared in a proper way. Manioc contains cyanogenic glucoside which can lead to a hydrocyanic poisoning, but on the other hand this fact is the reason why it is normally shunned by wild animals. (Acland, 1971).

It is worth noticing that manioc cultivation increased extensively during the Food Drive in Sri Lanka, during the food crisis 1973-1974, probably because it is so easy to cultivate.

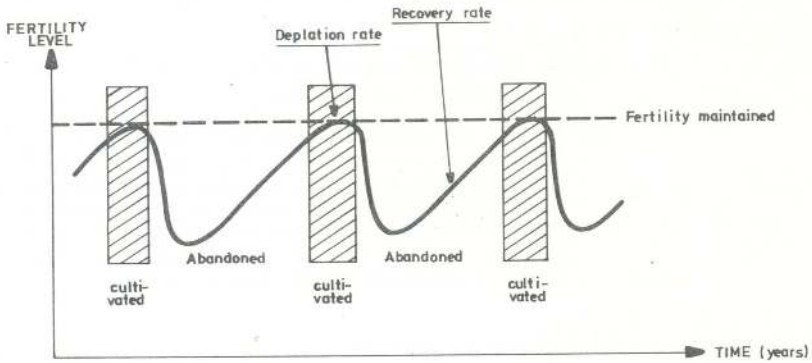
Kurakkan (Finger millet, Sorghum or Elusine coracana)

This crop is often a very useful nutritional complement to the rice diet of the farmer in a traditional village of Sri Lanka as it contains high values of calcium and riboflavin. This cereal is grown as an irrigated crop on most chenas. The crop is extremely adaptable to fluctuations in the rainfall and requires the minimum of attention. Its yields are much lower than those of rice and average between 4 and 6 bushels per acre (Wikkramatileke, 1963) depending on the fertility of land.

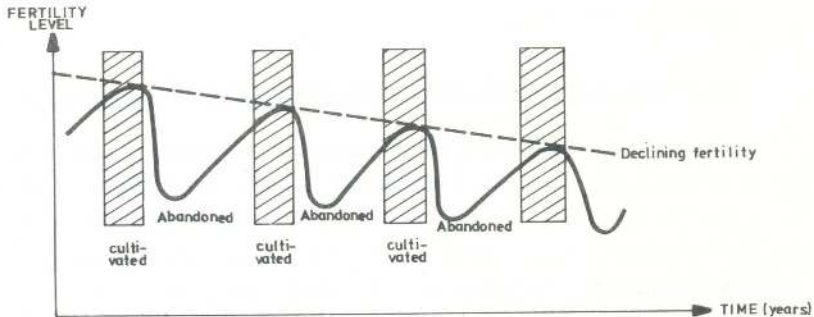
Its nutritional value was obviously not understood by the British colonialists, who through a number of regulations and restrictions tried to stop the chena cultivation, claiming that it was a waste of land and that chena crops were of inferior value. Kurakkan seems to have been the most commonly cultivated chena crop during the 19th century. (See page 47).

There are some other advantages from Kurakkan:

- 1) It can be stored for long periods without being destroyed by insects. Its seeds are small, and they dry out very fast which prevents insects from living inside them.



a) LONG CYCLE



b) SHORT CYCLE

Figure 13

Land use and population density. Relationship of soil fertility levels to cycles of slash and burn agriculture. a) Levels maintained under the long cycle characteristic of low density. b) Levels declining under the shorter cycles characteristic of increasing population density.

(From Haggett, 1972, p 139 ).

- 2) Because of its storage advantages, up to ten years, it is useful as a famine reserve.

Some disadvantages must be mentioned as well:

- 1) It has a fairly low yield capacity. Normally only between 400 and 800 lbs per acre of dried grain is harvested.
- 2) It requires a fairly high input of labour at all stages.
- 3) Although it withstands dry spells in the early stages, it cannot resist longer periods of drought. (Acland, 1971).

#### Maize (Zea mays)

Maize is an annual crop that yields about 900 lbs per acre. It is sometimes substituted for rice by poor chena farmers who think it resembles rice. ("Bat wage", meaning it is like rice, was a comment heard by the author from several poor agricultural labourers and chena cultivators in Sri Lanka who temporarily lacked rice).

Maize has some important advantages though:

- 1) It has a higher potential yield than indigenous chena cereals.
- 2) It is rarely damaged by pests or diseases in the field, and is normally untouched by birds.
- 3) Land preparation, weed control and harvesting require a fairly low input of labour.
- 4) No threshing or winnowing is required. (Acland, 1971).

Although fairly resistant to drought in the early stages, maize is often severely damaged by longer periods without rain during its maturing stages. It also needs well drained soil and a good supply of nutrients. Its calorie and protein values are fairly high though, but still maize is of limited importance as a crop in Sri Lanka and only small acreages are found on chenas and other small holdings.

5 THE SARVODAYA MOVEMENT IN SRI LANKA - A REMEDY  
AGAINST THE DECAY OF LOCAL COMMUNITIES?

5.1 Introduction

A foreigners first contact with the Sarvodaya movement in Sri Lanka is probably a visit to the head quarter in Moratuwa, south of Colombo. Here, roughly 200 Lankese people live and work together within the various branches. A visitor is taken around the centre to see all the sections. Batic, printing, nursery, photo, basket work, mechanic, gardening and carpentry sections are some of the branches where people are educated and work. All over the place there are notice boards explaining the ideology behind and purpose of the Sarvodaya movement.

The name of the centre is Meth Medura and its general purpose, except as the administrative centre of the movement, is to serve as an educational institution and constitute a model community where the ideas of the movement are put into practice. For a visitor, though he might not understand the ideology set out on the notice boards, the centre gives the impression of reflecting a very efficient and potent movement. Meth Medura is only the facade of Sarvodaya, though, and it demands far more effort and time to discover what lies behind. The purpose of this chapter is to describe briefly the Sarvodaya movement, its creation, expansion, aims and achievements.

5.2 Background. The setting and formation of the ideology of the Sarvodaya movement in India and recent development

To understand the Sarvodaya movement of Sri Lanka, it is necessary to glance at the corresponding and more comprehensive original organization in India. Sarvodaya started quite unpretentiously in India.

When Gandhi was assassinated in 1948, his ideology was carried out primarily by the more modest Vinoba Bhave. Gandhi was basically concerned with moral, social and political change.



Two principles constituted the base for his philosophy: Truth (Satya) and Non-violence (Ahimsa). Non-violence was not understood as a passive act by Gandhi, as is commonly believed outside India. Constructive non-violence was important to him, not just acts of disobedience. The common concept for this active non-violence is S a t y a - g r a h a, which literary means holding fast to truth, but is understood to mean non-violent resistance. A good example of practised S a t y a g r a h a is the incident when Gandhi led people on to the railways and so stopped the trains.

Vinoba Bhave is not known for Satyagraha actions, but for the foundation of the Bhoodan movement. About 1950 roughly 16% of the peasants were landless and the majority owned small plots (Choudhary, 1970). At this time Vinoba was working with the rehabilitation of refugees from Pakistan on the request of Jawaharlal Nehru, but Vinoba's mind was also concerned with the idea of carrying out Gandhis ideas in a community development movement. The base for such a movement was to be the Constructive Programme, developed under the guidance of Mahatma Gandhi in the beginning of the 1930's.

The Constructive Programme resulted in the following activities and reforms:

- 1) The development of Khadi (hand-spun, hand-woven cloth) in 1922.
- 2) The Hindu-Muslim communal unity in 1932.
- 3) The abolition of untouchability in 1932.
- 4) The promotion of village industries in 1935.

The Constructive Programme was apparently an attempt to raise awareness among the people not to comprehend merely the problems of their own family, tribe, caste or village, but to gear the minds and interests of the people towards a more comprehensive whole.

In the World Pacifist Meeting held at Sevagram in 1949, Vinoba Bhave said:

"Ahimsa (non-violence) is not merely non-participation in destructive activities; it principally manifests itself in constructive activities ....  
.... People say that the Goddess of ahimsa has no weapons; I say that is wrong. The Goddess of ahimsa has very powerful weapons at her command. They are the weapons of L o v e and therefore creative and not destructive."  
(Ostergaard and Curell, 1971. p 16 ).

Two years later the creative approach led to the B h o o d a n, and with it the revitalization of the Gandhian movement. Bhoodan was a campaign to persuade landowners to donate voluntarily land to the landless labourers. The Bhoodan action was carried out by pilgrimages led by Vinoba Bhave, walking from village to village throughout India.

Considerable pieces of land were given to the landless throughout the country, and from the authorities there were no major objections towards B h o o d a n, instead it was given good publicity. Much of the initial public interest in the B h o o d a n campaign stemmed from the fact that it appeared to offer a possible non-violent alternative to a communist-directed revolution. (Ibid, p. 15).

The Sarvodaya movement is the direct descendant of the B h o o d a n movement and the Constructive Programme and its institutions and persons.

The foundation of the Sarvodaya movement in India represented an attempt to apply to the task of social reconstruction of the ideas originally developed by M a h a t m a Gandhi. These ideas themselves may be seen as a manifestation of a wider movement for the revitalization and transformation of Indian values, norms and institutions which began in the early nineteenth century .... an aspiration to fulfill the universalism of the U p a n i s h a d s. (Ibid, p. 1).

Vinoba Bhave has said:

"If I am under some other person's command, where is my self-government? Self-government means ruling your own self."  
(Ibid, p. 33).

Vinoba strongly maintains the idea that all individuals should be independent, but that they should still have responsibilities towards each other. One central thought in Marxism is that the dynamics of the modernizing state is the increased contradiction between classes, which will finally lead to revolution or at least uprising. The most neglected groups will cooperate and oppress the favoured groups of society. The ideology of Sarvodaya is built on the assumption that there are no classes in society who are in conflict with each other. Instead Vinoba means that:

"Sarvodaya means that the good of all r e s i d e s in the good of one. That there could be interests of one person, which are against the interests of another is i n c o n c e i v a b l e. Similarly there could be no interests of any one community, class or country, which would be against the interest of any other community, class or country."  
(Bhave, 1964. p. 2).

Vinoba Bhave did not encourage passivism, instead he pleaded for action thereby approaching the mode of classical anarchism . Sarvodaya in India has had clear traces of classical anarchism at times, perhaps anarchistic populism if these two concepts is a compatible term. Anarchism is:

...." a system of social thought, aiming at fundamental changes in the structure of society, and particularly .... at the replacement of the authoritarian state by some form of non-governmental cooperation between free individuals."  
(Woodcock, 1963. p. 11).

The Sarvodaya strategy of revolution is distinguished from classical anarchism, and, of course, marxism, by its absence of any appeal to class. A major difference between Sarvodaya and classical anarchism, with the exception of Leo Tolstoy, is that the movement bases its anarchism on religious foundations. The importance of order, religion, non-violence and very high moral values separate Sarvodaya

from the Western type of anarchism.

The Sarvodaya rejection of class appeal and any form of class struggle rests on the explicit belief that the real interests of any individual, or groups of individuals, are never in conflict with those of the rest of mankind. In this respect (as well as in others) Sarvodaya anarchism is more akin to the utopian socialism of the British Owenite cooperative movement. (Ostergaard and Curell, 1971. p. 43). But it is a theory of social change, and not merely a plea for individual regeneration such as Moral Rearmament.

### 5.3 Legitimacy of Sarvodaya in India

The non-violence, cooperation and revitalization orientation of Sarvodaya in India was considered by the ruling parties of India as a fair alternative to the pleas for violence and upheaval from the communists and the Naxalite movement of Bengal. Those in the ruling parties, who were convinced that a slower form of change would be the only possible way for India, were thus willing to allow a kind of legitimacy for the Sarvodaya movement for four reasons:

- 1) Negative s a t y a g r a h a (disobedience), as practised by Gandhi, but not favoured by Vinoba Bhave himself, has enabled the movement to avoid direct struggle with the existing holders of power.
- 2) Sarvodaya has not looked for struggle but has concentrated on direct programmes of land reforms, promotion of K h a d i (see page 113) and village industries, development of S h a n t i S e n a (Peace army).
- 3) Another factor is its nativistic character. It is an indigenous movement, pursuing the Indian road to socialism and seeking to preserve and to rehabilitate peculiarly Indian values that have been lost or are in danger of subversion as the result of the process of modernization.

- 4) The movement has attached great importance to the preservation and even revitalization of religious values. Its leadership is largely in the hands of men of religious importance. The values the movement has tried to affirm are those associated with rural life and the (idealized) village community of ancient India. (Ibid. pp. 17-18).

Participation is a key word for Sarvodaya. Participation is seen as contributing to the participants own personal and spiritual salvation. Sarvodaya, as an Indian variant of populism, resembles the nineteenth century Russian populism to a great extent. (Ionescu and Gellner, 1970).

A kind of participation, *S a t y a g r a h a*, or civil disobedience was considered as a fair and proper tactic as it also was practised during the colonial time in India under the leadership of Gandhi. *S a t y a g r a h a* was considered as the symbol of the resistance of the Indian people against the British. It is quite obvious that *S a t y a g r a h a* in India today would be considered as, if not treason, at least an unlawful form of resistance against a legal government. In a peaceful and progressive setting, Sarvodaya would probably have had some success in India, but after the economic progress of the 1950's, the country has gradually sunk into economic stagnation and stiffness of the establishment. The recent breakthrough in Indian farming has brought greater prosperity to the upper strata of the peasantry, but it has also created new social tensions which nurtured the Naxalite movement. (Ostergaard and Curell, 1971). It is, with this background, easy to understand the emergence and spread of the J P movement. This movement was led by the respected Gandhian leader Jayaprakash Narayan (J P), who turned from the traditional Sarvodaya strategy to the more radical Bihar movement, later the J P movement, which, in 1975 attracted followers from all over India and finally threatened the Government. (Hettne, 1976).

J P combined Gandhisim with marxist thought and again encouraged *S a t y a g r a h a*, which was now practised for

the first time in 25 years in India. Opposition against the government in general and Indira Gandhi in particular spread rapidly, and a state of national emergency was declared on June 26 in 1975. J P and many others, from the J P movement and from other groups, were arrested.

#### 5.4 Sarvodaya goes abroad - the formation of a rural development movement in Ceylon

In Sri Lanka, the present United Front government reacted very strongly in Spring 1974 when the conservative opposition party, U.N.P., started an intensive campaign against the government, exhorting people through U.N.P.- supporting newspapers to practise *S a t y a g r a h a*. The consequence of this was a partial censorship over daily and weekly newspapers and strengthened restrictions on the issues of permits for political rallies.

It is not true to say that the Sarvodaya movement of Sri Lanka played any role in this political game, as the movement since its foundation in 1958, has carefully avoided getting involved in party politics.

##### 5.4.1 The setting and building up of the Sarvodaya movement in Ceylon (Sri Lanka)

A college teacher, Mr A.T. Ariyaratne, in one of Colombo's high schools, Nalanda College, went to India in the middle of the 1950's and had the opportunity of meeting Vinoba Bhave. He had already started to take an active interest in social work when he was still a student at Mahinda College. At that time he organized the poor community in his own village in southern Ceylon for constructive actions.

In 1958, at the 2500 anniversary of Jayanthi (Buddha's entrance into Nirvana) the Sarvodaya movement was founded in Ceylon by teachers and students at Nalanda College. It is quite clear that most of the influences on the ideology and dynamics behind the early Ceylonese Sarvodaya movement came from Mahatma Gandhi and Vinoba Bhave.

The first project that was undertaken by Sarvodaya in Ceylon was a simple help-to-self-help programme in a R o d i y a (beggar caste) village named Kanatolouwe. During the first decade after its foundation in 1958, the financial resources of Sarvodaya were very meagre. All active persons within the movement worked as unpaid voluntary labour. More and more financial support was given either by organizations, schools or communities in Ceylon or from foreign organizations and the money was used to pay for implements, food and other items necessary for carrying out the village development programmes.

From the beginning Sarvodaya was a village development organization with fairly simple programmes like cutting tracks, repairing houses, digging wells, constructing latrines, repairing small irrigation tanks and other minor projects that were labour intensive.

The programmes were carried out during camps when volunteering labourers came to the villages, slept a couple of nights there and worked with the village people with various schemes. When the camp was over the Sarvodaya workers went back to their homes and the villagers took up their ordinary work.

The great turning point for the movement came in 1969 when Mr Ariyaratne was awarded an Asian prize, the Ramon Magsaysay Award for Community Leadership. After that, various international organizations and development authorities in different countries began to pay attention to the movement. Sarvodaya was devoting much efforts towards achieving its first major target, the development of a hundred villages.

#### 5.4.2 The ideological base

The Bhoodan movement in India aimed at the partition of land while in Ceylon, Sarvodaya was started with the partition of labour. The name of the movement Sarvodaya Shramadana indicates much of the philosophy behind the organization. Sarvodaya signifies a thought and Shramadana the implementation

of that thought. S a r v a , meaning all, and U d a y a , meaning awakening are two Sanskrit words which are also current in the Sinhala Language of Sri Lanka. S h r a m a literally means energy or labour and D a n a means sharing. S h r a m a d a n a means Sharing of one's time, thought and energy for the welfare of all. (Ariyaratne, 1974).

Active Sarvodaya supporters in village communities believe that it is possible to mobilize villagers for collective work to improve the social and economic conditions of their villages. Within the Sarvodaya ideology there is a clear conception of the state of the rural areas:

"Ceylon has always been a country of villages. The vast majority, ... still live in villages. During the colonial era these people suffered most due to the disruption of their social, economic and political institutions. The disintegration of villages resulted in their subjugation to the towns resulting in a state of helpless dependency on the latter in all matters ranging from obtaining their day to day needs to political and administrative patronage ... (The) village instead of playing a subservient role as it does today in its relationship with the town or city should have strength to stand on its own legs to regulate and order its own affairs to bring about the maximum good for all its inhabitants with the least external assistance possible."

(Sarvodaya Shramadana, 1967. pp. 12f.).

This interesting quotation summarized much of Sarvodaya thought which can be framed in four basic conclusions:

- 1) The rural areas have been subjected to a long process of decay which has led to social and moral dissolution and general disunity. Within Sarvodaya, it is often claimed that the spread of party politics into rural areas has deteriorated the social and economic conditions in villages.



- 2) There is no disunity between classes or economic groups in the rural areas who oppose to each other, The village is regarded as a social and economic whole and the problems of the village are shared similarly between the inhabitants. Contradictions are identified between party political groups. Throughout the country people are divided by race, caste, religion and language.
- 3) Between the villages and towns there are clear contradictions. The growth of towns is a process that has taken place at the expense of the welfare of the villages. The villages are economically exploited by the towns (external economic systems).
- 4) To remedy the poor conditions in villages it is necessary and possible to mobilize all villagers for cooperative work through S h r a m a d a n a . This idea is based on the assumption that the K a y y e system can be restored. People are free to help each other if they can be motivated. The villages have to increase their economic independency towards the towns (external economic systems). This is clearly a trace of populism which is significant for the whole Sarvodaya movement.

The Sarvodaya movement has based much of its philosophy on the possibilities of mobilising the good within people to activate them to do constructive work for the whole community where they live. The philosophy of Sarvodaya is based on the principles of truth, non-violence and self-denial. The movement is inspired by Buddha, Gandhi and Vinoba Bhave. (Sarvodaya. Basic information 1. 1972).

The stated aims of the movement are:

- 1) The liberation of the individual both from his inner defilements of greed, hatred and ignorance and from outer oppressive elements that have enslaved him.

- 2) The liberation of the rural and urban communities from poverty, ill-health, ignorance and dependency resulting from the conditions existing within the communities as well as the economic and political exploitation carried on by outside agencies.
- 3) Liberating national communities from bureaucratic, economic and political exploitation and subjugation on one hand and from colonialism and foreign exploitation on the other hand.
- 4) The liberation of the Human Family world wide from distrust, hatred, wars and environmental pollution attendant on technological advancement.

To realize these aims, members of Sarvodaya and villagers in villages connected to the movement strive to practice in their individual as well as group life eight traditional virtues:

- a) Metta (loving kindness)
  - b) Karuna (compassionate action)
  - c) Muditha (joy of selfless service)
  - d) Upekkha (equanimity)
  - e) Dana (sharing)
  - f) Priya Vachana (pleasant speech)
  - g) Arthacharya (constructive activities)
  - i) Samanathmatha (equality)
- (Ibid. p. 5).

These eight virtues are preached in the nearly 900 villages that are connected to the movement at present.

In conclusion it might be possible to summarize the main targets of the Sarvodaya movement in a few words:

To attain revitalization and to strengthen the position of the villages in the country and to restore the traditional culture and moral values and to free the people of the country from alien deteriorating cultural impact.

5.4.3 The expansion and institutionalization of Sarvodaya in Sri Lanka

Since 1969 the Sarvodaya movement has expanded rapidly. The first basic target for Sarvodaya was to connect 100 villages to the movement. A connection means that there are or have been village development programmes carried out in the particular village and that a certain contact is maintained between the village and the movement. Naturally it is very interesting and important to discuss to what extent the Sarvodaya movement succeeds in achieving development in their programme villages, but that is a very extensive and difficult problem which cannot be fully treated here. The interpreted results of the village survey in Bundala, Kumbukgollewa, Pelawatte and Udakiruwa in part II of this book indicate the possibilities of achieving general improvements through the Sarvodaya programmes in these villages and if there are any obstacles that could hinder the development programmes.

The present target for Sarvodaya is to connect 1 000 villages in Sri Lanka to the movement and to maintain programmes in them.

When a village is connected to the movement, the people are organized into groups which perform and discuss their specific interests:

- 1) A children's Group
- 2) A mothers' Group
- 3) Youth Group
- 4) Farmer's Group
- 5) General Elder's Group
- 6) Village Re-awakening Council

In the village, Sarvodaya also organizes general meetings, P a u l H a m u w a s (Family gatherings), where the problems of the village are discussed. During these meetings, the villagers propose programmes for their village, and possibly after a discussion there is a decision for the implementation of one or a number of projects. The proposed programmes are to correspond with the needs felt by the villagers. For one village the long-term programme might adopt the following projects:

- 1) Construction of roads
- 2) Reparation or construction of irrigation systems
- 3) Starting cooperatives
- 4) Construction of latrines and cheap buildings
- 5) Starting small-scale industries
- 6) Digging wells
- 7) Opening children's kitchens

It is believed by active Sarvodaya leaders that there is a certain level of development that can be achieved after some time when a number of projects have been successfully implemented and a peaceful process of social rearmament has been going on for some time. To visualize this philosophy figure 13 was constructed.

Sarvodaya has now expanded to an extensive organization in Sri Lanka and maintains a number of programmes and educational activities outside the village development schemes. Religion, in this case Buddhism, plays an increasingly important role for Sarvodaya, and there are some centres where Buddhist monks are trained for active participation, though not with manual labour, in village development programmes.

The biggest project of the movement today is the institute of comprehensive cultivation and agricultural education in Tanamalwila in southern Sri Lanka.

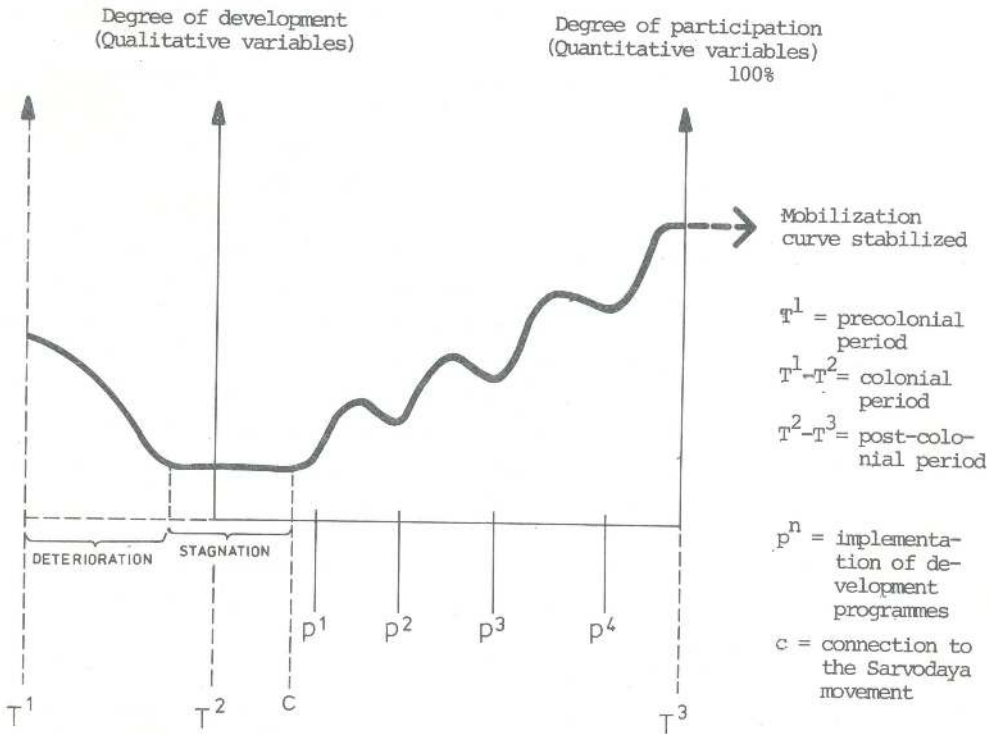


Figure 14 Schematic description of the path of development. The curve describes the ideal development in a village under Sarvodaya Community Development schemes.

The downhill slopes of the curve indicate that after a Sarvodaya programme has been carried out and the voluntary participants from the movement have left the village, there is a tendency for the village to fall back in the degree of development.

#### 5.4.4 Legitimacy of Sarvodaya in Sri Lanka

There is criticism against community development both inside and outside Sri Lanka. The government has organizations for rural development for instance to carry out large reclamation and irrigation schemes.

There are representatives for the government's development agencies who look on Sarvodaya as a competitive organization, because, as they see it, people in many areas prefer to participate in Sarvodaya schemes rather than government rural development programmes. A major problem for the government is lack of financial resources due to the present economic situation. Many times there are good ideas but no money to fulfil them.

Then there are those, who do not believe in the community development type of mobilization in general. The anthropologist Glynn Cochrane (1974) writes:

"I want to suggest that community development projects are of limited value.... since the major impetus for development must come from government extension services.  
... Community development programmes are generally self-help oriented, normally not demanding extensive financial inputs, why the major effort has to come from the target population. It is very important to stress the difference between affecting a community through preconceived or expert-led commercial construction, health, or educational programs and developing a community so that the people themselves are in control of the innovating impetus."  
(Cochrane, 1974. p. 46 ).

(It should be noticed here, however, that Sarvodaya as far as possible has avoided experts and machines to avoid dependency of external organizations or companies).

Sarvodaya has expressed the necessity of both social and economic change in the villages, but the descriptions of how this should be achieved are in many cases a bit blurred. The inability of community development planners to consider structural changes as important is a ground for criticism.

Traditionally the definition of community development is normally a narrow one that aims at development without social change through mobilizing people within their traditional structures, avoiding central planning of the projects. (Cochrane, 1971. Valsan, 1968. Wertheim, 1972).

Centrally conceived schemes with an elaborate administrative hierarchy reaching out of the community to a capital or some aid-giving agency's regional centre are not community development. In its broader meaning the community development type of projects tend to be labelled government extension programmes. (Adams, et al, 1955. Gibson, et al. 1955. Erasmus, 1961. pp. 163-64).

We now approach a major problem for Sarvodaya, the problem of the legitimacy of the movement. Although many people of Sarvodaya want to achieve real structural changes, the movement has no authority to carry out reforms. Only the government of Sri Lanka can make decision about reforms. Recently there has been a land reform stating that the maximum individual ownership for a family is 25 acres irrigated land and 50 acres of other land. There is also a recent rule setting the maximum monthly income for Lankese citizens at 2 000 rupies.

In Sri Lanka Sarvodaya, although officially hostile to westernization and foreign influence, cannot trace its roots to the colonial period and thus have a past as an anti-colonialist movement, which was the case for Sarvodaya in India. Official legitimacy was won in 1972, however, when Sarvodaya was recognized as an officially approved charity by the Parliament of Ceylon. (Government Publication Bureau, 1972). It is difficult to speculate about the future of Sarvodaya as there are different opinions about how wide the freedom of action that the movement should be allowed.

6 THE RELATIONSHIP BETWEEN LOCAL COMMUNITIES AND  
CENTRAL PLACES DURING THREE PERIODS. (SHOWN IN  
MODELS)

6.1 Towards socio-economic dependency

The questions that will be raised in chapter 7 are mainly based on the macro analysis of development in Sri Lanka (Ceylon) within various sectors during a long span of time. The village surveys which are presented in the later part, subjects of the study, of this book are attempts to explain conditions on the micro level. To bridge the gap between the macro and micro levels and to weave together the collected information for both levels it is necessary to suggest a model that can embrace this information into one logic whole.

Further chapter 6 is conceived as an introduction to the questions raised in chapter 7. Very little data was available at the regional level, i.e. those regions where the four surveyed villages of this book are located. This is necessarily not a set back as the contacts between the local level (the villages) and the regional level (towns, external markets and regional authorities) are comparatively few and specialized. Major events, laws, innovations or other phenomena that affect or have affected the inhabitants of traditional villages originate almost exclusively from spheres above the regional level, the macro level. A good example of this is how the cooperation within OPEC 1973/74 ultimately affected the situation of peasants in villages of Sri Lanka as will be seen later.

The importance of external markets is not doubtful for most villages, but their mere existence today is ultimately explained by events that took place during the 19th century. There are mainly eight types of contacts between the local level (villagers) and the regional level (towns, external markets, and regional authorities).



- Repeated contacts
- 1) Sales of crops and commodities in towns or external markets.
  - 2) Purchase of crops and commodities in towns or external markets.
  - 3) Contacts with state co-operatives to collect free quantities of rationed rice, and buy other subsidized commodities, to take loans or to sell own products.
  - 4) Hiring of labour or attempts to get casual or permanent employment for oneself.
- Semi-casual contacts
- 5) Contacts with regional authorities to settle formal matters such as registrations or purchases of land, renewal of licenses for fire arms i.a.
- casual contact
- 6) Intervention by army or police when crimes are committed, at curfew or when major disputes arise.
  - 7) Pilgrimages.
  - 8) Journeys for purposes of marriage

The way these contacts were established and how the local, regional and national/international levels changed their nature of relations will be summarized later in this chapter in an attempt to create a model for this process as an introduction to the questions in chapter 7.

### 6.1.1 Pre-colonial period

In the case of Ceylon it is necessary to include both regional and jurisdictional factors to define the effective colonial period. The reason for this is simply that only parts of the country were subordinated to colonial powers for long periods. (See parts 3.3.4 and 3.3.5).

The Portuguese and Dutch only managed to conquer the coastal areas and not until 1815 was the whole country in the hands of a colonial power, the British. To correspond with the purpose of this book I will make a further restriction in defining the meaning of the colonial period, and this delimitation concerns control over land and legal authority to alienate land and promulgate general rules for land use. No colonial power had such control until the Colebrooke reforms were made by the British in 1833, thus breaking the closed social and economic entity that the Rajakariya feudal system constituted. (See part 3.3.5.3).

In the pre-colonial times hardly any towns or central places existed when the ancient cities had fallen into ruins. Robert Knox (1958) mentioned Kandy, Colombo and a few more towns as the only ones existing in the 17th century. There was no regular contacts between rural communities and the few towns. Only the irregular exchange of barter and visits for religious and ceremonial reasons took place. No effective road net existed, which is why it could take months to travel from one part of the island to another. There was no division of labour between towns and rural communities. The economy of a village was almost completely subsistence oriented, except for the Rajakariya duties.

Most villages had for this reason a high functional differentiation. That which the villagers consumed they also had to produce because communication facilities were very limited. It seems as if the rule on village - on caste was valid, but also as if other castes than Goyiagama (cultivator)

cultivated paddy, although they had more obligations within the Rajakariya system. Similarly a Geyiagama farmer performed other functions than cultivation. He was often artisan, carpenter and housebuilder in one person.

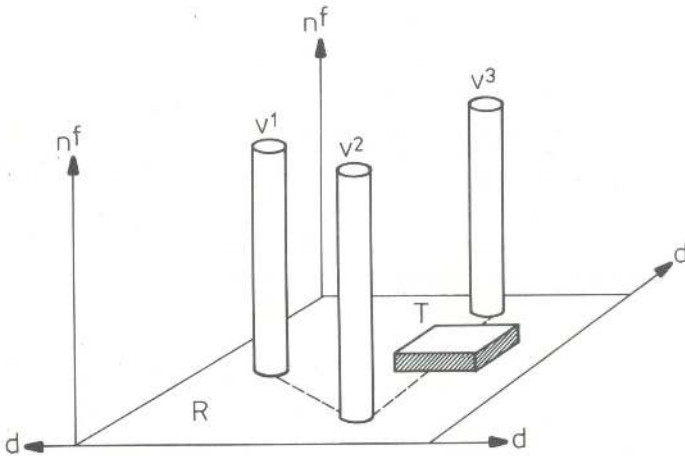


Figure 15. The relationship between a town and three villages,  $v^1$ ,  $v^2$  and  $v^3$  in a selected region of pre-colonial Ceylon. The number of production functions ( $n^f$ ) correspond to the height of the y-axis. The distance ( $d$ ) is indicated on the x-axis and a path or cart track connecting the villages with the town (T) is marked with a dashed line.

If we look at the pre-colonial system at a higher level, it is possible to see the feudal society based on Rajakariya as a fairly closed entity as in 18th century Japan.

From 1505 to 1833, the Colebrooke reforms, Ceylon was partly penetrated by colonial powers, but no major transformation of the society had taken place. Colombo was the capital of the colonialists and some sea ports grew into major towns during this period, but as a whole most of the rural areas in the country remained unchanged until the expansion of plantations.

#### 6.1.2 The effective colonial period, 1833-1948

The Colebrooke reforms enabled the British to start the slow transformation of Ceylon by interfering with the rules of the use of land, alienation and through inheriting the Rajakariya system by introducing new rules for a grain tax system. (See parts 3.3.5.2 and 3.3.5.3 for a further description).

By building out of a road network, construction of railways, spreading out the administration to provincial centres and creating a plantation economy, the whole country gradually changed during the 19th century. The rural or village communities were subordinated to regional authorities contemporarily with the spread of a monetary system. This monetary system was instituted by the diffusion of originally very simple innovations such as fuel, soap, textiles, some new grains and various ornaments. Coins and other non-barter means of payment existed already in ancient times but had not generally spread to rural areas.

There was a pull from the new administrative centres on the villages for recruiting artisans, which caused a drain of skilled craftsmen in the villages. To feed the inhabitants of these centres there was also a drive on the villages to cultivate basic crops, mainly paddy, as cash crops at the same time as a new land registration system, prescribing new rules for the control and possibilities of alienating land for cultivation was effectuated.

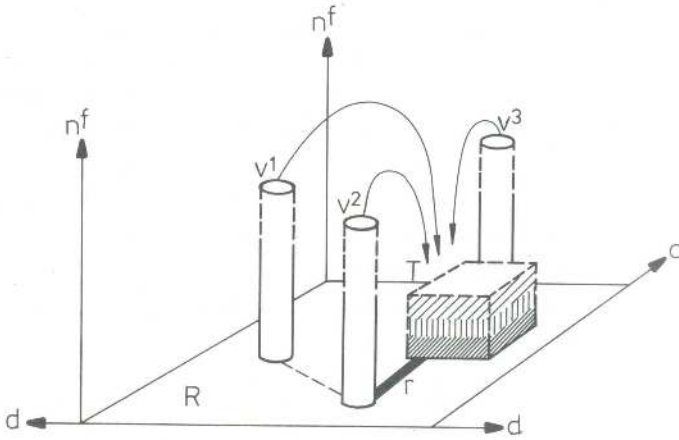


Figure 16. The relationship between a town and three villages,  $V^1$ ,  $V^2$  and  $V^3$  in a selected region,  $R$ , of Ceylon during the period of colonial transformation. The number of production and service functions ( $n^f$ ) is decreasing in the villages and gradually transformed to the town,  $T$ , which is increasing in height, indicating an increasing number of functions. A road ( $r$ ) now connects one village ( $V^2$ ) directly with the town ( $T$ ), while the two other villages ( $V^1$  and  $V^3$ ) only have cart tracks to reach the vicinity. The x-axis shows distance ( $d$ ).

Step by step the rural economy became linked more intimately with the urban economic system, and the villages gradually came into a more subordinated position to the towns and the external markets. With the further expansion of tea, rubber and coconut plantations this process accelerated. Agriculture became further and further capitalized and this was the point of departure in the struggle for *ma d a i d a m* (paddy land). *Rajakariya* was dissolved and the competition for land hindered the traditional *K a y y e* co-operation system. The nucleated family also became the production unit. Some families, the entrepreneurs, were more successful than others and gained a dominant position,

hiring less successful families as labour. The less successful families were those who through casual or permanent illness or for other reasons got into economic trouble and as the kayye system was nearly destroyed, they did not get any help with the work on their land. Instead they had to borrow money and they charged their land as security. Little by little, the charged land was forfeited to the creditors, and to earn a living, those who had lost their land had to hire themselves out as wage labourers.

Although the ownership of land became biased within commercialized and capitalist rural economy, although this bias never grew to be as accentuated as in India. Two reasons for this might be that firstly the grain tax system was never as burdensome as in India and secondly the Zamindars, a kind of tax collecting bailiffs, never had any counterpart in Ceylon.

### 6.1.3 The post-colonial or neo-colonial period, 1948-

Ceylon recieved its formal independence with joy on 4th Februari 1948, but the country remained a member of the Commonwealth. There was no dramatic social or economic change, instead things remained more or less as they had been for decades.

In the provinces, the towns had further accentuated their position as central places and strongholds. They had become the centres where events took place, where more important decisions were made and where all comprehensive trade was located. They had become the centres, while rural areas, as back-wash parts of the country, were now on the periphery. An effective road network now united the villages with the towns, or at least facilitated travelling between them.

Those in the villages who owned a fair amount of land could produce a surplus, which was transported to external markets and sold there. A large propoertion of villagers could

no longer produce foodstuffs for themselves, but had to work as wage labourers and then go to the external market and buy their food. (Also other types of rural settlement started to occur during the 19th century. For a further description of this (see part 4.3.2.1).

To contribute to the sufficiency of economically exposed families, the government founded state cooperatives where finally all people not earning a considerable income could collect one measure (c 0.9 kg) of rice weekly and buy another measure at subsidized prices.

With the capitalization of agriculture, acquiring paddy land was given the highest status among peasants. This fact has most probably directed the villagers' efforts towards paddy cultivation and it seems reasonable to suppose that less interest was given towards the cultivation of other crops. One apparent consequence of this is that the variety of crops cultivated most probably has decreased and deteriorated the nutritional status among large groups of the population. The welfare of the country came to depend on the foreign trade, i.e. income from the exports of tea, rubber and coconut products and expenditures for imports, debt services and costs for social welfare. Peasants in the villages became integrated into a system where they depended on what happened in the stock exchange markets in London and New York, that is at the highest aggregation level, the international.

The consequences of this became apparent during the oil crisis in 1973/74 when rice prices tripled within two months, while the prices of Ceylon's export products remained at the same. The bulk of the villages in the country have accentuated their role as suppliers mainly of a few surplus crops, basically paddy, during the post-colonial decades. There is now normally no major productive activity in the villages except for cultivation. During periods when no cultivation is done there is an important seasonal unemployment, a fact that is especially evident in the Dry Zone.

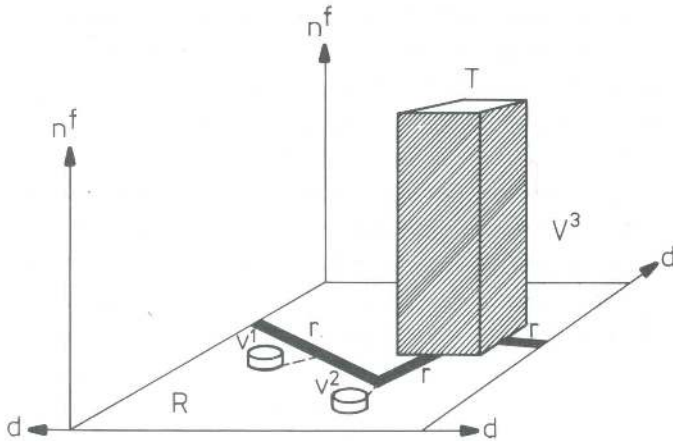


Figure 17 . The relationship between a town, T, and three villages  $V^1$ ,  $V^2$  and  $V^3$  (hidden behind "T") in a selected region, R, of Ceylon during the post-colonial period. The town has a high differentiation of productional and service functions ( $n^f$ ), while the number of functions is very low in the villages. Roads (r) are crossing the region, but in most cases there are only tracks leading to the villages from the road. The x-axis shows distance (d).

6.2 An attempt to show the changed pattern of relations between different levels of aggregation

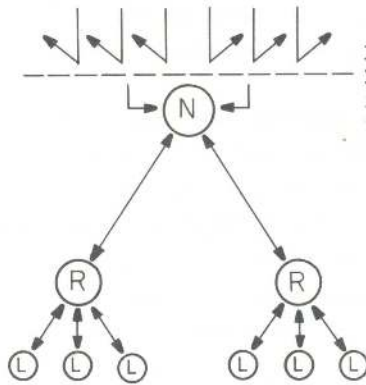
The Sinhalese society was a very closed entity during pre-colonial times. (See chapter 3). There was neither any need nor demand for extensive trade or other functional contact with foreign countries. Contacts with India were mainly violent, as when South Indian Tamil warriors invaded parts of Ceylon. In times of peace there were no important contacts between Tamil and Sinhalese communities as the Tamils had their settlements mainly in the northern and eastern parts of the island. During the pre-colonial period the



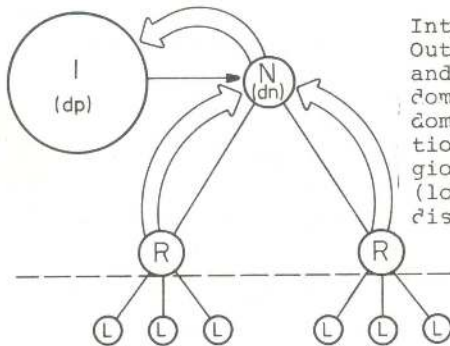
Rajakariya system linked the three different aggregation levels together in the feudal society, and except for trade with predominantly Arabic merchants no regular external contacts were maintained.

The colonial period, and especially the 19th century, was the great era of change for the Sinhalese community. The British became the dominating power (dp) at the international level. The Rajakariya system was finally broken up by the Colebrooke reforms in 1833, and with the right to alienate land to foreigners the plantation became the main sector in the Ceylonese economy. With the abolition of Rajakariya the functional links between the regional and local level were broken. On the other hand the relations between the regional and national levels were strengthened as the colonial administration was built up in the provinces simultaneously with the construction of a road network. Plantation products such as cinnamon, coffee and tea were exported but import was rather limited as no important internal market for imports existed.

Fig 18 shows the present relations between the different aggregation levels. There is no filter between any of the levels but they are all integrated into the same system. The dominating power is now the main trading partners as they import raw materials or plantation products and export ready made or worked up goods. England plays the leading role as the dominating power, though less accentuated during the last few years. The last five-year period terms of trade has developed negatively with an accelerated speed, which has caused a decreased GNP/capita the last few years. (Far Eastern Economic Review, 1975). The negative effects of this development can be observed even at the local level in remote villages. (Öhring, 1975).

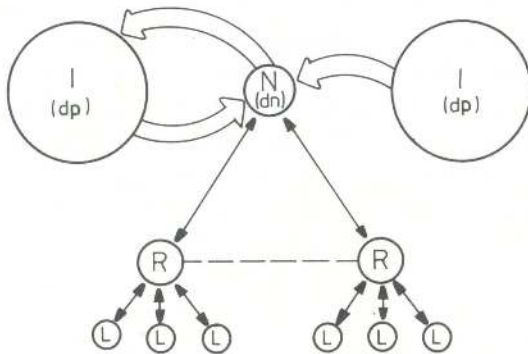


Filter. National level. Rejects almost completely foreign influence. Local, regional and national level.



International/national level. Outflow of raw materials and plantation products from dominated nation (dn) to dominating power (dp). Functional relation between regional and local levels (local communities) disturbed.

Dysfunctional filter



International/national level. Outflow of raw materials and plantation products from dominated nation (dn) to dominating power (dp). Import of food items from the third part to cover deficit. Import of ready made products from dominating power. Relations between regions due to long term planning and relations between local and regional levels reestablished within new administrative system.

C. Post-colonial period.

Figure 18. Influence pattern in the Sinhalese society under three historical periods.

7 FORMULATION OF THE BASIC QUESTIONS

7.1 A comment on current geographical research

Today there is a tendency towards operationalizing properties and data in computer programmes or mathematical formulas to explain theories or hypothesis about a surrounding reality within social science. This is possible because generally only one or a few properties are investigated, and the relation between these properties and one or more problems are studied in order to find certain relationships or explanations.

A group of individuals are studied for example as consumers of a certain product, as commuters, as airborne travellers or on any other way as an aggregate carrying one or two single properties related to a problem.

When individuals or groups are to be studied as carriers of an aggregate of properties, that which can be called total individuals or a total group, it is hard to plot the problem on a matrix or to operationalize the problem with the help of formulas or computer programmes. One reason for this is that when one or a few properties among individuals are studied, these individuals are regarded as objects, steered or guided by already assumed control entities. When individuals or groups of individuals are studied as total entities, they must be treated as subjects and not objects, because their behaviour, though in many aspects guided by external factors, is finally determined by individual or collective decisions. It is also a matter of at what aggregation level it is focused. On an overlapping level it is not possible to study more than a few properties, whereas at a local level consideration must be taken from as many aspects as possible to reflect reality.

These factors have determined the division of this book into two parts: The general object of the study and the subjects of the study. The selected research approach and method for analysis have been determined for the same reasons.

A major problem has been to connect the local level with the overlapping level without treating the regional level with either primary or secondary data. There are two reasons for this: The first concerns the difficulty of obtaining reliable and adequate data, especially for the four areas where the surveyed villages are located. The questions that are raised in this part concern mainly the villages to be surveyed and conditions that are related to them, but they also possess some generality for other traditional villages in the country. Secondly the questions are basically geographically oriented and attach to the problems in part 1 and 2 although they are more theoretically treated there.

## 7.2 The questions

- 1) Local communities or villages in Sri Lanka, where paddy cultivation is the main economic activity, have been subjected to a process leading them towards increased one-sided dependency on external contacts and markets for their existence as communities.
  
- 2) The production structures in paddy cultivating Sinhalese villages are fairly homogenous which means that the production system as a whole is uniformly built up irrespectively of population density or the possibilities of agricultural expansion in the areas concerned. If annual yields are considered, the medium annual figure for paddy land effectively cultivated per capita is roughly the same for villages in the more exploited Wet Zone as for villages in the comparatively sparsely populated Dry Zone. This is possibly so because the production relies nearly completely on the input of labour and only to a limited extent on the input of capital in these cases.

- 3) The degree of commercialization and penetration of a village is related to its accessibility. If there is a motorable road leading to the village it is also possible to organize the transport of commodities between the village and central places/external markets. The possibility of transporting products easily between a village and a market has stimulated villagers to direct their agricultural production towards cash crop cultivation in order to earn money.
- 4) The absence of a road between a village and the surrounding world has considerably obstructed the process of change and integration into an external economic system that began with the Colebrooke reforms in 1833.
- 5) The more commercialized the agricultural production of a village is the more likely it is that the registered system of land ownership is biased in such a way that those with the largest shares are improving their relative economic position while those who are unfavoured are subjected to an economic decline.
- 6) The probability of achieving general social and economic improvements that narrow the social and economic gap between the economically most neglected groups and the economically most favoured groups in a local community, decreases with the degree of commercialization of agricultural production and relative economic distance between different groups. It is possible to identify three barriers against development:
  - A) Dominating landowners and/or merchants. The higher the degree of relative dominance that the most favoured group possesses in a village, the higher the relative number of households that depend economically on that group.

- B) The degree of economic dependency and integration between a local community/village and external markets or central places is negatively correlated to the probability of achieving general social and economic improvements in that particular village.
- C) The relative degree of cash crop orientation of agricultural production in a village at the sacrifice of subsistence production. A village with a production system where subsistence production is followed by surplus or commercial production is less likely to be affected by a negative economic change, than a village where priority is given to cash crop production.

## II. SUBJECTS OF THE STUDY

### 8 METHODS AND METHODOLOGY

#### 8.1 Selection of villages to be investigated

Sri Lanka has about 23 000 rural settlements that can be classified as village system economies (Sarvodaya, 1972). A statistically acceptable sample of these villages would be anything between 1 100 and 2 300, i.e. a sample of 5 to 10%. To carry out socio-geographic surveys in so many villages, approximately 100 geographers working full time for one or two years would be needed.

Referring to the purpose of this study, (page 1 ) it was necessary to delimit the number of villages to be investigated by a process of step by step selection.

The first limitation was that only villages formally attached to Sarvodaya should be taken into consideration for a survey. The number of villages to choose from was thereby decreased from 23 000 to roughly 500.

##### 8.1.1 Seven criteria for selection of villages

At this stage it was necessary to find four Sinhalese villages that correspond to the general idea of what is typical for the country. A number of village studies provide some of the most common properties, possessed by a common Sinhalese village. (Ryan, 1955. Wikkramatilleke, 1963. Yalman, 1971. Obeyesekere, 1967. Leach, 1961). On the basis of these authors, it was possible to set up some of the criteria for selection. Additional criteria are more directly connected to the purpose of this study.

- I. Two villages are to be located in the Wet Zone and two in the Dry Zone, because it is assumed that there will probably be two different economic structures in rural areas of the two basic ecological zones of Sri Lanka. This relationship is assumed as ecology is intimately integrated with the social and economic structures in rural areas. (Leach, 1961). Pressure

on land is also normally much higher in the Wet Zone than in the Dry Zone. About 80% of the population has settled in the Wet Zone, which only constitutes 31% of total area. (Sievers, 1964).

II. Basic economic activity is paddy cultivation. Traditional rural communities of the country, not belonging to the plantation sector, have normally paddy cultivation as basic economic activity.

III. All the four villages shall be at least 150 years old.

As an important aim of this study is to explain present conditions as a consequence of changed relations with the surrounding world as well as an economic transformation in relation to this it is necessary to have a long historical background. As a whole the rural economy of Sri Lanka was transformed from a feudal system to a capitalistic agricultural economy by the British with the abolition of the Rajakariya system in 1833. (Pieris, 1956. de Silva, 1973).

IV. Population of the villages: Between 150 and 300 inhabitants.

The normal size of a traditional rural village in Sri Lanka does not exceed 400 inhabitants. With a population above this figure, the number of central functions that are not indigenous by tradition, also tend to increase, which will disturb the traditional socio-economic system.

V. All of the four villages shall be Sinhalese.

VI. Distance between each of the villages and nearest central place shall be at least eight miles by road and at least four miles without.

The distance factor is important, as a location closer to a more important place would lead to a more intensive impact by the urban system on the village economy. The consequence of very frequent contacts between the urban and rural communities would normally lead to a functional linkage of the rural economy with the urban system. For this study it is important to find communities with a distinct rural economy.

VII. All of the four villages shall have been connected to the Sarvodaya organization for two to four years.

A Sarvodaya village that has been connected to the organization for at least two years has confronted the aims and the ideology of Sarvodaya through a number of paul hamuwas well enough to make the villagers familiar with Sarvodaya policy



and thoughts. (Paul hamuwa means family gathering. A paul hama, when organized by Sarvodaya, is a big meeting where a great number of villagers, students and other people take part. A paul hamuwa often starts with prayers and singing and proceeds with discussions over more practical matters concerning the participants).

A village that has been connected for at least two years has usually been organized in some way. (See the part about organization of rural people in Sarvodaya villages, page 123). One or more Shramadana camps are also likely to have taken place after a two year period.

In the headquarter of Sarvodaya, there are files for each of the villages connected to the organization. A random selection of villages was not possible if these seven criteria should be taken into consideration. From the files it was now possible to select villages and gradually exclude them until at last only a limited number of villages were left, of which four were chosen at random.

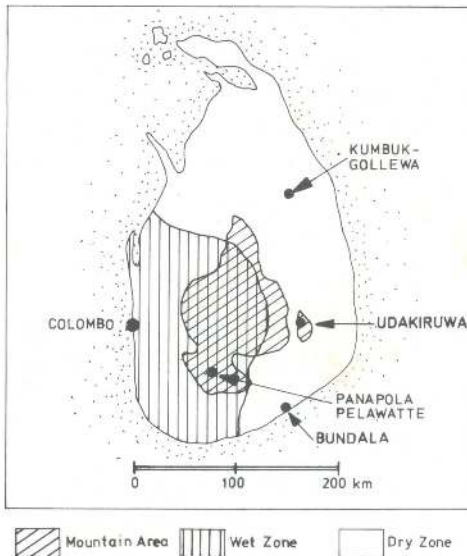


Figure 19 Approximate locations of the four villages selected for surveys in Sri Lanka. The sites are showed with arrows.

## 8.2 Survey technique

When the four villages were finally selected and the theoretical parts of the study as well as the general description were prepared, the time had come for the field work. The four selected villages were:

1. Bundala Wellangangoda village in Hambantota district, Dry Zone.
2. Kumbukgollewa village in Amuradhapura district, Dry Zone.
3. Panapola Pelawatte village in Ratnapura district, Wet Zone.
4. Udakiruwa village in Badulla district, Wet Zone.

The first village to be studied was Bundala, where also a suitable survey technique was worked out. Bundala Wellangan-goda will be treated separately in the next chapter, which is why there will be no full presentation of the village here. It is possible to reach Bundala by road, but still the village has remained traditional in its production system. Buildings are clustered on both sides of a dirt road passing through the village. There has been no survey done in Bundala, only a one inch to one mile map covers the area. (Revised by Survey Department).

It was therefore necessary to construct a simple map, to create a base for the following social and economic investigation. The following details were found to be important to plot out on the map:

- a. The full extent of the village with all households<sup>1)</sup> separately marked out in numerical order.
- b. The amount of irrigated paddy land owned by each household.
- c. Garden cultivations with different crops belonging to each household.

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1) Here a household is defined as one or more persons, related or unrelated, who combine to occupy the whole or a part of a housing unit and jointly provide themselves with food and other living essentials. (Poleman et al. 1973).  
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noolaham.org | aavanaham.org

- d. The number of inhabitants in each household. Also other details were marked out on the map, though not as essential as the above mentioned.

Before the first survey was made it was necessary to get some general knowledge of the village. Most of the households and the vicinity of the village was visited. After a couple of weeks a crude picture of the whole village had taken shape. It was then possible to start the first survey.

The extent of the village was easy to measure as a road crosses the village right through from one side to the other and the houses and huts are clustered on both sides of the road. By counting steps of equal size the extent of the gangoda (settlement area) of Bundala Wellangangoda was found to be slightly more than 900 metres. The breadth of the village was estimated in the same manner. A very crude map of several sheets was made, and the next step was to plot the individual households on the sheets of the crude map. The type of dwellings, the extent of garden cultivations and the various items extensively or intensively cultivated were marked out.

After this a simple family survey was carried out. For each household, names, ages and relationship of household members were recorded in a separate file. Information about the occupation of the household headman as well as the ownership of land was also recorded. Useful data from the separate file was then plotted for each household and the result was a map, though somewhat crude in its details, nevertheless fairly correct. It ought to be mentioned that the figures for age are in many cases incorrect, as the villagers only had a vague idea of their own age.

### 8.3 Interview technique

The problem of interviewing villagers in an unfamiliar environment is related to one major obstacle: the language

barrier. It was possible to use a local assistant, but this created the chance of some bias caused by the filter of translation as well as taking a very long time and also preventing good contact with the respondent. With only a rough knowledge of the language it was nevertheless possible to perform the interviews more efficiently later on.

Another problem was connected with the question of whom to interview in each household. The household headman was selected to be the respondent, but it was impossible to isolate him from the other household members during the interviews. Answers were often corrected and additional information given by other household members. It is difficult to decide whether this increased or decreased reliability. In many cases the given information was crosschecked by questioning neighbours and visits to the plots of land. The questions in the first survey were used in a questionnaire for a more extensive interview that was performed at a later stage.

Another way to correct the problem of interfering respondents was to repeat some questions later. The circumstances under which the interviews were done differed substantially from what is normally taught about making interviews at the sociological departments of western universities. Achieving the highest degree of reliability and validity was an important target, but it was believed that the best way of doing this in Sinhalese local communities is not described in the books previously studied by the author.

In a culture that is so dissimilar to the European one it seemed reasonable to believe that basic norms and values were also equally dissimilar.

Space, distance and time perception, as well as the way of expressing emotions and opinions, were also believed to differ considerably from European standards (Hall, 1966). Considerations had also to be taken of the fact that many of the presumptive respondents probably lacked primary education which must affect their choice of words, extent of

vocabulary and possibly their ability to understand the questions. The only way to solve these problems as a presumptive alien interviewer of Sinhalese peasants was to live among these people for some time to learn their habits, opinions and behaviour. Another reason for staying in the communities for some time before the interview programme was carried out was connected with the problem of getting as sincere answers as possible. If the respondent was familiar with the interviewer it was believed that he would also give more truthful and frank answers, as he would be less suspicious of the interviewer's aims.

#### 8.4 Drawing up a questionnaire

The basic surveys of the villages were done without questionnaires. For this purpose only smaller notes were made where name, age, relations, civil status and occupation of surveyed household members were recorded. The type and amount of land as well as the type and number of cattle were recorded as well.

To collect more comprehensive information about the surveyed villages, it was necessary to construct an interview instrument, the questionnaire. Such a questionnaire was finally constructed after a couple of months' stay in the village Bundala, typed out and cyclostyled in Colombo and returned to Bundala where the first interviews were carried out.

The questionnaires consisted of both open and closed questions and there was extra space in each form to record spontaneously narrated stories or facts. Five different fields of problems were given a headline in the questionnaire and under each headline a number of questions were put. Taken together, the answers on the questions could provide the necessary information for interpretation according to the questions raised in chapter 7.

More sophisticated numerical analysis of collected data was not considered either motivated or necessary, one basic

reason being that the statistical population i.e. the number of respondents in each local community never exceeded 52. The low aggregation level, the local or individual level, also allowed an individual coding of collected information. The five headlines of the questionnaire were:

- A) Civil conditions and settlement. How rooted are the household members in the village and how do they live?
- B) Production and work. Ownership of land, cultivated crops and ways of earning money were
- C) Political knowledge, interest and consciousness.
- D) Social and economic contacts and connections.
  - 1) Purchases, sales, salaries and debts.
  - 2) Relations and contacts with people from the Sarvodaya movement or other people from outside. Participation in collective activities.
- E) Innovations. The ability, economic possibility and motivation to adopt or accept more recent methods or goods. (Hägerstrand, 1953).

The complete questionnaire is presented in the appendix.

### 8.5 Interviewing villagers. Sampling technique

No specific sampling technique was used as the ambition was to interview, if possible, all the household headmen for all the surveyed villagers. On many occasion this ambition demanded some physical effort by the author and interpreter as the respondents had to be searched for in distant chenas. An advantage in these cases was that the interviews were rarely interfered with by others. After the basic survey of a village all the households had been given a number, and these numbers were put up on a check list together with some basic data for landowning etc.

No interview was refused, although there was a certain drop off, caused by various reasons. The respondent could

be too old, mentally retarded, too sick, even in the gaol, impossible to find or he could have gone away for a longer period. In a few cases there was reason to believe that the respondents purposely gave false answers, but then some of the facts were possible to correct with information from other people in the village. A certain knowledge of the language was also useful, as the interpreter during some of the interviews misunderstood or misinterpreted answers.

Another source of error was in many cases the lack of some basic knowledge on how to count among respondents, especially those who had never attended primary education. Figures for given age were in most cases stipulative, for example the age of a grandmother by a recently married girl was very often given as "75", although her probable age might have been anything between 59 and 64. In most cases the ages of the household members had to be estimated, but there was nevertheless a clear overrepresentation in certain age groups.

Other figures that were considered as uncertain were those for monthly cash income. The main reason for this was that cash income in this type of community are very irregular. During some months, especially after harvest, cash incomes are relatively high while other periods could give nearly no income at all. An attempt to tackle this problem was to ask for the most common monthly family income and after a while ask for the most common weekly income. Another way of estimating a round income figure was to observe the standard of the house, the number of capital items and last but not least to check with the list of modern items that was available after the interview was completed.

Some types of given facts or figures were considered as highly reliable, for example the amount of legally possessed land, cultivated crops and political party preferences.

## 8.6 Checking data with sources in central places

At the beginning of working on with this study, it was believed to be important to carry out for each village a corresponding survey in the nearest central place. But it was found that the villagers normally had no regularly repeated pattern of contact with the nearest central place. If they had something to sell they brought it in for sale and if they needed certain goods of specific food items, not possible to find close by, they bought that in the central place. A number of visits were undertaken with villagers from the surveyed local communities to towns or central places, but there was no pronounced regularity in their visits to these central places.

These more irregular visits have to be distinguished from their very regular contacts with nearest state cooperative. In all cases, except for Udakiruwa, the cooperatives were not located in a central place. Every week each person in Sri Lanka (except for a small minority, who pay income tax) can collect two pounds (0.908 kg) of rice without paying for it.<sup>2)</sup> At the cooperative villagers can also buy a certain amount of important goods such as chillies, sugar, bread and cloth of subsidized prices. The villager sells much of his produce to the cooperative and the cooperative can also provide the villager with a loan if necessary. Close to the cooperatives in rural areas there are also more or less regular free markets for purchases and sales. For Bundala, Panapola Pelawatte and Kumbukgollewa it was found that the cooperative and nearby markets constituted the link between the central place and the village. For this reason, no comprehensive survey in the nearest central places was found necessary or motivated. The type of contacts maintained will be specified for each village.

## 8.7 Analysis of data according to questions raised in chapter 7

This study is based on three types of data. The first type consists almost exclusively of secondary printed material

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2) Cut down to one lb in October 1973.



and it has been used to compile the descriptive background in the first part of the study. The second set of data consists of the information gathered for the basic surveys of the four presented villages. The third type of data was collected during the interview programme in the four surveyed villages. The maps of the villages were drawn during the collection of data for the basic survey, and they also constitute a kind of simple data bank. Both the second and the third type of data consists of primary material.

An important aim with this study has been to investigate the surveyed villages to find out their capability to resist economic crises occurring on a higher aggregation level, the regional or national levels. Such economic crises can affect the conditions on the local level, the village, to various degrees. A high degree of preparedness to support the village with food supplies should diminish the probability that this particular village would be severely affected by problems occurring at regional or national levels. In this case it is wrong though, to look upon a village as a whole, looking only at its food production capacity.

A village might have been subjected to a negative penetration that has affected its ability to resist economic misfortunes hitting the vicinity. Negative penetration can be of two kinds: Internal or external. Occurrence of internal negative penetration in a village means that a number of families are subjected to exploitation of some kind. A casual labourer who has to rely on day labour for a land owner in his village for the maintenance of himself and his family is an example of this.

External penetration can be exemplified in many ways. A good example is a farmer who has concentrated on cash crop production and has to rely on this income to get food. Two types of analysis of primary data for the villages will be made. One comprehends a village as a whole, its production capacity, labour capacity, age and sex composition, degree of integration, development situation and ability to pro-

duce enough crops for its maintainance. In the second type of analysis each household is investigated and the major aim of this is to investigate each household's ability to support itself and the degree of integration for each household. At first the ratio between depending and supporting members of each household will be presented to find a figure for the labour capacity in each case. In the second stage two pairs of variables will be cross-analysed for each household.

- a) Ability - inability or vulnerability.
- b) Cash crop oriented - subsistence oriented.

From the result of these two analysis, it will be possible to estimate the possibility of a village to support itself and to sort out the relative number of households with problems of supporting themselves. It will also be possible to predict the relative number of households which are exposed to a risk of severe future problems of support. The intention is to find out to what degree a village and its inhabitants will be seriously affected by disturbances of the economy on the regional or national levels. Both the analysis of whole villages as well as individual households will be based on figures arranged in four matrices for each village.

Much of the data collected through interviews will also be presented in a general discription of each village.

Four categories of households have been identified in the surveyed villages, and the composition of these categories and their mutual economic interrelations decide the readiness of each village to resist external misfortune.

- 1) Surplus farmer households.  
Cash crop cultivation dominate  
agriculture.
- 2) Semi-subsistence oriented farms  
or peasant households.

"Peasants ... are rural cultivators whose surpluses are transferred to a dominant group of rulers that uses the surpluses both to underwrite its own standard of living and to distribute the remainder to groups in society that do not farm but must be fed for their specific goods and services in turn."  
(Wolf, 1966. p. 3).

Cash-crop and subsistence crop cultivation equally comprehensive.

- 3) Subsistence oriented peasant households. Subsistence oriented crop cultivation. Eventual surplus achieved through casual wage labouring. Occasionally deficits within individual households' agriculture, which is then covered by wage labouring.
- 4) Proletarian or impoverished households. Agricultural casual or permanent wage labourers. Improductive households: members too sick, too old or too young. Productive households:

Labour force completely dependent on job opportunities, external economies and agro-climatic fluctuations. Periodical unemployment and marginal extensive cultivation.

For the purpose of this study the four household categories mentioned above have been broken down into three groups, according to their ability to resist external economic misfortunes:

- A) Able households.
- B) Occasionally exposed households.
- c) Vulnerable or unable households.

The higher the relative number of able households in a village the more likely is it that external and internal penetration is less significant.

If the added agricultural production capacity is considered for a village, one might come to the conclusion that enough

food for its maintenance can be produced. This does not, however, decide whether that village can resist an economic crisis in the country or not. For each of the four surveyed villages a matrix will be drawn on which the data from the interview programmes can be plotted. On these matrices a step by step analysis will be executed to classify the households according to their resistance ability. Taken step by step the deductions will be based on the following categories of information:

- 1) Stated profession of household's headman.
- 2) Age or productivity composition.
- 3) Stated or estimated monthly income in rupies.
- 4) Land possessed, according to the type of cultivation.
- 5) Estimated annual yield of paddy.
- 6) Cattle possession.
- 7) Stated number of hours of daily work performed by the household headman.
- 8) Index for productive capacity. The number of household members belonging to the productive ages as quota of the unproductive members.
- 9) Cultivation and consumption structure. Differentiation of cultivation and purchase habits.
- 10) External contacts.
- 11) Possession of surplus goods.
- 12) Knowledge of the practice of fertilizers.
- 13) Complementary remarks.

After a composite analysis of all thirteen subheadings for each household it will be possible to classify them according to their economic ability into one of the categories

mentioned on page 155 . The data on the matrices shall be interpreted from left to right.

After a complete analysis it will be possible to predict the relative probability whether a village would be able to support itself with food crops in a crisis situation such as the oil crisis in 1973/74. Climatological factors are not considered in this case.

If it is found that a village should be able to resist an external economic crisis according to its complete resources, it does not necessarily mean that this particular village will be able to do so.

The probability that a village would be able to avoid serious economic difficulties cannot be given unless a final investigation of each household is carried out and on the composite matrix the individual results are summarized and interpreted at the end.

The first village surveyed was Bundala Wellagangoda. The choice of the village was made at the Sarvodaya Educational Institute, Meth Medura, just south of Colombo. The survey of the village was planned to be of a trial-and-error nature, as I had no previous experience of this type of work. I considered it necessary to learn a little of the local language, to become familiar with the village people, their habits and their system of production as well as the social life of the village. This field work was started early in 1972.

### 9.1 Population and a few geographical particulars

#### 9.1.1 Some geographical particulars

Bundala Wellagangoda is located a 1/4 mile from the sea in south eastern Sri Lanka at 6' 11<sup>o</sup> north and 81' 05<sup>o</sup> east in Hambantota District in the Dry Zone. The village belongs to Magam Pattu D.R.O. (District Revenue Officers') Division. It is a traditional nucleated tank settlement with huts and houses clustered in a ribbon. (See maps on pages 88 and 160 ) The village is located about one mile from the paddy fields. The total extent of the village is not known as the real amount of chena land is uncertain.

Only ten out of the fiftytwo households have houses with tiled roofs, while the rest of the houses and huts are made of clay mixed with cow dung and thatched roofs. Water shortage is a permanent and sometimes acute problem for the village as there is only one well with drinkable water, and this water is brackish.

The soils of Bundala consist of reddish brown earths in low country terrain and alluvial soils of variable texture. Reddish brown earths require careful handling, but are more fertile than is normal in the tropics. The village is located close to the sea and the soils are slightly brackish, but otherwise suitable for paddy cultivation. Yields are not very high because of obsolete techniques and climatic limitations. The agroclimate is not quite suitable for cultiva-

tion in general. Temperatures range up to 37° C, the maximum for paddy cultivation. The sun is very strong, the sky is rarely cloudy, the relative humidity is very low, and evaporation is high. Slightly saltish winds blow in from the sea. The rainfall is very unevenly distributed and the normal annual precipitation figure, about 900-1 000 mm, is the lowest of the four surveyed villages.

The drought period is about 9 months each year, which allows only one crop annually.

### 9.1.2 Population

In Bundala Wellagangoda there were 51 households with 299 inhabitants all together in 1972. No Buddhist monk lives permanently in the village, but one Bikku visits Bundala regularly. Endogameous marriages are as common as exogameous, but marriage partners are, with almost no exception of the same caste. In Bundala people belong to a fairly low caste, the Rada or Radava, with traditional caste functions as laundry men for higher castes. As the area where Bundala is situated seems to have been very sparsely populated for a long time until the 20th century, it is not likely that the villagers have performed their caste duties for a long time.

The age structure in Bundala shows a similarity to the age structure of the whole country, if it is possible to draw any conclusions from two samples of such different extent. The aged are few and children make up a large group, but a larger share is found within productive ages here.

Compared with the other surveyed villages, Bundala has the highest proportion in productive ages, but with only one per cent difference from Panapola Pelawatte. It is worth noticing, though, that the surplus of females is rather remarkable.

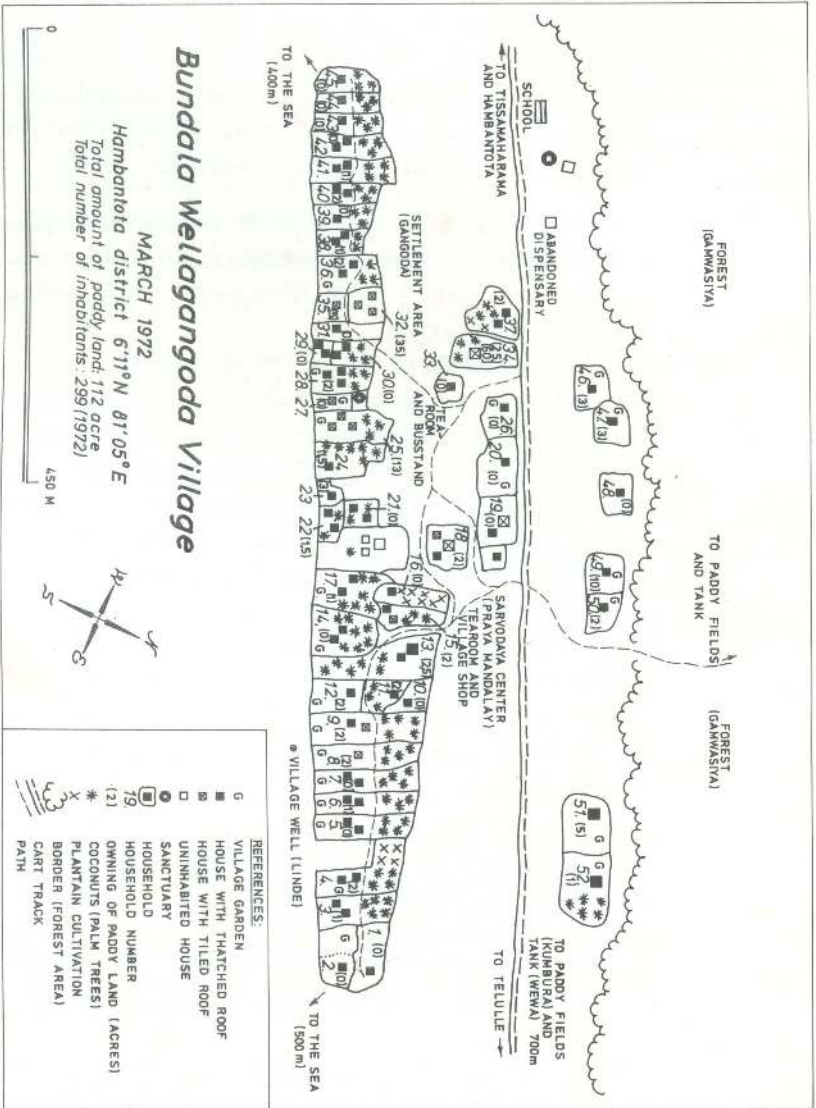


Figure 20 Bundala Wallangangoda, Sri Lanka.



Table 20 Age structure in Bundala Wellagangoda 1972

Age groups	Sex		Both sexes	%
	Males	Females		
0- 4	9	17	26	31
5- 9	10	21	31	
10-14	15	19	34	
-----				
15-19	17	12	29	
20-24	11	18	29	
25-29	13	10	23	
30-34	9	7	16	
35-39	8	12	20	63
40-44	8	9	17	
45-49	6	7	13	
50-54	8	8	16	
55-59	8	5	13	
60-64	7	5	12	
-----				
65-69	2	4	6	
70-w	6	8	14	6
-----				
	137	162	299	100
%	46	54	100	

The biggest variation is found among the children whose number only 91 which is, why there need not be any specific reason for the difference. It is also interesting to notice the overrepresentation in certain five-year groups, a tendency that has also been observed in the other three villages surveyed. It is my opinion that this overrepresentation is not due to the limited size of the statistical sample, but must be explained by the fact that the respondents very often do not know their own age exactly or the ages of the other family members. This is because, even though they know how to read and count, they do not care that much about the exact ages of grown up married people

especially. It was my impression that a stated age figure was often functional, in the sense that it was related to that particular person's position in the family, his number of children, what type of work the oldest child was able to, etc. This is a typical example of this problem: An elder widow, whose husband has been dead for about five years, has three sons and two daughters. The eldest son has one daughter, who has entered puberty and two sons who are old enough to help the father in his paddy fields. In this case it is very probable that the respondent, the son of the widow, will give her age as 75 years. In the most obvious cases I corrected the errors. In a case where, for example, a married woman had a daughter who was about 15 years old, her husband might still have stated the age of his wife as 26, and she would not have objected. In such a case the woman might have been anything between 30 and 40 years to judge from her appearance, but it was most likely that she should be given a normal age of 34-36 years. Therefore the age figures are most probably only roughly correct statistically, but they give a true picture of the age structure according to production groups.

## 9.2 History of the village

The village Bundala consists of two separate parts, Lewa-gangoda and Wellagangoda which is the older part. There is no adequate source describing the origin of the village, which I shall simply call Bundala, but it is believed to be the oldest of the four villages surveyed. According to a story that was told by some villagers, Bundala was founded many generations ago when a king passed the site of the present village on an elephant named Bun. The elephant was a tusker and by mischance it lost one of its tusks, dala, and on this place the village was founded. Some villagers claim that the village is about 800 years old and that they are the descendants of the original settlers. It is not possible to get any substantial information from the very old days, but the village can be traced on a Dutch map from the 17th century, that was reproduced in a contemporary book by Robert Knox (1958).

Today the villagers are faced with severe problems, which might explain their disposition to idealize the past. According to elder men in the village, mainly paddy and vegetables were cultivated by irrigation during the last century. Also various fruits were harvested each year. Cloths were woven and different wooden and metal tools were made. From a nearby lagoon (lewaya) the villagers got their salt as well as some fish. Meat was not a common ingredient in their meals, but occasionally rabbits and wild boars were hunted.

Two Bikkus (Buddhist monks) taught both children and adults, and an Ayurvedic (indigenous) doctor was responsible for medical care. The most severe problem was the periodical lack of drinking water, still a prevalent threat every year. Contacts with the surrounding world were limited, only few trips to nearby villages and the little coastal town of Hambantota were made, as wild animals are often a threat to travellers. The most common reasons for travel were trade and the exchange of the marriage partner.

Until the end of the 19th century, the area where Bundala is situated, a fairly unattractive region, was hardly affected at all by the British. Not until 1880 did the colonial power pay any attention to this area, but from that period tank restoration works were begun in the district. (Irrigation under Tissamaharama, 1882-83).

At the beginning of the present century a government saltern corporation was set up on a close by lagoon and many of the men in Bundala stopped to cultivate paddy and other crops, and instead they started to work on the salt extraction project.

At the beginning this was quite profitable for the villagers the purchase power was quite good for the money they earned. It is at this time the village became divided into Lewagangoda and Wellangangoda, which are one mile apart, the former inhabited by those families who were

largely dependent on the saltern corporation, but still maintaining a smaller programme of cultivation.

### 9.3 Production

Most of the work in the village is concentrated on paddy cultivation. Paddy is cultivated both for subsistence and as a cash crop. Other means of livelihood are animal husbandry, garden cultivation and casual labouring.

As a commercial crop, paddy dominates completely. Curd (a kind of yougurt) and plantains give a little cash income as well. Casual labour is available in the village during the peak periods of paddy cultivation and occasionally outside the village during the rest of the year. A few other crops are cultivated for subsistence such as coconuts, chillies, some onions and a few leafy vegetables. As it is impossible to cultivate anything during a long period of the year, much labour is lost as the people are forced to be idle.

Retail trade is very limited and there are only two combined tea rooms and village shops. Dry fish, salt, soap, needles, cigarettes, betel, spices, kerosene and coconut oil are the most commonly sold items. Bread is brought several times of the week by a salesman on a bicycle.

Forestry is not possible as only scrub jungle grows in the area because of the climate.

No tradition of village industry exists in Bundala. No carpentry, weavery work, tool making or any other handicraft work was found in Bundala. Sometimes fresh fish is available as one man occasionally goes to the lagoon with a cast net. Although the sea is very close, no sea fishing is undertaken by the men. Sea fishing is almost exclusively done by men from the karava (fishermen) caste, or by Christians and Muslims.

9.4 Economic groups and economic structure of the village

Commercial activities are concentrated almost exclusively to the paddy harvest period which is normally in May. For this reason the economic position of a household in Bundala is determined by the amount of cultivated paddy land (mada idam). Competition for land has gone on for a long time. Nobody in the village could recall a period of subsistence agriculture and the general practice of kayye (traditional form of cooperation). The variety of cultivated crops was very small, and it was not known how the agricultural production was built up in the old days when the village was isolated.

The figures for ownership of paddy land indicate a clear economic stratification. It is possible to distinguish between four economic groups:

- A) Big land owners. (More than 10 acres).
- B) Middle class farmers. (3.1-10 acres).
- C) Small farmers. (0.1-3 acres).
- D) Landless.

Table 21 Total possession of paddy land including illicit cultivation according to categories of ownership in Bundala 1972.

Owning category	Acres	Number of households	%
I	0	22	42
II	0.1- 1	7	
III	1.1- 2	13	46
IV	2.1- 3	4	
V	3.1- 5	2	6
VI	5.1-10	1	
VII	10.1-25	1	
VIII	25.1-50	2	6
IX	50.1-w	-	
		52	100

Table 22 Total possession of garden land including illicit cultivation according to categories of ownership in Bundala 1972.

Owning category	Acres	Number of households	%
I	0	23	44
-----			
II	0.1- 1	29	56
III	1.1- 2	-	
IV	2.1- 3	-	
-----			
V	3.1- 5	-	
VI	5.1-10	-	
-----			
VII	10.1-25	-	
VIII	25.1-50	-	
IX	50.1-w	-	
		52	100

The figures for garden land show the minor importance of this type of cultivation. On garden land basically subsistence crops are cultivated and plantains and coconuts are the only major perennial crops.

No household reported chena cultivation in Bundala Wellagangoda, but in Bundala Lewagangoda many families tried to cultivate chena as they possessed no paddy land.

Last, it should be noticed that harvested paddy must be sold to the state cooperatives, but private purchase by Mudalalis (traditional merchants) took place frequently.

It was not possible to discover at what prices paddy was sold privately as either prices varied from time to time or people were not willing to state the correct amount. In 1972 the minimum price, fixed by the government, for paddy was 14 RS per bushel. (One bushel = 36 l).

9.5 External contacts. Economic and public

Some villagers were asked in April 1972 what kind of relationship they had with government representatives and the spontaneous answer was: "We are scared!" This answer merely indicated the relative social isolation of the village rather than a lack of mutual understanding. A motorable road leads to the village and one phenomenon was observed during the months I spent in the village early in 1972. Very often jeeps or cars arrived in the village, bringing government officials such as surveyors, officers from the G.A. and D.R.O. offices, police constables, soldiers, bank employees (!) and others. In some cases their visits were of a formal nature but very often it seemed as if the village itself served as an excursion goal for curious people from the neighbourhood. On one occasion a few soldiers were observed hunting with their rifles close to the village.

People having regular contacts with the village without living there.

- 1) Grama Sevake. As for the rest of the country the Grama Sevake for the village (successor to Village Headman after 1957) is appointed by the government and constitutes the link between the village and the authorities. The Grama Sevake for Bundala, lived about five miles away in the small town Tissamaharama, but the relationship between him and the villagers were good. The Grama Sevake is the link between the Rural Development Societies and the police force on the one hand and the villagers on the other. In many cases a Grama Sevake can be regarded with suspicion by the villagers if he cannot make any improvements for the village. This is common as there is a serious shortage of money for development and improvements, because of the present economic situation. In that case it is usual to consider the Grama Sevake as a kind of control agent.

2) Medical doctor or D.M.O. (District Medical Officer)

Previously there was a dispensary for the village but several years ago it was closed down mainly because of a lack of money and today only a few bats occupy the building.

Once or twice a week nowadays a doctor or D.M.O. visits the village, but the amount of medical treatment seems to have decreased. Basically only severe cases and children are treated. Common parasitic or infectious diseases are in many cases left untreated.

3) Madanaike stores

One Mudalali (traditional merchant), the owner of Madanaike Stores in Tissamaharama, has important contacts with the village. He owns some paddy land in Bundala, and to get his land worked he hires labour from the village. He can also lend out some money on credit for the purchase of crops and goods for the villagers, who often do their purchases at his store.

4) Moneylenders

Moneylenders are occasionally approached by the villagers. In Tissamaharama there is a Tamil and a Sinhalese moneylender, both are unauthorized. Also moneylenders in Hambantota were approached. The only moneylender with a license from the government was a man in Ambalantota, further to the west; he registered his loans and paid tax.

5) Priests or Bikkus

Two Buddhist monks live close to the village. They have extremely different reputations and prestige. One Buddhist monk in closeby Nediganwila is highly respected by the villagers and is frequently consulted by them for religious purposes and for general advice.



The other Buddhist monk in closeby Telulle is considered to be a "crook", especially after the illicit affairs that he had with a couple of married village women who consulted him in his cell.

6) Mudalalis (traditional merchants) and pedlars

Shop owners and store keepers in Habantota and Tissamaharama, small towns both 13 1/2 miles away, provide the villagers with some necessary goods, especially tools and cloth. A number of pedlars frequently come to the village to sell bread, fish, dry fish and textiles. Bread is normally delivered daily.

Other contacts maintained or occurring between villagers and persons from outside

Public and economic contacts between the villagers and outside institutions, departments or persons consist of:

A) Hospital or clinics

Visits to the hospital in Tissamaharama, either for childbirth or for consulting a doctor. In each case the cost is a quarter of a rupee (25 cents). Other clinics are also consulted.

B) Cooperative

To receive the free weekly rice ration of two pounds (0.908 kg), and to buy another one or two pounds at subsidized prices the villagers go to the nearest state cooperative. (In October 1973 the free rice ration was cut down to one pound). Also other food items and goods such as textiles can occasionally be bought to subsidized prices.

C) District Revenue Officer's (D.R.O.'s) office and Government Agent (G.A.) in Habantota

The D.R.O. and G.A. offices are frequently contacted for the same reasons as in Kumbukgollewa.

(See page 216).

4) Sarvodaya

Contacts between the Sarvodaya movement and Bundala will be treated in part 9.8.

5) Police authorities

When disputes occur and criminal offences are penetrated, a police patrol comes immediately to the village. This is possible as there is a daily bus connection. Criminal offences are very rare in the village, though.

The government has no major development scheme in the village at present (1975), but neighbouring Bundala Lewagangoda was recently granted some land by the M.P. of Tissamaharama electorate, who represents the S.L.F.P. party.

U.N.P. is the party favoured by the majority, though. About 90% preferred U.N.P. to S.L.F.P. in 1972.

Children get some contact with the outside world through the government primary school in the village. Most children attend at least the first two or three years .

9.6 Innovations

Bundala has had frequent contacts with the surrounding world for many years and it is not known when the village was, as it once has been, an isolated settlement with a completely subsistence oriented economy. However, it would be ridiculous to say that the village has undergone a process of modernization although many changes have taken place. People normally use the same tools for work as they have done for hundreds of years in the village. Most dwellings are huts with thatched roofs, cultivation techniques are commonly traditional, clothes are not western and habits have not changed considerably. But some diffusion of innovations and spread of cultural news has occurred, especially since 1950.

1) Village school

One of the first schools in the area was started in Bundala already about 1880.

2) Sub-post office

A sub-post office was opened in 1952. From that day a regular mail service was established in the village.

3) Bus connection

In 1950 a bus connection was opened for the villagers who previously had to walk 4.5 miles through the jungle to reach the nearest motorable road. The motorable road to Bundala is also from that period.

4) Dispensary

A dispensary was also opened in 1950, but had to be closed down. Nowadays medical personnel arrives by car or jeep.

5) Nobody in the village owns a tractor, but since 1957 tractors were available for hire from outside. Privately owned tractors can be hired for cultivation work on the paddy fields. The hire was 100 RS in 1972 for one acre. Then one acre paddy land (mada idam) was worked three times. In Bundala water buffaloes are used more frequently, though.

6) Fertilizer

Fertilizers were introduced about 1957-58. The practise of fertilizers never became popular, and after the price increases in 1974, (after the oil crisis) the practise has nearly ceased.

7) Radio

The first radio, with a dry battery, was introduced into the village about 1955. In 1972-73 only a few families owned an own radio.

8) Western clothes

More modern cut shirts, dresses, trousers and modern materials were introduced about 1955, but are still not commonly used except by children.

9) Newspapers

Nobody could give even a rough date of the first arrival of a newspaper. They appear occasionally in the two tea rooms, brought with the bus or by people travelling with it.

10) Shops

There are two shops, the tea rooms, in the village. There the men gather in afternoons and early evenings. In the tea rooms it is also possible to buy a few items such as soap, salt, spices, condiments, dried fish, tea, betel, cigars, cigarettes and kerosene.

Both establishments have been established for about fifty years.

11) Kitchen equipment

New stoves and other items are very rare. Only the most well-to-do households have modernized their kitchens. Food is normally cooked in pots and pans directly on a fire.

12) Food items

New food items occur very rarely.

Of all these innovations, the road and the bus concention seem to have had the greatest importance for the village as a whole. With the bus, villagers could easily travel to the nearest town or even further and establish contacts with the outside world.

An interesting fact that must be observed is that although the distance to both Hambantota and Tissamaharama is the same, the villagers preferred to go to Tissamaharama. This was in spite of the fact that it was possible to go direct-

ly to Hambantota by the bus. The reason for this, it is assumed, is that Hambantota is a Muslim community with a Malay mixture among the inhabitants while Tissamaharama is a Sinhalese township.

Paddy is cultivated as a cash crop in Bundala and there are absentee landlords as well. This cultivation system is favoured by the road connection, as crops easily can be transported from the village.

The school is of course important, but it has not affected the economic or social structures to any major extent. As the education in the school of Bundala is to a primary standard only it can merely provide its attendants with more or less general knowledge, especially as many of the children don't attend regularly.

Of the other innovations there is none that has had any basic importance for the situation of the village.

9.7 General problems of the village as understood by the villagers

The research work in the four villages was possible on the condition that each of the villages was connected in some way to the Sarvodaya movement. Although programmes were not carried out regularly in each case should at least be a link between the movement and the village. In Bundala there are severe problems and the Sarvodaya movement had put quite a lot of efforts and money into a development programme which includes both the two Bundala villages. In Lewangangoda people owned no paddy land, but they were promised the benefit of paddy land work under a cooperative scheme. The Sarvodaya programme was based on the condition that the two Bundala villages cooperated.

In 1973 the people from Lewangangoda were granted paddy land from the local M.P. and people from this side of the village no longer found any reason to work with the Wellagangoda people. The cooperation between the two villages ceased and so did Sarvodaya involvement in Bundala.

The research work in Bundala had to be interrupted as well, and the consequence of this is that the interview programme could not be completed. The conclusions about Bundala does not contain the same degree of validity as for the three other villages, because much of the statistical value was lost as figures and facts could not be coordinated in the more comprehensive interview programme. Assumptions and conclusions about the village are believed to correspond to reality as I spent nearly four months in the village, although it is not possible to give them the same scientific support, as for the other villages where the interview programmes were completed.

By far the severe problem for the people of Bundala is water shortage, both for drinking and sanitary purpose as well as for cultivation. This was stated by the villagers on many occasions and it was also directly observed. The village was visited both during the dry season and the rainy season.

During the dry season people had to be idle if there were no casual labour as it was not possible to cultivate anything during this period of the year. This situation lasts for about half the year. The dry season is also the time when the village women fight for the few drops of water that still flow into the single well of brackish but drinkable water. Sometimes the women have to walk six miles to the nearest half dried out river to filter out some water by digging a hole in the sand of the river bed. Several times women were observed when they fetched water from a large puddle, filtering it into clay-pots through fairly dirty pieces of cloth. This puddle was also used by the cattle.

The village tank is not big enough to allow more than one crop per annum, and during years with little precipitation some parts of the paddy land cannot be irrigated.

In general people were rather pessimistic about the possibilities of further development in Bundala. The shortage of water was considered as the major obstacle.

9.8 Sarvodaya in Bundala

9.8.1 Services rendered through Sarvodaya

As water shortage was the major obstacle for the extension of agriculture Sarvodaya representatives in collaboration with most villagers from both Bundala villages decided to construct a new irrigation scheme and clear new land for cultivation.

In 1970 Bundala joined the Sarvodaya movement and the first Shramadana camp was organized the same year. The whole Sarvodaya paddy cultivation extension programme for the village was divided in six major stages:

- 1) Formation of Sarvodaya village cooperative and formation of functional groups.  
(See page 123 ).
- 2) Cutting of a 4 to 5 mile track, motorable by jeep, from Bundala Lewagangoda to an irrigation channel north of the villages.
- 3) Construction of a new 1,5 mile long irrigation channel.
- 4) Repairing an abandoned tank.
- 5) Clearing Crown Land for paddy cultivation under the supervision of the village cooperative.
6. Cultivation of new land.

In 1970-71 the 4 to 5 mile long track was completed during the Shramadana camps and repair of the tank as well as construction of the new irrigation channel was started. The biggest Shramadana camp was organized in April 1972. About 80 Sarvodaya volunteers arrived in Bundala and the programme was advertised in both Tissamaharama and Hambantota.

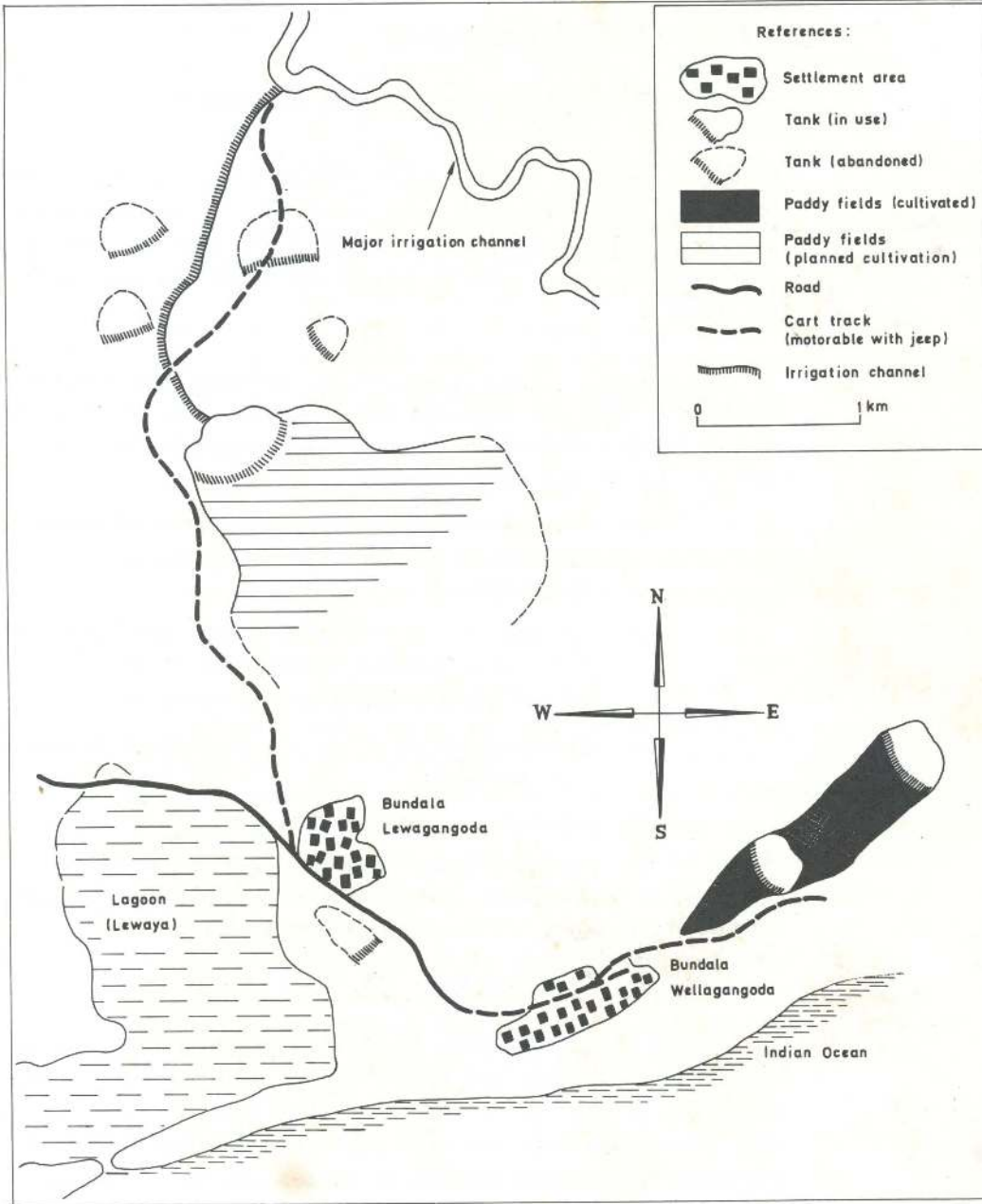


Figure 21 Planned irrigation and paddy cultivation extension scheme for the two Bundala villages.



"According to the Sarvodaya Shramadana policy the above mentioned camp will be organized and there will be no involvement of party politics and the camp will be organized for the common welfare without expectations of any return and we further hope that the camp will be successful."

(Quoted from Sarvodaya papers, boards and advertisements in 1972).

Once the camp started far more people from the vicinity than were expected were mobilized. On the second day about 800 people of both sexes were working on the construction of the irrigation channel. Sarvodaya had difficulties with the organization of food distribution for all the people at the camp site. Regional politicians also found a good opportunity to make a political manifestations of the whole thing. It was very difficult for the Sarvodaya workers to organize the work efficiently but when the Shramadana camp ended on the fifth day about half of the irrigation channel was completed.

So far, Sarvodaya had been successful with its activities in Bundala, but when the people from Lewagangoda were granted their own land, (see page 173) the cooperation between the two villages ceased.

About a year after the big Shramadana camp in 1972, Bundala was revisited and it was found that the irrigation channel had already fallen into disuse, earth had slid down into the excavated channel and thorn bushes and plants were growing over it. The majority of the families of the two villages now had land of their own, although most of them were only smallholders. Sarvodaya based their activities in Bundala on cooperation between the families of Lewagangoda and Wellagangoda and when cooperation ceased, Sarvodaya could no longer mobilize the people of Bundala for development.

#### 9.8.2 Development situation

The main activities in Bundala are:

- 1) Paddy cultivation
- 2) Garden cultivation
- 3) Rearing cattle

4) Casual labouring

Cattle and land are unevenly distributed and many families depend on casual labour for others. Bundala has intimate economic contacts with the two small towns in the vicinity by cultivating paddy as a cash crop. The village can be said to be economically integrated with external markets both for sales and purchases (for those who can afford it). The water shortage is still the major problem. Many families are exposed to price fluctuations on the external markets and are intimately linked to the economic system at a higher level of aggregation. Inflation has hit necessary commodities without any corresponding increase in salaries; conditions have deteriorated for those who have no land of their own.

The negative economic development for Sri Lanka during the last few years has impoverished the most neglected groups in Bundala further compared to other groups in the community. Those who are landless, without paddy land, cannot improve their situation through their own efforts.

## 9.9 Analysis of primary data

It might be more sensible for Bundala not to draw a full set of conclusions from the analysed empirical data, but rather to indicate tendencies. The reason for this is that the survey work was interrupted before the more comprehensive interview programme was completed. The reliability of figures for land ownership is considered to be high as they were crosschecked twice, and this will allow a high degree of probability of the conclusions about both the individual and general capacity of agricultural production.

### 9.9.1 Total amount of cultivated land and age structure

The cultivation system in Bundala is of the typical Dry Zone village type, with a dominance of irrigated paddy and other annual crops. Bundala has a lower figure for annual precipitation than what is normal for most Dry Zone villages though and the rains are only expected during a short period in the year. The fairly small and unevenly spread precipita-

tion has negative consequences for the agriculture, as it restricts the cultivation period to roughly six months of the year. For this reason it is also more or less impossible to cultivate chena successfully which further delimits the cultivation alternatives for the farmers of Bundala.

The most common figure for possession of garden land is 1/8 to 1/4 acre, land that is normally connected to the dwellings. Coconuts and plantains dominate, but there is also cultivation of vegetables, chillies and onions on the garden land. The importance of garden cultivation is limited though, as the total amount is not more than 7 acres.

If paddy cultivation is considered, the figures look more encouraging initially as there are altogether 135 1/2 acres of wet paddy land including illicit cultivation. It is estimated that the total annual yield amounts to about 125 000 kg rice which is about 42 kg/capita for the 299 inhabitants. If it is reckoned that each individual has a daily consumption of about 1/2 kg the total yield for Bundala can not last more than 3 months. The additional free ration rice improves the figures a little, but not considerably. (Figures refers to unhusked rice).

Children and the old consume less than the average and those of productive ages more. A child between 1-8 years is considered as a 1/3 consumer unit, between 9-14 years as a 1/2 consumer unit and an old person over 64 as a 3/4 consumer unit. (Djurfeldt, G., 1968).

It should be noticed that the agriculture of Bundala is commercialized with paddy as the most important cash crop, which is why an important share of the 125 000 kg annual yield is sold outside the village, most of it to the cooperative.

If the total labour capacity is considered, Bundala is the most favoured of the four villages surveyed with a relative share of 62,5% of the population at productive ages. Much of

potential labour capacity is lost though, as the cultivation period is only about 6 months a year and many people work less than that as there are limited opportunities of work for the landless.

Bundala has clearly a deficit economy and must rely on eventual external assistance to achieve a tolerable situation. If irrigation works were improved and new m a d a i d a m (wet land) cleared many of the problems in Bundala could be relieved.

#### 9.9.2 Analysis of economic resistance ability for individual households

According to the method of analysis described in part 8.8, all households were investigated in order to find out the share of able households. Able households are considered to be those who have an economic potential and labour capacity to provide themselves with basic needs such as food and a small cash surplus for the purchase of necessary items.

As the analysis in most cases could not be made according to the 13 variables listed on page 156, because the survey was interrupted, the reliability of the results is less than for the other three villages. Still some very interesting tendencies appear.

The most well off households with the highest economic security are found near the upper left corner of the matrix, while the most neglected groups are close to the lower right corner. The 3 households in the upper left corner are commercial farming households rather than peasant households and need to hire labour regularly to maintain their cultivations. Labour is also occasionally hired by the 22 households in square 1/II.

The opposites of these households are those in square 3/IV where all the casual labourers are found who have to rely on more or less occasional work for their maintenance. None of the households was classified as unproductive because of age or illness. (For further information, see the composite matrix in the appendices).

Table 23

Cross-classification of households in Bundala Wellagangoda according to economic groups and their ability of maintainance and economic resistance. (For explanation of categories see page 154 and 155).

ECONOMIC RESISTANCE ABILITY \ FARMER CATEGORY	I	II	III	IV	$\Sigma$	
1	3	22	3	-	28	Able households
2	1	3	6	-	10	Occasionally exposed households
3	-	-	1	19	20	Vulnerable ur unable households
$\Sigma$	4	25	10	19	58	

Only 48% of the households in Bundala are capable of supporting themselves. No less than 34% of the households can easily find themselves in a critical state. It is obvious that Bundala at present is not a village that creates a surplus for people in towns and other areas not engaged in agriculture.

10 PANAPOLA PELAWATTE, RATNAPURA DISTRICT

10.1 Population and a few geographical particulars

10.1.1 Some geographical particulars

Panapola Pelawatte village is located in a valley at 6' 25<sup>o</sup> north and 80' 29<sup>o</sup> east, 5 miles from the nearest motor road in Ratnapura District in the Wet Zone. The village borders Sinharadja, the last remaining tropical rain forest of some extent, and belongs to Kukul Korale D.R.O. division. It is an agglomerated rural settlement of the Wet Zone type according to the classification in chapter 4. Dwellings are scattered in small clusters, most of them close to the paddy fields.

The total extent of Panapola Pelawatte is not known, partly because the amount of chena land (goda idam) is unknown and partly because it is difficult to assess accurately where garden land ceases to be cultivated or worked.

Thirteen households (1975) and the combined temple and community centre have tiled roofs, while the rest of the houses and huts are made of clay mixed with cow or buffaloe dung and with thatched roofs. The supply of good water is abundant, as many small streams run down from the hillsides and a stream with clear water flows through the village.

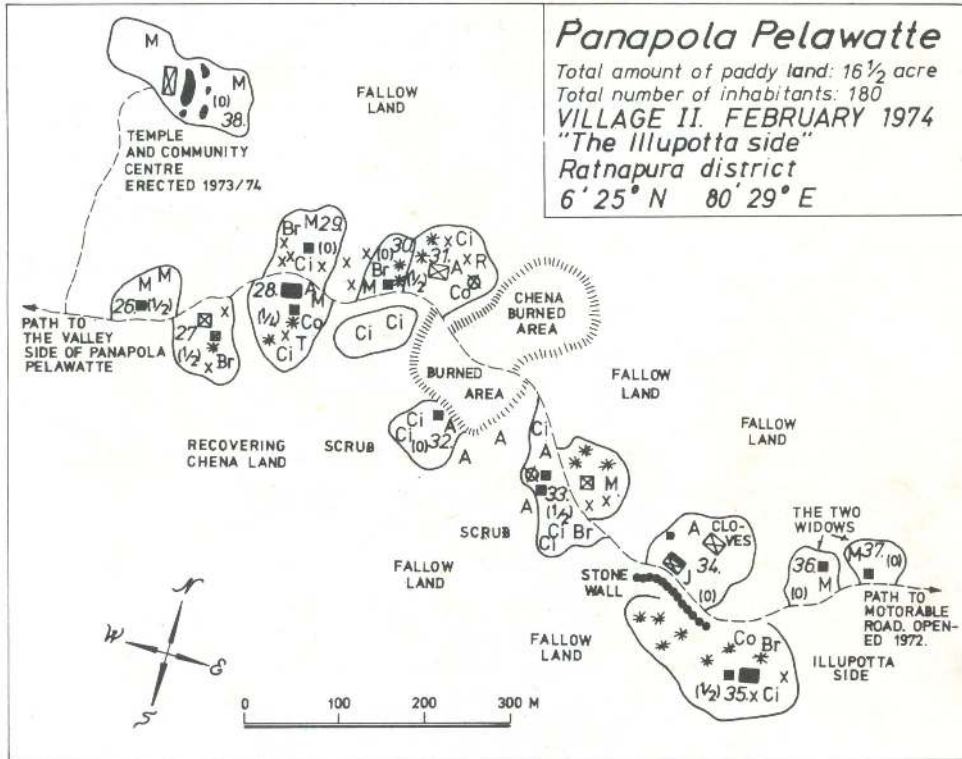
Red yellow podzolic soils and wet mountain regosols dominate the area, which is generally fertile. In the valley, the soil is fertile and is suitable for paddy cultivation as rain falls throughout the year and the water runs continually off the hills. Hardly anything remains of the indigenous vegetation on the hillsides in the vicinity of the village as this land has for a long time been used for chena cultivation. This has created some problems. In this type of climate where rain falls heavily on the exposed soil, much of the fertile surface earth is washed off. This together with repeated swiddens leaches the soil of much of its nutrients and accordingly decreases the output of crops.



There is enough water as the amount of annual precipitation every year is just above 4 000 mm, spread evenly throughout the year, with peak periods in May/June and October/November. Paddy is irrigated by small streams and for the gardens and chena no irrigation is necessary.

The cultivation period extends over the whole year and consequently both Maha and Yala season paddy is harvested. As shown by the maps of the village area the variety of cultivated crops is broad.

Figure 23. Panapola Pelawatte. The Illupotta side .  
Sri Lanka.





10.1.2 Population

In 1974 there were 38 households and one Buddhist priest or Bikku (Buddhist monk) living in Panapola Pelawatte. The number of inhabitants (with the Bikku included) was 180, all Sinhalese Buddhists. All of them belong to the Goyiagama or cultivator caste, which is the highest caste. Marriages are both endogameous and exogameous, but in the latter case brides or bridegrooms are not fetched from any distance.

Table 24 Age structure in Panapola Pelawatte 1974.

Age groups	S e x			%
	Males	Females	Both sexes	
0- 4	12	10	22	
5- 9	8	12	20	35
10-14	10	11	21	
-----				
15-19	8	12	20	
20-24	13	9	22	
25-29	7	7	14	
30-34	10	2	12	
35-39	4	4	8	60
40-44	1	3	4	
45-49	3	7	10	
50-54	5	4	9	
55-59	5	1	6	
60-64	1	2	3	
-----				
65-69	1	2	3	
70-w	3	3	6	5
	91	89	180	100
%	51	49	100	

If production capacity is considered, the age composition is advantageous for the village as nearly two thirds of the population falls within the productive age group.

It is doubtful whether it is worthwhile to draw up an age structure for a population of only 180, but this has been done so that it is possible to compare the age composition with other villages in this book.

## 10.2 History of the village

In a valley in Sabaragamuwa, the comparatively untouched Province in the southern highlands of Sri Lanka, the village Panapola Pelawatte has been more or less hidden ever since its assumed foundation 300 years ago. Although the age of the village was reported by some of the older men, it is possible to tell roughly the number of years that have elapsed since the foundation of the village by estimating the age of the Boo-tree of Panapola Pelawatte. At the foundation of a village in the old days a Boo-tree was always planted in the middle of the settlement area.

I was told that the man who owned the area where the village was founded brought some families to settle and work within the Rajakariya system.

In the old days the name of the village was Hapugode Nindegamme. The second word *N i n d e g a m m e* most probably comes from the word *n i n d a g a m* which means "villages assigned for the exclusive use of the grantee" (Ariyapala, 1968) and this indicates the former position of Panapola Pelawatte.

Previously the villagers had to pay a yearly tribute to the landowner, who probably had the rank *R a t e M a h a t m i y a* (see page 31). To him each family gave a quarter of the annual paddy crop and a fifth of the chena and garden crops.

This landowner had a superior landowner in his turn, who controlled a larger area. To him the subordinated landowner had to give an eighth of the paddy crop (i.e. 1/2 of the 1/4 given by the villagers) and a tenth of the other crops respectively (i.e. 1/2 of the 1/5 given by the villagers). Each villager also had to pay an annual tax to the superior landowner. In 1910-20 it was approximately 2RS. As many villages were under the jurisdiction of the superior landowner, he

could collect a large amount of money and crops each year. This principle of taxation and appropriation applied throughout the Rajakariya system all the way up to the king at the top of the feudal hierarchy.

A government regulation finally abolished this system as late as 1940, and in 1953 a commissioner came to carry out a survey to distribute formally the land to the correct owners. At first he failed with the survey and land registration because different owners claimed the same piece of land. In 1959 the commissioner returned and the distribution of land was formally settled and the owners registered.

The village is and has always been isolated. As late as 1972 the villagers had to walk 18 miles to the nearest motor road. Today there is a road with a daily bus connection to the next valley 5 miles away.

### 10.3 Production

As both annual and perennial crops are easily cultivated in Pelawatte, paddy is not as important as in Dry Zone nucleated tank settlements. Paddy is cultivated almost exclusively as subsistence and various types of garden crops are cultivated for the outside market as well as subsistence. Among garden cash crops, areca nuts, cinnamon, rubber and various fruits are most important. Tapping the sap of the Kitul palm tree and preparing treacle and j a g g a r y is common. J a g g a r y is a kind of brown sugar that is sold for a good price at the market. In November 1975 the price for 1 lb of jaggary was 7,5 RS.

Other means of livelihood in the village are: Garden cultivation of coffee, tea, fruits and vegetables for subsistence; chena cultivation of primarily manioc and maize for both cash and subsistence; collecting d u m m e l e, a kind of resin, found in a certain tree that grows in the surrounding Wet Zone jungle. This resin is then turned into a popular aromatic incense, which is readily sought after.

There is no organized retail trade in the village, and nearest shop is in the nearby village Koskulana. The nearest small market and cooperative is at Ambegekanda, 6 miles away. Though prohibited, a certain amount of forestry is carried on near the village as some rare and expensive trees are found in the area.

No casual labouring is done either for any private or government enterprise or for any family in the village with one exception. In Panapola Pelawatte cinnamon is a major crop. The cinnamon bushes have to be cut and the bark removed. This work is not done by the villagers themselves, but by hired labourers from outside, who have to be provided with food and lodging. These labourers perform their traditional caste function as they belong to the Salagama caste, which means the cinnamon peeling caste. (Compare with chapter 3 page 42 ).

The villagers practise *kayye* frequently, the traditional form of cooperation. People work on their own land normally but they help each other if they are unable to work. A good example of practiced *kayye* can be shown from a joint family, consisting of three brothers who have separate households but own and cultivate their paddy land jointly, each brother taking the harvest every 3rd year, but each year all of the brothers working the land together all the time. If one of the brothers is without his own paddy one year, he buys some for money he earns from cultivation of manioc, cinnamon or arecanuts. This system is possible as paddy can be stored for 3 or 4 years.

#### 10.4 Economic groups and economic structure of the village

All the working population of Panapola Pelawatte are found within the agricultural sector but paddy cultivation does not have such a dominant position as in other villages. Wage labouring is not practised, at least not in an organized level. All three traditional cultivation systems exist, each of them complementing the others, and normally each family reaps a wide variety of crops annually.

The traditional form of cooperation (kayye) is still upheld by most households and it is integrated into the structure of ownership of paddy land. Few families own no paddy land at all, and those who do not are either too old or too sick, or are too young to own land or they have concentrated on garden or chena cultivation.

Table 25. Total possession of paddy land including illicit cultivation according to ownership categories in Panapole Pelawatte 1974.

Owning category	Acres	Number of households	%
I	0	11 (-7)	30
II	0.1- 1	24	
III	1.1- 2	2	70
IV	2.1- 3	-	
V	3.1- 5	-	
VI	5.1-10	-	-
VII	10.1-25	-	
VIII	25.1-50	-	-
IX	50.1-w	-	
		37	100

Out of the 37 households only 29 can be classified as productive. By this, it is to be understood that at least one of the household members has a normal working capacity. Only five of these households possess no paddy land and of these five households one consists of a man who is sharing land with his father and is consequently no an owner himself. This means that there are only four households or 10,8% of the productive households, which own no paddy land. These four households concentrate on garden and chena cultivation instead, and are more dependent on cash incomes.

It seems reasonable to assume that there is no system of interdependent economic groups in Pelawatte, at least not according to the distribution of paddy land.

The existence of the Kayye system does not prescribe obligations in a negative sense as it provides a kind of a security system for tis practioners. If somebody falls ill during for example harvest, the other members in the sick persons Kayye group perform his work.

Table 26 Total possession of garden land including illicit cultivation according to ownership categories in Panapola Pelawatte 1974.

Owning category	Acres	Number of households	%
I	0	2	( 8)
II	0.1- 1	23	
III	1.1- 2	7	84 (92)
IV	2.1- 3	1	
V	3.1- 5	3	
VI	5.1-10	-	8
VII	10.1-25	-	
VIII	25.1-50	-	-
IX	50 -w	-	
		36.	100

The variety of cultivated crops on garden land is very high in Panapola Pelawatte, if the individual households are considered. As can be seen at the map over the village on page 183 , garden land is, with almost no exceptions attached to the dwellings.

Garden crops are cultivated both for subsistence and as for cash, and they demand little input of labour and capital to cultivate, as perennial crops are in most cases, grown.

Weeding, transplanting and replanting are rarely required. Common garden crops are arecanuts, plantains or bananas, coconuts, kitul, palmtrees, rubber, tea, jakfruit, breadfruit, coffee, pepper, manioc, cinnamon and pineapples. (For a further explanation of (application for these crops, see the appendices).

Most of the crops mentioned above require a fairly large and evenly spread precepitation throughout the year, and the agroclimate of Ratnapura District is favourable for their cultivation. The garden crops in Panapola Pelawatte constitute a safe source of food and cash income for the villagers.

Table 27 Hen(a) or Chena cultivation. Total possession of land including illicit cultivation according to ownership categories in Panapola Pelawatte 1974.

Owning category	Acres	Number of household	%
I	0	12	32
II	0.1- 1	21	
III	1.1- 2	3	65
VI	2.1- 3	-	
V	3.1- 5	-	3
VI	5.1-10	1	
VII	10.1-25	-	
VIII	25.1-50	-	-
IX	50.1-w	-	
		37	100

Of the three agricultural sectors in Panapola Pelawatte, chena cultivation is the least important. Chena also demands more input of labour and capital than garden culti-

vation, as weeding must be done regularly and planting is normally done annually. A capital reserve for seeds is also required.

Chena cultivation is important, though, in one sense as it provides its cultivators with complementary crops of nutritional importance and can serve as a potential bulk food reserve. Dry paddy, manioc, vegetables and finger millet (kurakkan or *elusine coracana*) are the most common chena crops in this area.

The division of chena land between the households in Panapola Pelawatte is not biased as nearly all the households fall within the first two categories of ownership and most of the chenas are cultivated without permission. For this area, the habit of cultivating chena has had some negative effects. As the population density in the region has increased, especially during the last decades, so has the pressure on land. There is hardly any virgin land on the hillsides in the inhabited areas, and the forest and other vegetation has been burnt down.

When the hillsides are burnt, the naked soil is subjected to the heavy rains that flush away the nutritive surface cover. Also the old chenas get less time to recover and the soil is, at an increasing rate, leached. This is a problem that has to be considered seriously for this area. (See figure 14).

Only one household cultivates a bigger plot, 7 acres, but this household has concentrated their cultivation to goda idam (high land) where they grow dry paddy and own no mada idam (irrigated land).

It would seem that the categories of ownership of cultivated land in Panapola Pelawatte is fairly evenly distributed. Wage labouring hardly exists and no household possesses enough cultivated land to have any reason to hire labour regularly. The production structure shows an orientation towards a subsistence economy.



10.5 External contacts. Economic and public

Panapola Pelawatte is located in an area that has attracted little interest from the outside world. Accessibility has been very difficult until 1972, when a road was constructed in the area. The villagers still have to climb 4 to 5 miles over a mountain and down into a valley to reach this road. The isolated location of the village has hindered the development of a regular network of external contacts between the villagers and the outside world. The difficulties of transporting goods between the village and the outside has probably contributed to the orientation towards subsistence within the agricultural sector.

All of the items sold by the villagers are light goods like h a k k u r u or j a g g a r y, cinnamon, rubber flakes, and sometimes uncut gems. Another source for cash incomes is the purchase of d u m m e l e, a popular aromatic incense that can be made from the resin of rare trees that grow together with about 2 000 other species of tree in the nearby rain forest. The only bulky and heavy item sold by the villagers is areca nuts for betel chewing. The cultivation of areca in the area is explained by big yields with a very limited input of labour and capital.

The only regular external contacts that are maintained by the villagers are with the state cooperative in Potupitiya about six or seven miles from Panapola Pelawatte, and the market there, as well as in other nearby places like Ambegekanda. From 1973 a daily bus connection passes on the recently constructed road and occasionally villagers use this bus service to go to more distant markets.

Occasional contacts are also made with the D.R.O. office in Rakwana town mainly for official purposes such as the registration of births, marriages and deaths, the registration of land transactions, the renewal of gun licences, and reporting disputes over land.

Money lenders or pawn brokers have only scattered contacts with the villagers, and few Mudalalis (traditional traders or pedlars) come to the village.

There is a dispensary in Potupitiya with a D.M.O. (District Medical Officer, who has a medical education which is more comprehensive than that of a nurse, but less than that of a doctor).

For 25 cents, about 5-10 U.S. cents, everyone in Sri Lanka is entitled to medical treatment. People who fall ill in Panapola Pelawatte, though, have difficulties getting to the dispensary.

Journeys of any distance are an exception for the people of Panapola Pelawatte and few had ever visited the capital Colombo at about 95 miles distance.

#### 10.6 Innovations

Although the social and economic system of Panapola Pelawatte is so oldfashioned, the modern world is slowly reaching the village, especially since 1972, when the road was constructed. Some modernities have been available for the villagers for some time, though:

- a) School. The first government school in the area was built about 50 years ago. The second school was started in the nearest village of Koskolana, about 15 years ago. A third school was started about 12 years ago not far from the village in Ambegekande.
- b) Road. In 1972 a road was built which makes it much easier for the villagers to go to the nearest town, but most of the villagers still have to walk and climb at least five miles to reach the road.
- c) Bus. A bus service was started in 1973. Before that people had to walk about 16-17 miles to the nearest small town, Rakwana.

About 25 years ago people had to walk all the way to Ratnapura, 38 miles away but to-day there is a bus service there.

- d) Modern medicines. About 25 years ago the first modern medicines became available in a nearby dispensary.
- e) Radio. About 15 years ago the first dry battery radio was introduced into the village.
- f) Fertilizers. These were introduced about 4 years ago by Agricultural Department, but were used less after 1973/74.
- g) Post-office. A sub- postoffice was opened in Potupitiya about 30 years ago.

Because of the favourable development of prices after 1973-74 on the goods purchased by the villagers of Panapola Pelawatte, the number of transistor radios has increased from two in 1973 to six or seven at the end of 1975. Many houses have been repaired, plastered and the roofs tiled between the beginning of 1974 and the end of 1975.

Except for these few innovations, the village has hardly been touched by the modern world. Cigarette smoking was not observed, but betel chewing is common in all the households, clothes were traditional as were all the implements and tools. No newspapers were circulated in the village and knowledge about party politics was slight. As a rule people voted for the moderately conservative U.N.P. party, "because the MP, who belongs to U.N.P. was a nice man as he has helped the villagers construct a small pedestrian bridge over a stream, which the villagers cross to reach the road".

#### 10.7 General problems of the village as understood by the villagers

For reasons that will be more thoroughly dealt with in the final analysis the degree of social and especially economic

security is higher in Panapola Pelawatte than in the majority of traditional villages of Sri Lanka. In spite of this, the villagers have stated a number of problems, which they consider serious:

- a) Transport difficulties. No road connection.
- b) Difficulty in marketing products due to bad communications and lack of nearby market.
- c) Wild animals destroying crops.
- d) Poor educational facilities for the children.
- e) Poor health conditions.

A large portion of the interviewed villagers complained over the bad transport facilities, as that entails difficulties for them to market their surplus products, as well as transporting of goods to the village. The relative inaccessibility of the village also creates problems for women who want to give birth to their babies in hospital, for sick people to contact the D.M.O. and for children going to school. But as a whole, the lack of a road does not affect the economy of the village to any major extent, it merely makes things a little bit harder for the villagers.

The second problem overlaps the first, but it is clear that if the transport facilities could be improved and if better possibilities to purchase the villagers products were also created, the cash incomes would increase. This would improve the labour efficiency, and thus raising the surplus output per household. There are other, maybe more severe, problems, though.

Much of the crops, especially on the chenas, are destroyed by animals such as wild boar and deer. To protect their cultivations, the villagers often have to guard their fields at night. It is a major problem for those families, who have holdings on the fringe of the village. A man who has guarded at night obviously is less able to work the day after. It is a minor problem, though, for those families, who have more than one grown up male person.

Bad health conditions is a problem that is more difficult to tackle, as it often is related to social problems, methods of food treatment and storage, contamination of the environment and general hygienic conditions. A very common source for parasitic as well a bacterial diseases is contaminated drinking water, but in Panapola Pelawatte the villagers are supplied with pure drinking water all the year. Lack of latrines as well as at many instances of bad general hygiene is a cause for the spread of disease. It should also be noticed that two families are affected by the disease ichtyos. It is heritable and cannot be cured. Ichtyos leads to general retardation, inability to work efficiently and an early death.

The standard of primary education in the area is not very good and as children have to climb mountains and walk several miles a day to reach the school, very few attend regularly. It is not common that children complete their primary education.

#### 10.8 Sarvodaya in Panapola Pelawatte

##### 10.8.1 Services rendered through Sarvodaya

Panapola Pelawatte joined the Sarvodaya movement in 1970. The first Shramadana camp, or initiated labour activity, started on the 24th and 25th of July of that year. The path leading over the mountains was improved and 30 tools and siccles were given to the villagers by Sarvodaya. Sarvodaya has rendered a number of services to the village, but many of them have not been maintained or continued because of the limited possibilities for the movement to supply voluntary or paid labour and capital.

The services so far rendered are:

- a) Cutting a three foot wide path to the village.
- b) Building the farmers group hall 20' x 20'.
- c) Inauguration of children, youth & farmer groups.
- d) Maintenance of a children's group farm.
- e) Getting young boys and girls to participate in the training schemes.

- f) Inaugurating a pre-school.
- g) Inaugurating a Sarvodaya Sunday School.

Proposed work:

Inauguration of a community farm.

Source: Official records from the Sarvodaya movement.

A few other things done by Sarvodaya ought to be mentioned as well. For the construction of the farmers' group hall, which is actually a combined temple and community centre, the movement provided 3 700 RS to pay for the building materials. A sewing machine and a Buddha statue have also been presented to the villagers. During a visit in 1973, then again at the completion of the village survey in 1974, and again at the end of 1975, I found that the cut path was still kept clear and that the community centre was in excellent repair and in use.

Of the other activities there was not much that has kept going, probably because of lack of leadership. However, the attitude towards the Sarvodaya movement was positive among the villagers.

#### 10.8.2 Development situation

For the time being, the general situation is improving in the village, although the stated problems remain. During the interview programme in 1974, very few respondents said that there was any urgent need for help.

A few possible future problems ought to be noted. It seems as if chena cultivation will decrease as the goda idam (high land) around the village will be leached continuously and the output per cultivated unit will decrease accordingly. (See figure 14). To counteract this possible setback, it is important to find out if there is a chena crop of general nutritional importance for the village, and to try to replace it with something else, that possibly could be cultivated as a garden crop.

Further improvement of the path to the village seems to be a possible way to increase the incomes for the villagers as they will be able to transport goods for sale more easily. The further spread of the disease ichtyos does not seem very likely. Some other diseases that are common in other parts of the country have not spread to Panapola Pelawatte as the environment is fairly clean.

#### 10.9 Analysis of primary data

Panapola Pelawatte was the first Wet Zone village to be investigated, and the results of the survey corresponded with the previous assumption that the Wet Zone agrosystem differed considerably from the Dry Zone. In Pelawatte there is a threefold cultivation system with both annual and perennial crops, of which paddy is the most important subsistence crop. Further because of its relative isolation. Pelawatte has also preserved considerably more of its traditional social and economical structures.

##### 10.9.1 Total amount of cultivated land and age structure

Pelawatte has the highest figure for annual precipitation of the four villages and its agriculture is the typical traditional Wet Zone type. Both annual and perennial crops are easily cultivated and as many as 69% of the productive households maintain a threefold agricultural system with paddy, garden and chena cultivation.

A variety of crops are cultivated of which paddy is the most important. The total amount of paddy land does not exceed more than 16 1/2 acres, but two crops are harvested annually. The total quantity yielded each year is estimated to be about 30 000 kg rice which means nearly 170 kg/capita. If the rice was divided in fair portions among the 180 inhabitants it would mean that together with the additional free rice rations from the cooperative self-sufficiency from paddy is easily reached. (Figures are for unhusked rice).

The total amount of 28 1/2 acres chena and 47 1/2 acres garden allows comprehensive cultivation of food crops which complement the rice diet.

The potential labour capacity is favourable for Pelawatte as the relative number of inhabitants in productive ages amount to 60%. Because of the favourable conditions it is possible for most people to work all the year round.

It should be noticed, though, that out of the 37 households investigated, 5 of them consisting of 8 people are reported as unproductive. For these people there are more or less severe problems of maintaince.

#### 10.9.2 Analysis of economic resitance ability for individual households

For nearly 80% of the productive households it was possible to complete the full interview programme, which is why the reliability of the conclusions from the survey is much higher than for Bundala. The whole production of Pelawatte is characterized by a priority of subsistence production followed by a cash-crop orientation. This assumption was supported when the interview programme had been completed. The households cultivated for their maintaince first and then for cash income. This is also shown if the households are cross-classified.

Five households in Pelawatte are reported as unproductive because of high age or illness among the household members. Four of these households are found among the eight in the lower right corner. Of the others not less than 78% belong to the group of able households, which indicates a different economic structure as compared with Bundala. No less than 81% of the productive households possessed paddy land as compared to 57% in Bundala. But of those possessing no paddy land in Pelawatte nearly all were engaged in other types of cultivation on private land, while this was not the case in Bundala.



Table 28

Cross-classification of households in Panapola Pelawatte according to economic groups and their ability of maintenance and economic resistance. (For explanation of categories see page 154 and 155).

ECONOMIC RESISTANCE ABILITY \ FARMER CATEGORY	FARMER CATEGORY				$\Sigma$	
	I	II	III	IV		
1	-	25	-	-	25	Able households
2	-	-	4	-	4	Occasionally exposed households
3	-	-	-	8	8	Vulnerable or unable households
$\Sigma$		25	4	8	37	

Only 9% of the productive households in Pelawatte are seriously threatened by a critical economic situation, as compared to 34% in Bundala. Although Pelawatte does not contribute to the supply of paddy for other people outside the village, they still deliver a fair quantity of other food items. Although a number of households are facing rather bad problems there is no exploitation of labour in the village or any dependency on the external economy as a rule for their maintenance. It is clear that Pelawatte is capable of producing surplus products to be sold outside the village.

11 KUMBUKGOLLEWA VILLAGE, ANURADHAPURA DISTRICT.

11.1 Population and a few geographical particulars

11.1.1 Some geographical particulars

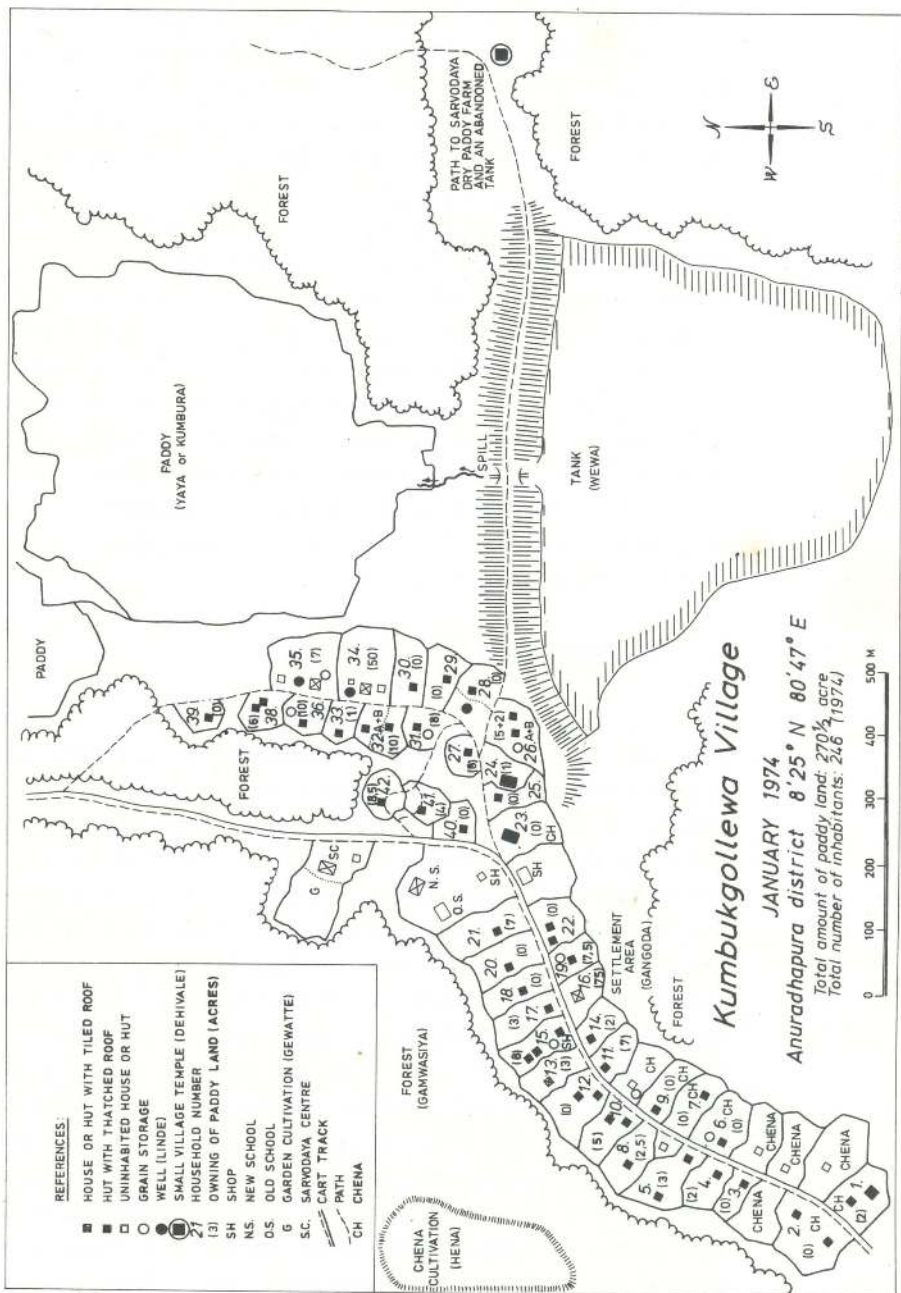
Kumbukgollewa village is located at 8' 25<sup>o</sup> north and 80' 48<sup>o</sup> east, about 7 miles from the main road between Trincomalee and Anuradhapura in Anuradhapura district in the Dry Zone. It belongs to Galenbindunuwewa D.R.O. Division. According to the classification in chapter 4 (p.85 ) it is a typical nucleated tank settlement with houses and huts in a cluster close to paddy fields and the village tank. The area of the village, including garden, swidden, paddy and settlement land, is about one square mile. Forests and scrub land surround culture land.

Only two of the inhabited houses have tiled roofs, while the rest of the houses and huts, built of clay, have thatched roofs. There are also two separate wells belonging to the tiled houses. For the rest of the village there is only one public well.

The soils in the area consist of redbrown podzolic earths. Although it is suitable for paddy cultivation, it is not optimal, which is why yields are not very high.

Another factor limiting agricultural production is the climate. It is wrong to believe that, if the fertility of soil is fair, the precipitation sufficient and the temperature modest, then conditions for agriculture are favourable. Many other factors must be taken into consideration, such as the relative humidity, the length of the day, hours of sunshine and the number of days with precipitation. (Domrös, 1974). In Kumbukgollewa the agroclimate is not favourable and during the last five years the village has been subjected to more or less severe droughts. During this period there has not been enough water to fill the tank to its normal level and the irrigated land on the

Figure 24. Kumbukgollewa village. Sri Lanka



outskirts of the village has been left unused.

The average figure for annual rainfall in the area amounts to about 1 500 mm, which is above the normal figure for Sweden or England. In these countries it is evenly distributed throughout the year, though, but in Kumbukgol-lewa there is drought more or less for 8 to 10 months.

Before the rain comes with the north-east monsoon in October or November the soil is very dry and in many places cracked. At the time for the monsoon the rain falls as heavy downpours and floods away much of the nutritient top soils. Much of the water cannot be used for any constructive purpose, instead it causes damage. One reason for this is that the irrigation system in Kumbukgol-lewa, as in many other villages to-day, is in such poor condition. Because of these set-backs it is only possible to cultivate on a major scale during half of the year. Much of the resources are therefore wasted.

#### 11.1.2 Population

In 1974 there were 43 households and 45 families living in Kumbukgol-lewa. The number of inhabitants was 239, all of them Sinhalese Buddhists. Caste is nowadays rather immaterial in Sri Lanka in general, but still has some importance in Kumbukgol-lewa. The villagers belong to a low caste, the Wahumpura or Wahanpura caste according to a person in the Sarvodaya movement, which means that they belong to the caste that, apart from farming, also makes jaggary (palm sap sugar). People in Kumbukgol-lewa claim that their old caste function was to carry food and various other items with yokes to weddings. I was not able to trace a name of a caste with those obligations. Caste has some importance still in Kumbukgol-lewa, though, in the sense that marriages are normally exogamous and to find a suitable marriage partner they commonly go to the town Kurunegale in the Wet Zone about 90 miles away, where there is a large group of people belonging to the Wahanpura caste. They never marry anybody from a lower caste.

Although 239 people is a small number, the age structure shows a very large proportion of children under 15, and a very small number of people over 64 years.

Table 29. Age structure in Kumbukgollewa in 1974

Age groups	Sex		Both sexes	%
	Males	Females		
0- 4	22	23	45	
5- 9	16	22	38	47
10-14	20	12	32	
-----				
15-19	16	17	33	
20-24	12	9	21	
25-29	5	10	15	
30-34	9	3	12	
35-39	7	10	17	51
40-44	4	3	7	
45-49	5	3	8	
50-54	4	3	7	
55-59	2	1	3	
60-64	3	-	3	
-----				
65-69	1	-	1	
70-W	2	2	4	2
$\Sigma$	128	118	246	100
%	52	48	100	

The number of small children, up to 5 years, is especially large compared with the three other surveyed villages. For many families with low incomes this is important, as the number of members and the age structure of the family decides the labour capacity of that family.

## 11.2 Location and history of the village

Kumbukgollewa village is situated in Anuradhapura district (Eastern Province), an area that is occasionally stricken by drought.

The village is about 250 years old, according to older people in the village. From the same sources it is reported that only some 15 families lived in the village 40 years ago, each family cultivating about one acre paddy. At that time they had severe problems to protect themselves and their crops from wild animals. There were no communication facilities. Not even a cart track connected the village with the nearest main road six miles away. The nearest hospital was 38 miles away in the provincial capital Anuradhapura.

The principal of the village was the provincial leader or Rate Mahatmiya, for whom the villagers had to do a certain amount of day-work each year. This day-work seems to have been attached to the land-holdings of the villagers.

The families who originally settled in the present site of Kumbukgollewa most probably had to ask permission to settle from the Rate Mahatmiya, and at this time the obligations attached to the village land were decided.

"Still there are some remains of the old 'Kayye system' in Kumbukgollewa. Some families work for each other with paddy cultivation. The family who has others to work on its land is responsible for providing them with food during the time this work goes on. For this reason the families involved in this communal system have certain tools and a special kitchen equipment"

This statement was made in April 1974 by the Ayurvedic medicine man (Vedamahatmiya) of Kumbukgollewa, who also showed me these tools and equipment. Although change has taken place to a great extent, much of the traditional ways of production appear to have been preserved from the old days.

As no records have been kept of the history of the village, very little is known about its past. Only a few facts are known. If the villagers did not perform the day-work for the Rate Mahatmiya they were punished. At the Sinhalese new year (12th and 13th of April) they had to bring gifts such as the meat of wild animals and oil cakes to the Rate Mahatmiya and the other superior land owners.

A few necessary items such as tools and cloth were bought from places outside the village. As the economy was not monetary, there was an exchange system for such transactions. The villagers used milk, honey from wild bees, meat from wild animals, skins and agricultural products as items of exchange.

### 11.3 Production

The production in Kumbukgollewa is dominated by irrigated paddy, which is cultivated as a cash crop. Other means of livelihood of the villagers are chena cultivation, animal husbandry and casual labouring. Garden cultivation is unimportant, performed only on two acres by one family. Casual labouring is done by landless peasants or smallholders on the land of more well-to-do farmers.

Irrigated paddy is easily the most important commercial crop, but millet, maize, vegetables, pumpkins, dry paddy and sorghum are also cultivated, though mostly as subsistence crops.

Retail trade is represented by a couple of small combined tearooms cum village shops with a very limited stock. The poorer families do most of their purchases in the nearest market a few miles away, where they can find the same items a little cheaper than in the village itself.

No forestry is done by the villagers, although the forest grows in the immediate vicinity, because the felling of timber is prohibited. No village industry exists either, and, except for agriculture, there is no other production of any importance.

11.4 Economic groups and economic structure of the village

As agriculture is the most important undertaking in Kumbukgollewa, and irrigated paddy dominates agriculture, the amount of cultivated paddy land that a family or a household owns decides its economic position. Chena cultivation is also important, but in many cases not as a complementary cultivation but as a substitute cultivation for the landless, when they cannot find any employment as casual labourers. Unfortunately the job opportunities are most numerous at the period of the year when conditions for chena cultivation are most favourable.

Chena cultivation is also commonly practised as a complementary cultivation by those families who have a suitable age structure, i.e. a few grown up or half grown up children who can work with chena at the same time as the rest of the family work on the paddy fields. A person is also needed as a watchman to protect the chena crops from destruction by wild animals at night.

From the tables below it is possible to distinguish a structure of ownership of paddy land as compared with that for chena land.

Table 30. Total possession of paddy land including illicit cultivation according to categories of ownership in Kumbukgollewa 1974.

Owning category	Acres	Number of households	%
I	0	15	35
II	0.1- 1	2	
III	1.1- 2	2	19
IV	2.1- 3	4	
V	3.1- 5	2	42
VI	5.1-10	16	
VII	10.1-25	-	
VIII	25.1-50	1	4
IX	50.1-W	1	
		43	100



Table 31. Total possession of chena land including illicit cultivation according to categories of ownership in Kumbukollewa 1974.

Owning category	Acres	Number of households	%
I	0	12	28
II	0.1- 1	11	
III	1.1- 2	11	
IV	2.1- 3	4	62
V	3.1- 5	4	
VI	5.1-10	1	
VII	10.1-25	-	
VIII	25.1-50	-	-
IX	50.0-W	-	
		43	100

From these figures it is possible to distinguish four economic groups:

- A) Big landowners. (More than 10 acres)
- B) Middle-class farmers. (3.1-10 acres)
- C) Small farmers (0.1-3 acres)
- D) Landless.

It is possible to relate the value of paddy land to cash equivalents, which might give a new base for comparison. A farmer who wants to acquire paddy land (mada idam) has to claim permission from the D.R.O. (District Revenue Officer) office and for each acre he has to pay 1 500 RS. cash, which is roughly the annual income of an unskilled labourer.

#### The big landowners

Three mudalalis (Sinhalese merchants) came to Kumbukollewa and married local girls in the early fifties. None of them was very prosperous at that time and the other families in the village had enough land to cultivate. The three mudalali families worked hard clearing large plots in the jungle for chena cultivation. As they already had more money than the other villagers normally possessed, they

hired labour to assist them. During the first year they cultivated chena on one plot, and during the next year on a nearby plot. During the third year they pulled out all the roots from the two chena plots and cleared the land for paddy cultivation. They also hired labour to assist them in paddy cultivation on what was previously goda idam (chena or high land) but is now turned into mada idam (paddy land). After a few years they had accumulated a large sum of money which they began to lend out extensively to families who had fallen on to temporary hard times. They had also bought three tractors, which they hired out when they had no immediate use for them on their own fields. When the debtors could not pay back their loans in time, they had to give some of their land instead. By giving away their land piece by piece they decreased their chances of cultivating enough crops for their families and had to start working as casual labourers.

In this way the three mudalali families increased their wealth at a fast rate, while other families trying to do the same could only slowly improve their situation. For the majority in Kumbukgollewa, there was no improvement at all.

By and large, it can be said that the big landowners possess the land with the easiest access to irrigation water and which primarily is of first or second quality. They grow cash crops and obtain agricultural supplies from merchants outside the village. The three mudalali (merchant) families hold the economic and social key positions in the village, and they also maintain most of the personal contacts with government officials outside the village.

Their houses are considerably better than the other dwellings in Kumbukgollewa. Their children are also privileged, as most of them have enjoyed both primary and secondary education.

The facts concerning the economic development of the three mudalali families have been confirmed by cross-checking with a number of farmers at the end of the interview pro-

gramme in the village in April 1974. To-day only two of the mudalali families have a major cultivation programme, while the third mudalali has turned exclusively to business.

### The middle-class farmers

This group is the least interesting group, when general conditions of the village economy are considered. They do not take advantage of cheap labour and their situation is not problematic. They manage to eke out a living.

The middle-class farmers constitute the biggest economic group in Kumbukgollewa if the amount of paddy land they own is considered.

The production of the middle-class farming family is partly commercialized and partly subsistence. It is normally possible for the middle-class farmer to produce a surplus that can be sold on the external market. Paddy is the dominant cash crop for this group. It is also used as a means of payment. When a middle-class farmer goes to the nearest town or external market to buy something he takes rice (hal) with him. He uses it to trade with a few merchants (mudalalis) that he knows, and the payment is made with rice, not money, although formally he is obliged to sell his rice to the state cooperative.

To get their paddy land tilled efficiently, the middle-class farmers hire the tractors from the three mudalali families. For each acre they pay 125 to 150 RS and for that sum the plot is worked three times. The hire is normally paid for with rice, not cash.

Their houses are of fair quality and the middle-class farming families often possess some capital goods such as transistors, bicycles, wrist watches and pressure lamps. Their children pass through primary education with almost no exception and occasionally secondary education too.

### Small farmers

The economic life of the small farmers is quite hazardous, as they have generally no security in firm means except for their land. The small farmer in Kumbukgollewa does not produce any important surplus of paddy, but combines paddy cultivation with chena and occasional casual labouring for the more well-to-do families. In many cases the limited size of the small farmer's plot is the result of old repaid loans that he has taken in times of hardship or in order to pay dowries for his daughters.

This group is very exposed to economic fluctuations that affect wages and prices of important goods such as food-stuffs, clothes and tools. A dramatic increase in the price of necessary goods hits the small farmer and his family very hard.

Usually the small farmers have to work as casual labourers during the Maha season to earn money when they should be working with their own paddy fields. They try to solve this problem by hiring a tractor but on different terms than the middle-class farmers. The small farmers often have to borrow the seeds for sowing, that is normally one twelfth of the yield per surface unit, as it has not been possible for them to save this share from the last harvest. This has been more or less a general rule for the last five years.

The family hiring out the tractor (one of the three mudalali families) also provides the small farmer with seeding. When the yield is harvested, a share equivalent to what has been given as seeding is separated and handed over to the mudalali who hired out the tractor. The rest of the crop is then divided into two shares of equal size and the mudalali takes one of these. This means that a small farmer in this situation has to give away about 60 % of his paddy yield.

It is also common that small farmers have to let their paddy land lie fallow if they cannot borrow the necessary seeding, which normally leads to the loss of their legal rights to the land after a time.

As the economic position of the small farmer is generally determined by the labour capacity of his family (i.e. the relative number of persons able to work compared with the number of mouths to feed), the economically most vulnerable family seems to be the one with many children in unproductive ages. With many dependants a small farmer family has been found to be economically very vulnerable in Kumbukgollewa, as they could not maintain a fair subsistence level within the agricultural production sector.

### The landless

Those who own no paddy land are considered as the landless in this context. This group consists of 35 % of the households of Kumbukgollewa and, being the most neglected group, they live under the poorest and economically most insecure conditions. However, it was not possible to prove this in all cases. It seems reasonable to assume that most of these households have had some paddy land, but for various reasons they have lost it. During the interviews, the landless declared their monthly family income to range from 40 to 150 RS; some households declared no regular income at all.

The landless work as day labourers when jobs are available and they are hired from day to day. They make up the real proletariat in the village with the lowest social and economic position and no guarantee for the future. The only resource of the landless is their labour force and they lack any surplus goods or capital to live on if they fall ill and are unable to work. In that case they have to rely on the charity of other families.

The only security, though meagre, to be found among the landless was some chena cultivation. The average size of these chena plots is between 1 and 2 acres, and they are worked and looked after when there is no casual labour available. Chena cultivation is restricted to a few months of the year because of climatic reasons and for long periods the landless are forced to be idle. Most of their work is done on the paddy fields of the three mudalali (merchant) families or

the middle-class farmers, and they are thus integrated into the commercialized agricultural sector. The salary for a casual labourer in Kumbukgollewa was 5 RS/day plus one meal or 6 RS/day in 1974.

The landless are highly vulnerable to price increases of indispensable foodstuffs, but also of other important goods such as tools and clothes. For nearly two decades the landless have been exposed to a general inflation with a price increase for basic foodstuffs and other goods at a much faster rate than the wages for agricultural labourers have increased. In November and December 1973 the rice price (except for the subsidized share at the cooperative) increased by 300 % (Cole, 1976). For the rank-and-file Sinhalese family, rice is a completely indispensable food item, as it makes up the bulk of their food. (Poleman et al., 1973).

Simultaneously with the price increase of rice, the free rice ration was cut from 2 lbs to 1 lb a week. For a full day's work a casual labourer in Kumbukgollewa could not buy even 1 lb of rice in December, as his salary was 5 RS and the cost of 1 lb of rice was 5:50 RS at the market. At the beginning of 1974 the situation of the landless agricultural labourers became desperate, and it seems logical to conclude that one major reason for this was their vulnerability caused by their complete integration into external markets and economies. For them the commercialization of agriculture was of no benefit.

The landless in Kumbukgollewa are in general facing a variety of problems: Malnutrition, conditions of bad health, very bad housing conditions and the lack of most necessary goods. As a rule their children do not attend school more than sporadically for one or two years. After that they have to help their parents and free them for more productive work. The landless have no prospects of ever being able to buy any paddy land, as one acre costs 1 500 RS (1975), a sum of money out of their reach.

11.5 External contacts. Economic and public

In Kumbukgollewa there are five major types of contacts between the villagers and the outside world. They are of both economic and public nature and will be called external contacts as a common concept.

- 1) Money lenders and pawnbrokers. In the case of people having to borrow money and not doing so in the village from the mudalalis, they turn to pawnbrokers in towns. Gold, bicycles and other capital goods are given as security. Previously it was more common to borrow from unauthorized money lenders, but that habit has been replaced by a system of pawnbrokers who are more easy to control by the government.
- 2) Mudalalis (traditional merchants). To purchase vegetables, mudalalis from Kahatagasdigiliya and other places in the vicinity enter the village occasionally. Sometimes pedlars come to the village to sell pots, pans, hair needles and other small goods. It is also common that the villagers have regular contacts with mudalalis in the nearest market or town, with whom they trade, both buying and selling.
- 3) Grama Sevake. The government-appointed Grama Sevake of Kumbukgollewa is of a higher caste than the villagers and lives in Kokebe, a bigger place close to the village. The purpose of his normal contacts with Kumbukgollewa is to collect household records with information about living conditions, incomes, health conditions, etc. These records are controlled by the D.R.O. and then returned to the households.

These records then entitle the household members to acquire ration books with which they can buy certain items and foodstuffs at subsidized prices at a cooperative. One pound of rice (previous to October 1973 it was two pounds) is also given free

every week to a grown-up holder of a ration book. There is also a Farmers Board, which, after contacts through Grama Sevake, may make judicial decisions about land divisions, water distribution for irrigation and other matters. A loan can be granted for those who are trusted and have security through the Cooperative Board of a bank through Grama Sevake.

- 4) Cooperative. All villagers have contacts with the nearest state cooperative as they get their free ration of rice from this place. They can also buy a number of items at subsidized prices and, if trusted, arrange loans through the cooperative.
- 5) District Revenue Officer (D.R.O.) and Government Agent (G.A.):
  - a) Taxation or loan application. In economic matters the villagers have contacts either through the Grama Sevaka or directly with the D.R.O. office.
  - b) Registration of marriages.
  - c) Registration of births.
  - d) Registration of deaths.
  - e) Registration of land transactions. Purchase of land, division of land or inheritance of land has to be registered at the D.R.O. office.
  - f) Obtaining and renewing gun licences.
  - g) Land disputes and other controversies are often settled at the G.A. office if not taken to court.

There are also frequent contacts between the Sarvodaya movement and Kumbukgollewa, which will be described more extensively in part 10.8. For the time being there is no major development undertaking of government schemes, but it was reported that the villagers received help to repair the village tank a number of years ago. Another type of external contact concerns politics, as the villagers can normally take part in general elections every five years.



The people of Kumbukgollewa, like people from other traditional villages of Sri Lanka, take little interest in politics and support only two of the four major Sinhalese parties. The knowledge about what the different parties stand for is scanty.

About 75 % support the Sri Lanka Freedom Party, S.L.F.P, which has at present (1977) the majority in Parliament. Its orientation is social democratic. The rest of the villagers support the United Nationalist Party, U.N.P., which is the major opposition party. U.N.P. is a moderately conservative party with a western-oriented leadership.

The children in the village get some contact with the outside world as there is a government primary school in Kumbukgollewa with one teacher.

#### 11.6 Innovations

Except for the tractors very little in Kumbukgollewa has changed. This is also true of daily habits. People normally live in huts or simple houses, store their paddy in small traditional clay silos, wear traditional clothes, cook food on open fires, use traditional tools and employ their feet for transportation. A number of innovations have been introduced, though, not generally widespread, during the last three decades:

- A) The village school. As late as 1964 a school was started in the village and illiteracy is still high among those over 20 years of age.
- B) Bus connection. The nearest bus connection is in the village Kokebe, a few miles away from Kumbukgollewa.
- C) Tractor. The first tractor came to the village in 1955 and now there are three of them.
- D) Fertilizer. In 1965 fertilizer was introduced in the village, but was not used widely. After the increase of oil prices in 1973, its use was even more limited.

- E) Radio. The first dry battery radio was introduced to the village in 1955 and in 1974 there were radios in 10 households.
- F) Newspaper. There is no regular circulation of newspapers in the village, but they appear at infrequent intervals.
- G) Village shop. For many years there have been one or two simple village shops in Kumbukgollewa, but nobody could say for how long.
- H) DDT. From the end of the 1940's all the houses and huts have been sprayed with DDT once or twice every other year. The result has been the total eradication of malaria and a decrease of the death rate.

These innovations have changed life in Kumbukgollewa to various degrees. The influence of the tractors on the social and economic development in the village has been comprehensive. To some they have been a benefit, but they have also been to the disadvantage of many. The village school has been a great asset to most of the children, except those from the poorest families, who have only sporadically attended lessons.

It is also important to observe the innovations which have not spread to Kumbukgollewa. There is neither a postal service in the village nor any regular medical service. The village lacks a dispensary and the villagers suffer from various diseases without receiving any treatment other than that given by the Vedamahatmiya (traditional ayurvedic medicine man). Fashion has not changed, as hardly any western clothes such as nylon shirts have been bought. No long trousers are to be seen, but schoolboys and some younger men wear shorts. The traditional clothes seem to be the most practical for both work and leisure for the villagers.

Food habits have not changed except for the infrequent consumption of white bread among some families. There is

reason to believe, though, that the variety of cultivated food items has been reduced among the bulk of the population as a result of the commercialization and cash crop orientation of agriculture in Kumbukollewa.

11.7 General problems of the village as understood by the villagers

The general situation for Kumbukollewa is precarious and the villagers are quite aware of the complex of problems they are facing. The seven problems most often stated, ranked after a given priority, are:

- A) Insufficient rains create severe problems for cultivation. This has been especially true for the last few years.
- B) Wild animals are destroying much of the crops.
- C) The irrigation system is insufficient.
- D) Bad health conditions. Due to lack of proper drinking water, the villagers are forced to consume contaminated water from which they succumb to various diseases.
- E) A biased system of land ownership.
- F) Lack of food for many families.  
Malnutrition is general and even undernourishment prevails. For several years it has only been possible to take one crop each year.
- G) Bad road connections.

All the interviewed villagers in Kumbukollewa were asked to answer what they considered the most severe problem for the village. Farmers with small plots living under fairly bad conditions as a rule answered that the worst problem is the repeated failure of the crops due to insufficient rains during the last few years, which has cut their incomes to about one third of the normal. Many landless claimed that for many families it was now impossible to eke out a living at all.

Those who are more well off were more concerned about the transport facilities and stated that the bad road was the main problem for the village. (For the well-to-do families it is important to transport efficiently purchased goods in to the village and crops for sale out from the village).

It seems as if the villagers are aware of their major problems, but there are also a few other things that should be noted. In general the condition of the dwellings is bad which results in bad hygienic conditions. Much of the nutritional value also seems to be lost because of the careless treatment and storage of food. On the other hand, it should be observed that nearly everybody eats a kind of vegetable which consists of chopped leaves from a plant named Gotukola . This vegetable has a high content of calcium, iron, vitamin A and to some extent also protein. Betel chewing is also widespread and this habit provides the consumer with a good portion of vitamin A. (Poleman et al., 1973). Without these extra nutritive substances, the malnutrition would probably be even worse among many families.

#### 11.8 Sarvodaya in Kumbukgollewa

##### 11.8.1 Services rendered through Sarvodaya

From 1969/70 Kumbukgolléwa has been attached to the Sarvodaya movement and an extensive effort has been made to achieve some development in the village, but the effects of development have been rather limited , especially among the most neglected groups such as the landless and the small farmers. In the earliest phase the movement in consultation with the villagers formed functional groups as voluntary organizations:

##### Voluntary Organizations in the village:

1. Cultivation Committee
2. Mahila Samithiya (Womens group)
3. Sarvodaya Mothers Group
4. Sarvodaya Childrens Group

5. Sarvodaya Farmers Group
6. Sarvodaya Youth Group

Through shramadana camps and other actions various types of assistance have been given to Kumbukgollewa, all aiming at improving general conditions:

Services so far rendered through Sarvodaya

1. Linking Kumbukgollewa with the village Meerhout in Belgium.
2. Cutting a road and reconstructing a tank through Shramadana.
3. Inaugurating Childrens, Mothers and Farmers Groups.
4. Erecting a 80' x 20' building. (Sarv. centre).
5. Starting the reconstruction of an abandoned tank and inaugurating a Community Farm.
6. Presentation of agricultural implements.
7. Inaugurating a Children's Library and supplying it with books and materials.
8. Presentation of a sewing machine.
9. Work in the village being conducted under the guidance of a Sarvodaya full-time worker.
10. Inauguration of a Community Kitchen (for children).

For the nearest future it is also proposed to extend and maintain a farming project already started and to build up a tank fund and prepare new paddy fields.

11.8.2 Development situation

In Kumbukgollewa the situation in general is bad. Only few families have economic security while the rest of the people are exposed to various difficulties.

Drought has struck the village the last few years and

especially those who have to rely on rainwater for much of their cultivation have been badly hit. The irrigation system has been found to be insufficient, as parts of the paddy land (mada idam) have had to lie fallow since 1973 due to no irrigation water being available. Drinking water facilities are insufficient as there is only one public well with water of inferior quality. To what extent bad health conditions among the population can be explained by this fact was impossible to ascertain during this research programme.

As paddy land is very unequally distributed, and most families are integrated in a commercialized agricultural production, either as self-reliant peasants or as casual labourers, all depend on the external markets and general price fluctuations of purchased or sold commodities. Insufficient irrigation facilities, such as the decay of one tank and the inability to restore a second one, limit the paddy output for the village. There is also reason to believe that general improvements of the irrigation in Kumbukgollewa would primarily benefit those already favoured and not the most neglected groups.

#### 11.9 Analysis of primary data

The agrosystem of Kumbukgollewa is of the typical traditional Dry Zone type, and at the beginning of the final interpretation of the composite matrix, it was expected that the results would resemble those of Bundala rather than Pelawatte. Kumbukgollewa is a nucleated tank settlement with paddy cultivation as the main economic undertaking and for the supply of paddy the villagers depend completely on the amount of water in the tank. There is no garden cultivation in Kumbukgollewa, except for one household, but the chena cultivation is fairly widespread.

##### 11.9.1 Total amount of cultivated land and age structure

As with Bundala, climatological factors limit the extent of perennial crop production, but the normal figure for precipitation in Kumbukgollewa is considerably higher, which is

why the variety of crops is also bigger. In Kumbukgollewa there is normally a twofold cultivation of chena and irrigated paddy. The cultivation period is truncated, however, as there is a long annual period of drought.

Finger millet (kurakkan), maize, pumpkins and manioc are common crops on the chena land, which amounts to 70 acres. These crops complement the paddy and cultivated crops for a majority of the households cultivate chena.

The total figure for paddy land amounts to 270 1/2 acres, and with one crop per annum the normal yield is estimated to be nearly 250 000 kg, which is about 1 017 kg/capita for the 246 inhabitants. With an estimated daily average share of 1/2 kg/capita the total requirements for Kumbukgollewa would amount to about 45 000 kg for a year to cover subsistence. It seems as if the local paddy production is capable of providing a good surplus. It is also true that the production in Kumbukgollewa is cash crop oriented with paddy as the main cash crop. For this reason, much of the paddy is sold, even in larger quantities than would be sufficient to support the village with its annual subsistence need. The answer to this was given after the household specific interpretation of the composite matrix. The proportion of people of productive age was lowest in Kumbukgollewa compared with the other villages: 51% adults, 2% aged and 47% infants. Nevertheless the labour capacity must be considered as good, with the exception of health conditions in a number of cases. (Paddy yield figures refers to unhusked rice).

#### 11.9.2 Analysis of economic resistance ability for individual households

If the figures for normal total paddy yields are considered, it seems as if there would be no severe food problems, even if the yields should be affected by partial drought and crop failures that cut the normal output by up to 50% occurred. It is also true that during the last few years precipitation has been less than normal in Kumbukgollewa.

Table 32

Cross-classification of households in Kumbukgollewa according to economic groups and their ability of maintainance and economic resistance. (For explanation of categories see page 154 and 155 ).

Economic Resistance Ability \ FARMER CATEGORY	I	II	III	IV	$\Sigma$	
1	17	-	11	-	28	able households
2	-	-	4	-	4	occasionally exposed households
3	-	-	-	14	14	vulnerable or unable households
$\Sigma$	17	-	15	14	46	

Not unexpectedly it was found that the table resembles the one for Bundala considerably. Only two households were classified as improductive and they are to be found in square 3/IV. A big difference is that no less than 39% of the productive households are classified as able surplus households in Kumbukgollewa, while in Bundala most of the able households belonged to the able subsistence category. The reason for this is probably that the climatic conditions are more favourable for a differentiated agricultural production in Kumbokgollewa than in Bundala. Another very striking difference is that while Bundala is a deficit community according to the output/input ratio of cultivated crops, Kumbukgollewa is a surplus community as more food crops are transported out of the village than into it. Yet as many as 30% of the households in Kumbukgollewa, slightly less than in Bundala, belong to the category vulnerable or unable households.



From the information collected about Kumbukgollewa it is possible to conclude that the resources are very unevenly distributed and even if the cultivated land was redistributed the village would still be able to sell a good surplus to external markets. There is also one more (abandoned) tank that belongs to the village, and if that were repaired the present production could be increased considerably which would safeguard the future for the villagers.

12 UDAKIRUWA VILLAGE, BADULLA DISTRICT

12.1 Population and a few geographical particulars

12.1.1 Some geographical particulars

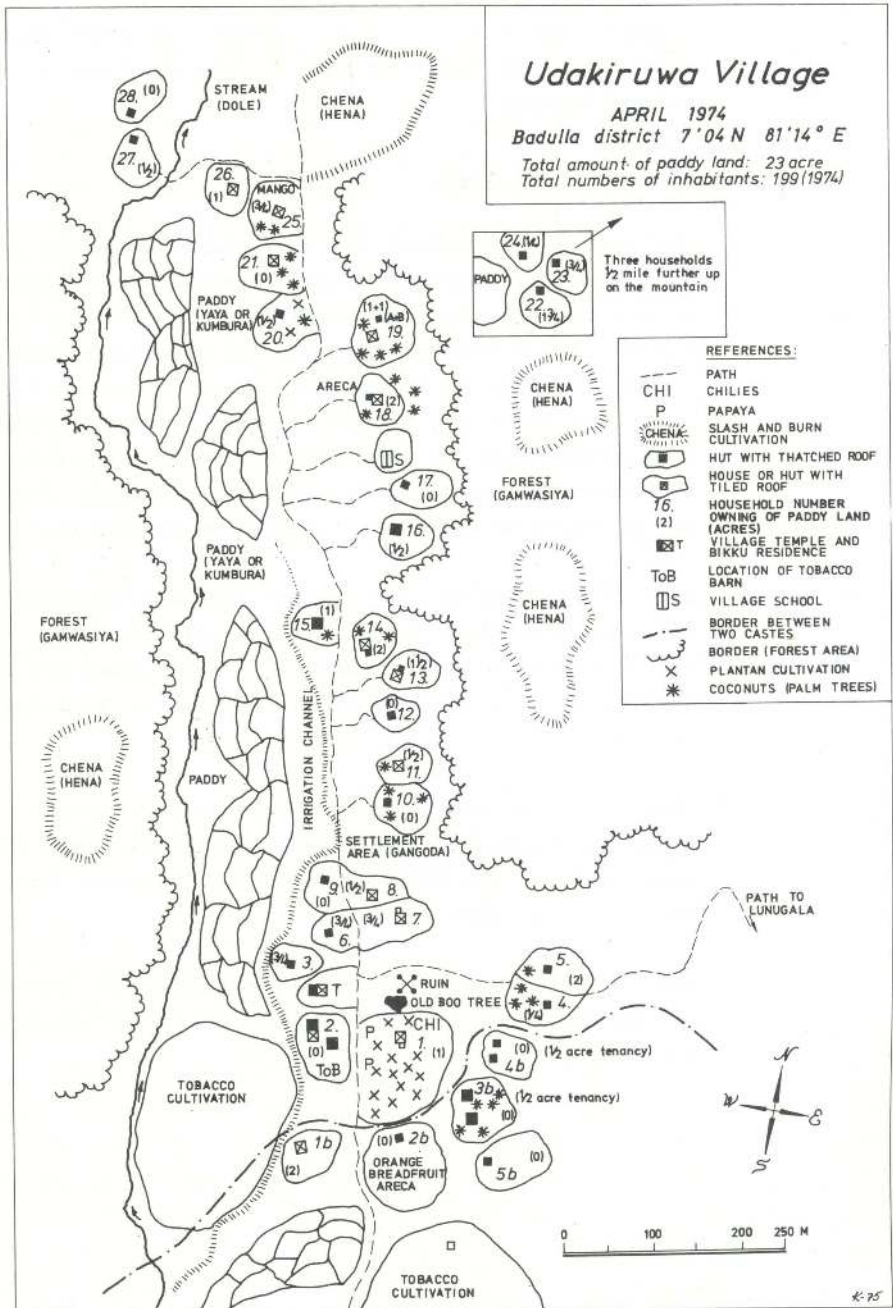
Udakiruwa village is located at 7' 04<sup>o</sup> north and 81' 14<sup>o</sup> east, about 7 to 8 miles from the nearest motorable road. To reach this road it is necessary to climb a 1 000 m high mountain through the forest, get down to the western side, and pass some tea plantations. By the road it is very close to Lunugale, which is the nearest central place. Udakiruwa belongs to Passara D.R.O. Division, which lies in Badulla district.

Although this place is located in an area, that due to formal climatological criteria belongs to the Intermediate or Dry Zone, it is not correct to call Udakiruwa a Dry Zone village. If the settlement pattern is classified according to the disposition on page 84, Udakiruwa belongs to the Wet Zone agglomerated rural settlement type. The production system is of the same kind as in many of the Wet Zone traditional up-country villages.

The total extent of the village is about 970 ha, which includes garden, swidden, paddy and settlement land. Forest grows on the hillsides and surrounds the cultivated land. The huts and houses are located elliptically along the paddy fields and a stream that flows down a valley.

There are 12 households out of 33 with tiled roofs. The standard of the dwellings is slightly better than in the other three villages, although repairs are necessary for many of them. There are no wells in the village, but the water from the stream is considered to be of good quality, although no contamination tests have been made. The soils of the area consist of reddish brown earths and immature brown loams, and it is suitable for the cultivation of both perennial and annual crops. There is no tank irrigation in the village, as there is enough precipitation, 2 000-2 500 mm, spread evenly throughout the year.

Figure 25 Udakiruwa village. Sri Lanka



Both annual and perennial crops compete for space, but the most organized crop cultivated in Udakiruwa as a cash crop is tobacco, which is an annual crop here. Chena is practised by the majority of the farmers, but the primary vegetation has not been destroyed to the same extent as in Panapola Pelawatte.

#### 12.1.2 Population

The village consists of the two groups Goḻiagama and Wahanpura, who live apart from each other. The Wahanpura part of the village continues outside Udakiruwa and for this survey only a smaller group of the Wahanpura side is included. The two parts will be called Udakiruwa I (Goḻiagama) and Udakiruwa II (Wahanpura). (In the following, both groups will be presented, but when Udakiruwa II is included the figures will be within brackets. Figures without brackets show only the Goḻiagama proportion).

Both groups live by cultivation and jaggary making, which has been practised in Udakiruwa I only recently. Social and economic contacts between the two castes are still very limited and there is a distinct social split between the two parts.

There is no intermarriage between the two groups. In most cases marriages are endogamous within the same caste. In some families the bridegroom (or his parents) has found his bride in a closeby village.

The age structure of Udakiruwa is unlike the other villages in the sense that the proportion of children is comparatively the highest of the four.

Table 33 Age structure in Udakiruwa 1974

Age groups	S e x			%
	Male	Female	Both sexes	
0- 4	17 (18)	16 (19)	33 (37)	
5- 9	14 (16)	9 (11)	23 (27)	(42.5)
10-14	8 ( 9)	11 (12)	19 (21)	
-----				
15-19	5 ( 6)	14 (17)	19 (23)	
20-24	10 (11)	9 (10)	19 (21)	
25-29	4 ( 5)	6 ( 9)	10 (14)	
30-34	6 ( 9)	3	9 (12)	
35-39	5	4	9	(53.5)
40-44	3	2	5	
45-49	2	3	5	
50-54	2	5 ( 6)	7 ( 8)	
55-59	1 ( 2)	1	2 ( 3)	
60-64	5 ( 6)	1	6 ( 7)	
-----				
65-69	1	3	4	
70-w	3	1	4	( 4)
M 86 (98) F 88 (102) 174 (200)				(100)

Figures within brackets show the total number when the people from Udakiruwa II are included.

As for the other three villages there is a clear over-representation of some of the five-year groups, which can be seen in the age pyramid for Udakiruwa.

## 12.2 History of the village

As with the other villages surveyed, no written sources telling the history of the village are available. The probable founder of the village was traced as being the ancestor of an older man still living in the village. (Hh 18). According to him his grandfather came to the present site about 1820 after a dispute with his superior landowner.

He brought his family and a number of buffaloes. Shortly after this episode another four families joined him and settled there, all of them belonging to the Goyiagama (cultivator) caste.

From early times, Udakiruwa has been separated into two parts on the basis of different castes, one part consisting of the Goyiagama caste and the other of the Wahanpura (jaggary maker) caste. The Wahanpura men were blacksmiths in the old days but they also produced jaggary for the king. It is not known which of the groups settled first.

From the earliest days marriages have been endogameous, or brides or bridegrooms have been found in close by villages. Between the two castes there has been no intermarriage, however. The nearest central place, Lunugala, was founded at the end of the 19th century when the nearest road was constructed.

### 12.3 Production

The production in Udakiruwa is dominated by two crops: paddy and tobacco. Paddy is the dominant subsistence crop, but it is also cultivated for sale on the external market to a limited extent. Paddy is cultivated both as a rainfed and irrigated crop. Tobacco is basically cultivated as a rainfed cash crop.

Other important annual crops are sorghum, maize and finger millet (kurrkkan). Of the perennial crops arecanut, coconut, jakfruit, pepper, plantains and various fruits are important.

Udakiruwa is the most inaccessibly located village out of the four. It takes roughly 7 hours to make a return visit to the nearest cooperative in Lunugala by foot. To get there it is necessary to climb the mountain of 1 000 m, and no track, even for carts, has been constructed. It is assumed that the high degree of self-sufficiency within

agriculture is greatly due to the inaccessibility of the village. All items for sale and all goods that have been bought outside the village have to be carried, which demands much efforts. It is significant for this reason that the major cash crop, tobacco, is a comparatively light item.

There is no organized retail trade in the village, not even a tearoom. Each family is responsible for their own trade, but the lack of retail trade might also be explained by the fact that the economy of most families is highly subsistence oriented, which is why it probably would be difficult to find a living as a retail tradesman among the relatively few families in Udakiruwa. Furniture, many tools and even ploughs for paddy cultivation are made in the village.

The Kayye system still remains, and people work the paddy fields in groups.

The caste division is important for the production, though. The man who has started the tobacco cultivation uses the Wahapura people as paid labour. They were paid 4 RS a day, in late 1975, which then was about 50 to 60% less than the average agricultural labourer's wage in the country. In late 1975 a number of youngsters, aged between 13 and 17 years, had been brought into the village by the tobacco cultivator. This group was paid only 2 or 2:50 RS a day but recieved food and a place (not bed) to sleep on.

The majority of the Udakiruwa people, the Goyiagama group, have no connection with the tobacco cultivator, but they reported that they strongly disliked the man and hoped to get rid of him. It was difficult for these people to ask the tobacco cultivator to leave the village, though, as he had established contacts with outside people who have contacts with the authorities.

12.4 Economic groups and economic structure of the village

As with Panapola Pelawatte, it is not possible to distinguish any distinct social groups. All households reported land possession of some kind of land and only very few people have too little land to maintain themselves.

In recent years the Goyiagama families have also started to produce j a g g a r y from the K i t u l palm tree. Before the tobacco cultivator settled in Udakiruwa the means of livelihood for the Goyiagama and Wahanpura groups resembled each other strongly, but there was no K a y y e relationship between the two castes.

Today many of the Wahanpura people are engaged as hired labour on the tobacco cultivations or at the tobacco barn. More than the five Wahanpura households surveyed in this book are involved as hired labour by the tobacco cultivator, and they come from the neighbourhood. If the tobacco cultivation expands, a more permanent group of Wahanpura casual labourers not cultivating their own land will probably spring up, and the village will be separated not only into two caste groups but also into two economic groups. The survey of land possession showed, however, that the distribution of land is still fairly even.



Table 34 Total possession of paddy land including illicit cultivation according to categories of ownership in Udakiruwa 1974.

Owning category	Acres	Number of households	%
I	0	7 (11)	(33)
-----			
II	0.1- 1	16	
III	1.1- 2	5 ( 6)	(67)
IV	2.1- 3	-	
-----			
V	3.1- 5	-	(-)
VI	5.1-10	-	
-----			
VII	10.1-25	-	
VIII	25.1-50	-	(-)
IX	50.1-w		
		28 (33)	(100)

Figures within brackets show the actual figures when the people from Udakiruwa II are included.

All the 33 households can be classified as productive, if the age structure is considered, but in two households the fairly young household headman were found to be slightly mentally incapable which reduced their labour capacity.

One more household was classified as a problem household as it seemed as if the household headman and his wife (Hh 28) had difficulty earning a living for their children. The rest of the households without paddy land had either concentrated their efforts on chena or both garden and chena cultivation. In some cases paddy land was worked jointly with parents.

The perennial crops and the tobacco cultivations in Udakiruwa are on garden land and are cultivated by nearly 60% of the households in the village.

Table 35 Total possession of garden land including illicit cultivation according to categories of ownership in Udakiruwa 1974.

Owning category	Acres	Number of households	%
I	0	13 (14)	(42.5)
II	0.1- 1	4 (6)	
III	1.1- 2	9 (11)	(51.5)
IV	2.1- 3	-	
V	3.1- 5	1	( 3 )
VI	5.1-10	-	
VII	10.1-25	1	( 3 )
VIII	25.1-50	-	
IX	50.1-w	-	
		28 (33)	(100)

Figures within brackets show the actual figures when the people from Udakiruwa II are included.

It is on the garden land adjoining the house that most of the selfgenerating crops of the village such as jakfruits, plantains, coconuts and papaya grow. They need little input of labour and capital annually and it is surprising that as many as 42.5% of the households do not practise garden cultivation, but they practise chena cultivation instead of chena and paddy cultivation.

In 1974 the tobacco cultivation consisted of 21 acres, classified as garden land. The tobacco cultivator also owned paddy land, which was cultivated intensively by transplanting the paddy germs, but the kumbura (paddy land) was not in Udakiruwa. Another household cultivated 4 acres of garden, but no chena.

The variety of garden crops are not as big as in Panapola Pelawatte, which must be explained by a less favourable agro-

climate and more limited supply of rainwater.

The soil and climatic conditions are favourable for c h e n a cultivation though, which engaged 26 of the 33 households if the sharing system is included.

Table 36 H e n(a) or C h e n a cultivation. Total possession of land including illicit cultivation according to categories of ownership.

Owning category	Acres	Number of households	%
I	0	9 (10)	(31)
II	0.1- 1	5 ( 6)	
III	1.1- 2	8 ( 9)	(63)
IV	2.1- 3	4 ( 5)	
V	3.1- 5	2	
VI	5.1-10	-	(3)
VII	10.1-25	1	
VIII	25.1-50	-	(3)
IX	50.1-w	-	
		(33)	(100)

Figures within brackets show the actual figures when the people from Udakiruwa II are included.

Chena cultivation is a fairly safe and important complementary cultivation in Udakiruwa. Dry paddy, sorghum, maize and finger millet are the most important chena crops, but they are fairly demanding as repeated weeding and more or less permanent night watching is required. Households with more than three adults are more suitable for practising c h e n a cultivation because of better labour capacity.

There is no pressure on cultivable land, but still only 9 out of the 33 households practise paddy, garden and chena cultivation at once. In Panapola Pelawatte 21 of 31 productive households practise all three cultivation systems at once.

#### 12.5 External contacts. Economic and public

As with Panapola Pelawatte, Udakiruwa is located in an area that has drawn no major attention to itself from the outside world. Udakiruwa has for this reason no major network of external contacts.

The nearest external market is located in Lunugale 7 miles away, but as the production, except for the tobacco cultivations, is highly subsistence oriented, the economic contacts with Lunugale are of minor importance.

Naturally, as for other villagers in Sri Lanka, the people from Udakiruwa use their ration books to get their weekly free share of rice and to buy an additional amount of rice or other items at subsidized prices.

Other reasons for external contacts are matters for registration. Like in other traditional villages registrations of births, marriages, and deaths are done by the villagers at the D.R.O. Office, but as the Udakiruwa people have to go all the way to the nearest office in Passara 20 miles away to do it properly, these matters are often neglected. Registration of land transactions, renewals of gun licenses and settling land disputes are often considered as more important.

Hardly any money lenders, pawn brokers or pedlars have any contact with the village, mainly because of its inaccessible location.

The relative isolation of the village also prevents people from the general practice of modern health facilities, as it is necessary to be in good condition to reach the nearest

hospital. Udakiruwa has the least regular contacts or links with the outside of the four villages.

## 12.6 Innovations

Because of its isolation, relatively few innovations have found their way to the village or have been generally accepted. Innovations can be classified in four groups according to their relative importance for the social and economic life for Udakiruwa:

- 1) Cooperative. It is not known when the cooperative in Lunugala was started but it is of great importance for most of the households of the village because of the free rice and other subsidized goods.

School. The present government school in the village was started in 1953, but the land was donated in 1949 and construction was begun already in 1950. Before the government school, a B i k k u, Buddhist priest, was responsible for education. In Weragoda, a close-by village a school was started already in 1937.

- 2) Post Office. In Lunugala, 7 miles away, a post office was opened already between 1880 and 1890 but at that time everybody in Udakiruwa was illiterate.

- 3) Radio. The first radio appeared in the village 1968 or 1969, but very few families listen regularly.

Fertilizers. The introduction of fertilizers took place about 1960, but the use of it is practised by very few today, especially since the price increases in 1973/74.

- 4) Communications. A road between Bibile and Badulle passing through Lunugala was already opened in 1881, but has had no major importance for the villagers of Udakiruwa so far. A bus service started on this road about 1935.

Modern medicines. Are not in general practise.

Contacts with the modern world have had very little effects on the life of Udakiruwa so far, except for the introduction of tobacco cultivation. As long as there is no road connection to Udakiruwa, the village will change very little.

12.7 General problems of the village as understood by the villagers

With Panapola Pelawatte it was assumed that because of the subsistence orientation within agriculture, the villagers were safeguarded from the general economic problems of Sri Lanka. This is also true for Udakiruwa to a large extent, but occasionally the farming is jeopardized by accidental droughts. The major problems as understood by the villagers do not indicate any severe problems in supporting themselves with the basic requirements, however. The problems are reported according to the frequency and relative priority they were given to them by the villagers.

- a) Transport problems. The villagers have to walk 7 miles through the jungle and over a high mountain to reach the nearest road and market.
- b) Wild animals damage much of the crops.
- c) Insufficient health facilities.
- d) Inadequate education.
- e) Soil erosion and in a few cases insufficient cultivation prerequisites.

It was interesting to find that the bad communication facilities were found to be the most severe problem for the villagers of Udakiruwa. That at least supports the assumption of an increased interest among a majority of the villagers to increase and strengthen contacts with the outside world.

12.8 Sarvodaya in Udakiruwa

12.8.1 Services rendered through Sarvodaya

Udakiruwa has been linked to Sarvodaya since about 1970/71. The major efforts of the movement has been concentrated to the construction of a combined community hall and temple. The biggest problem, as understood by the villagers, is the absence of good communication facilities to the village, a problem that is both difficult and costly to remedy. As with the other three villages, there are voluntary organizations in Udakiruwa: Voluntary Organizations in the village:

- 1) Udakiruwa Shramadana Movement
- 2) Rural Development Society
- 3) Viraparakum Community Centre
- 4) Jayabima Youth Movement

Cooperation with Sarvodaya has so far, except for the temple construction, been mostly of the organizational type, probably because it has been found that there are no urgent general problems with food in the village. The services so far rendered by Sarvodaya are:

- a) Granting aid to build a hall at the village temple.
- b) Maintaining a Children's Group.
- c) Maintaining a Children's Library and supplying of books and furniture.
- d) Inaugurating a Youth Group.
- e) Planting seedlings through Shramadana and participating in outside Shramadana camps.

Proposed work:

- a) Inauguration of a Community Farm.
- b) Cutting a road through Shramadana.
- c) Inaugurating a Community Kitchen.

Source: Official records from the Sarvodaya movement.

In late 1975 none of the proposed works had been organized since the survey in 1974. The reason for this is probably that the Sarvodaya movement had to direct their efforts to other areas where conditions have deteriorated seriously during the last few years. The general opinion in Udakiruwa was positive towards Sarvodaya, but a number of respondents stated in interviews that they did not know what Sarvodaya was or wanted.

#### 12.8.2 Development situation

Except for the social division between the two castes in Udakiruwa and the problems caused by the presence and activities of the tobacco cultivator, the general development situation for Udakiruwa seems to be less complicated than for the other villages. There is no scarcity of land and no serious socio-economic obstacles for general improvements.

The main problem is the absence of a road or even a track, according to a majority of the villagers. At present, the tobacco cultivator is the person in Udakiruwa who would gain the greatest advantages from improved communications, but also the majority of the villagers would get benefits from a road .

Improvements of health conditions and primary education are responsibilities for the government, but due to the present economic situation in Sri Lanka it is doubtful whether any major support to these sectors can be expected in the near future unless aid is given from external organizations and foreign countries. It is far more easy to stop continued soil erosion, a problem that could be solved if voluntary labour is organized efficiently. If this is done, the yields would probably be easily increased, but as the eroded land in Udakiruwa are normally registered with private holders, it might be difficult to motivate other farmers in the village to cooperate if they do not have similar problems.

The general situation, however, is comparatively good in Udakiruwa and several improvements should be possible .



## 12.9 Analysis of primary data

Udakiruwa was the last village to be investigated and although the village is located on the outer fringe of the Wet Zone in what is called the Intermediate Zone, Udakiruwa bear all marks of identification with a traditional up-country Wet Zone village. Its relative isolation has prevented it from much of change that has taken place in communities that are accessible by road. As in Pelawatte, there is a threefold cultivation system with paddy, garden and chena.

### 12.9.1 Total amount of cultivated land and age structure

The precipitation in Udakiruwa is big enough and evenly spread throughout the year to allow a threefold cultivation system, but only 13 of 34 (40%) households practice all systems simultaneously, compared to 69% in Pelawatte.

The most important single crop is paddy, cultivated mostly as a subsistence crop, followed by tobacco, which is cultivated by one household solely as a cash crop. Paddy is not suitable as a cash crop in Udakiruwa, because it is bulky and heavy and therefore impractical, as all goods leaving or entering the village have to be carried over a high mountain. As in Pelawatte a big variety of both annual and perennial crops strive for space, but there is a bigger potential for expansion of cultivation in Udakiruwa than in Pelawatte. The vicinity is not so damaged by chena-ing as in Pelawatte.

The total amount of paddy land amounts to 23 acres, and normally it is possible to gather in two yields per annum. The total quantity paddy yielded each year is estimated to be equivalent to 41 400 kg rice. Divided per capita among the 200 inhabitants this gives a figure of 207 kg for each individual or more than 1/2 kg per day for all inhabitants. With an additional share of free rationed rice from the cooperative, it can be concluded that normally there should be no lack of food in the village. (Paddy yield figures refers to unhusked rice).

A total amount of 54 acres of chena and 52 1/2 acres of garden land provide the villagers with food crops complementary to rice. The most common cash crops are areca nuts, k i t u l jaggary and oranges.

The figures for the present labour capacity are not so positive as for Pelawatte, as no less than 46,5% belong to unproductive ages. Yet it is believed that productivity conditions are better in Udakiruwa as no household is reported as unproductive. All those who are capable of work can find employment throughout the year as the climatic conditions are favourable and there is no major pressure on land.

12.9.2 Analysis of economic resistance ability for individual households

Completed interview programme were carried out for 29 out of 34 households which is why the reliability of the composite data is believed to be high.

As with for Pelawatte the cultivation system has a clear subsistence priority with the exception of the household cultivating tobacco on about 15 acres for cash, thereby engaging some of the villagers as hired labour. As a general rule though, cultivation is primarily carried out as a subsistence undertaking, and only secondarily for cash incomes.

Table 37

Cross-classification of households in Udakuruwa according to economic groups and their ability of maintenance and economic resistance. (For explanation of categories see page 154 and 155).

ECONOMIC RESISTANCE ABILITY	FARMER CATEGORY					$\Sigma$	
	I	II	III	IV			
1	1	18	4	-	23	Able households	
2	-	4	5	-	9	Occasionally exposed households	
3	-	-	-	2	2	Vulnerable or unable households	
$\Sigma$	1	22	9	2	34		

In Udakuruwa 70% of the households belong to the able category, while about 5% belong to the vulnerable or unable category.

It seems as if the relative economic security is very good in Udakuruwa and the general degree of economic resistance ability is very high. Only 5% (two) of the households are liable to be threatened in a critical economic situation as compared to 9% in Pelawatte, 34% in Bundala and 30% in Kumbukgollewa.

As with Pelawatte and Bundala, Udakuruwa does not contribute to the supply of paddy for other people outside the village, but a fair quantity of other food items and goods are produced for external markets. Udakuruwa is a subsistence oriented village able to produce a surplus, with a high degree of relative economic security.

13 SUMMARY. FINDINGS AND RECOMMENDATIONS

13.1 Basic aims of the study and approach

After the completion of the investigations in the four local communities, it was considered as important to relate the findings of the study to the previously stipulated aims to see to what extent the interlying work with this book had been carried out in accordance with these aims. This book has basically been centred around four types of problems and attempts at their explanations:

- A) The identification of the factors that obstruct success with attempts at development in traditional local communities and the interrelationship between these factors.
- B) The relation between the processes of change that has taken place in a selected developing country (Sri Lanka) and the fields of problem that concern development and modernization.
- C) The indication of what practical consequences the integration of local communities, with a traditional structure, to an external economic system will have for these communities.
- D) The identification of the conditions that promotes a process of underdevelopment, then especially in the traditional local communities.

These problems are very general to their nature and of this reason it has not been possible to suggest universal solutions or explanation models, but merely to indicate explanations that seem plausible.

The book is divided into two parts:

Object of the study and subjects of the study. The object of the study is Sri Lanka, and this part give a general

description of conditions and general development in the country, primarily based on secondary printed material.

The second part, subjects of study, consists mainly of four surveyed local communities in Sri Lanka and the results of an interview programme carried out among the inhabitants in these communities 1972-1974. The second part is concluded with the findings from analyses of both the first and second parts of the book.

13.2 General assumptions about conditions in traditional Sinhalese villages or about conditions of importance for these communities

13.2.1 Provincial or regional centra, growth poles

It is difficult to give a clear, unambiguous picture of the size, importance, functions and relative status of the larger communities, not exclusively rural, that existed before the 19th century in Ceylon. It is not correct to call them towns, growth poles, urban communities or central places at that time although they constituted a kind of centra, with a different set of central functions. They were merely market places, travellers' resorts or religious centres.

When the British extended the colonial administration into the provinces in the mid-19th century it was natural to allocate the government offices and services to these embryotic urban communities. After 1833 and the Colebrooke reforms, the planations expanded gradually. The British extended their economic interests to the provinces, and it was necessary to build out the services for the people engaged within the plantation sector and expand the mechanism of control, the administration, to these areas.

Demand for increasing supply of food crops for expanding administrative centres

Those who were engaged in the plantation sector produced no food crops for their own maintainance. To run these planta-

tions an increasing number of Tamil workers were imported from South India and they needed food. The new administrative centres grew gradually as well, and most of their inhabitants were not employed in the agricultural sector. All these people needed food, and there was an increasing demand for food from the rural communities. Their production system was subsistence oriented, however, and it was not possible at first to find the necessary amount of provisions in the villages.

To solve the problem of an increasing deficit of food in the country, caused by a growing number of people who did not belong to the sector producing food, considerable quantities of rice were imported mainly from Burma. (See page 48).

In the emerging provincial and regional centres, the service sector, the trade sector, and the small scale manufacturing sector expanded and the people engaged within these sectors came from the traditional rural communities. Skilled labour and artisans left villages for a new future in the growing centres.

It is quite natural that the pressure increased on the rural communities to produce more food. This was stimulated by the introduction and spread of items that could be purchased for cash. If a certain demand was created in the villages needing cash for payment, the peasants would probably concentrate more on surplus production for cash incomes.

This assumption supports the correctness of the first question in part 7, but a general conclusion is possible to draw rather from the description in the first part of the book, than from the analysis of the more static survey in part two. In this case the empirical part reveals that a local community is integrated to and dependent of an external market, but not how this situation has developed.

13.2.2 Development in traditional village communities.  
Integration of subsistence oriented economies

Roughly simultaneously with the redefinition of land ownership (see page 45 ), the monetary system was introduced into the villages. For the food crops that the villagers provided the external markets with, they were more and more often paid in cash. With this money they could buy food items as well as new 'surplus' items that were introduced in the markets in the country in the mid 19th century.

In the villages there was an increased striving for achieving m a d a i d a m or paddy land. A farmer who increased his amount of possessed paddy land also increased his prestige.

From then onwards there was a fixed monetary price for each unit of paddy land and gradually competition arose for paddy land, as prestige was attached to the ownership of paddy land.

The K a y y e system (see section 3.3.2 ) was threatened by the fact that the gradual commercialization within the agricultural sector made it more difficult for families to cooperate. Instead it was more natural for them to compete in a system where cash crops slowly began to increase in relative importance.

This was a process that of course took many decades, but little by little the whole system of cultivation in the villages changed. It became more profitable for farmers to cultivate basic food crops as cash crops and other minor crops were neglected. Also, in many areas restrictions were placed on c h e n a cultivation (see page 47 ), which further decreased the variety of crops cultivated.

There was still an important barrier against the transformation of the traditional rural system, however: the bad communication facilities. There never was a steady stream of goods and crops between villages and external markets unless

they could be transported easily. In the low country there was in most cases at least a cart track which allowed a fairly comfortable exchange, but in the up country goods had to be carried to the villages in most cases when there was no road or track.

I believe that the topographical conditions have been important for the pace of 'modernization' or integration of a village into an external economic system such as a local or regional market.

With convenient facilities for transportation, the exchange of basic food crops especially of paddy, from the villages for surplus items, dispensable food items and necessary goods such as salt, clothes and tools increased gradually. No general technological change took place in the villages for a long time, but there was social and economic change, which cannot be easily measured.

In due course a system with different economic groups emerged. At the top of a commercialized village agrosystem is a surplus farmer and in the bottom the landless casual labourer. Finally these village agrosystem become intimately integrated into the external economic system for the benefit of a few but to the disadvantage for many.

### 13.3 Assumptions, findings and recommendations

#### 13.3.1 Comments on question 1 in section 7

According to the first question raised in section 7, traditional village communities in Sri Lanka with paddy cultivation as their main economic activity have been subjected to a process of change that has increased their dependency on external markets. It is even possible to call it a commercialization of agriculture leading to economic penetration. The ability to resist such penetration or negative economic integration was found to be high in two of the surveyed villages, whereas the two other villages had a large number of households which were vulnerable to economic crises; they simply had no resistance ability or eco-



conomic reserves. It is not possible to wholly support the first question, because I assume that there are two very important factors that were not considered in the preparatory phase of this work:

- A) Type of agroclimate
- B) Accessibility

However, these two factors are touched upon in questions 2 to 4.

### 13.3.2 Comments on questions 2 to 4 in section 7

#### 13.3.2.1 A few assumptions about the different economic value between annual and perennial crops

We have seen that perennial crops, except in some places for plantains and coconuts, are more or less absent in the two villages investigated in the Dry Zone. This is explained by climatological reasons. The variety of cultivated crops is limited to mainly annual crops in Bundala and Kumbukgollewa.

In Pelawatte and Udakiruwa there is a high variety of perennial crops, and most households cultivated a number. Perennial crops such as pepper, cinnamon, tea, coffee, cocoa, cloves, areca palm, papaya, coconut palm and kitul palm are very easy to cultivate in the two Wet Zone villages. These crops demand little repeated input of labour for weeding and manuring and no repeated input of capital for their cultivation.

The perennial crops are used for subsistence purposes and probably improve the nutritional standards, but they also constitute an economic buffer that can be important if there is failure of the paddy crop. The peasants of the Dry Zone have to concentrate on annual crops such as paddy, onions, chillies, manioc, maize and vegetables.

These crops demand a repeated input of capital either in cash or crops in the form of seedlings. They also demand more input of labour than the perennial crops as they must

Table 38. Features of some perennial crops.

Crop	Years to first crop	Years to maturity	Years of production	Harvested portion
Perennial field crops				
Bananas	1-2	3	5-50	Fruit
Pineapples	1.5	2	3-5	Fruit
Shrub crops				
Coffee	3	5-6	12-50	Fruit
Tea	3	6	50	Leaf
Tree crops				
Rubber	4-7	8-11	35	Sap
Cocoa	8-11	15-20	80-100	Seed
Coconuts	4-6	8-15	60	Fruit
Cloves	8-9	20	100	Flower buds

Source: Ruthenberg, 1971.

be manured, weeded and watched, often at night. The climate is apparently clearly at a disadvantage for peasants in the Dry Zone. If a family's economy deteriorates either because of crop failure or for other reasons, they might have difficulties to raise capital for seedlings for their annual crops. For paddy cultivation it is necessary to save a twelfth of the yield for the next period of cultivation.

As the cultivation of annual crops in general also demands quite a lot of preparatory work, it is not possible to rely on wage labouring to raise the necessary financial means for purchasing seedlings etc. in times of economic hardship. In this situation it is normal to borrow and the security for these loans is usually the debtor's land. In many cases this is the beginning of the process of impoverishment that leads to the transformation of the smallholder peasant to the landless casual labourer. Many peasants fall into this

situation where they can no longer afford to cultivate their own land. They have to live on casual labour to manage from day to day. The farmers who are better off can afford fertilizer which can improve their crops considerably.

These reflections on the importance of the cultivation of perennial crops might shed more light on the fact that there is a wider gap between economic groups in Bundala and Kumbukgollewa than in Pelawatte and Udakiruwa. These differences are not explained solely by social science interpretations.

#### 13.3.2.2 A few assumptions about the importance of accessibility

According to the classification on page 85, Pelawatte and Udakiruwa belong to the group of disseminated lowland settlements, while Bundala and Kumbukgollewa can be classified as nucleated tank settlements. When the villages were selected, no notice was paid to the topographic conditions. Only later it appeared that the Dry Zone villages are located in the low country and thus far more easily accessible than the Wet Zone villages, which are situated in the up country and lack any road or cart track. It is only possible to speculate how important the topographical factor is for the results of this survey.

The central places T,R,L,K are ranked according to their degree of centrality in figure 25. It should be understood that the degree of centrality is assumed to be correlated with the degree of integration.

T = Tissamaharama. Of the four central places, Tissamaharama has the highest degree of centrality. In Tissamaharama there is a circuit bungalow, post and telegraph office, Rest House of high quality, dispensaries, hospital, police station and a bus station.

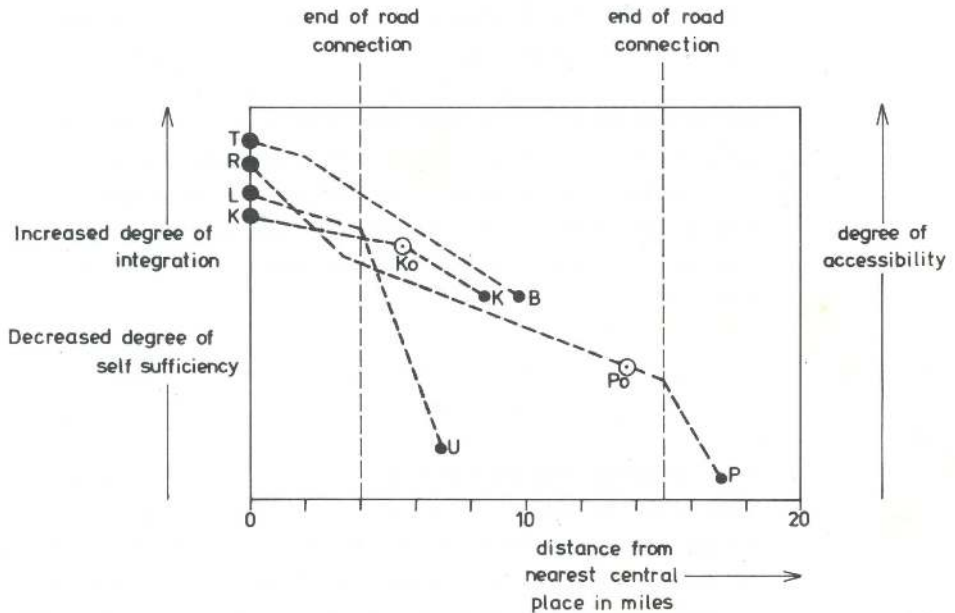


Fig. 26

Influence of the space factor as a restriction on the process of integration for the four surveyed villages.

- B = Bundala
- P = Panapola Pelawatte
- K = Kumbukgollewa
- U = Udakuruwa

Ko = Kokebe, nearest cooperative for Kumbukgollewa.  
Po = Potupitiya, nearest cooperative for Panapola Pelawatte.

- R = Rakwana. A small town with the second highest degree of centrality. Two circuit bungalows, post and telegraph office, hospital, police station, bus station and a Rest House of a lower degree of standard.
- L = Lunugala. Third degree of centrality. Post and telegraph office, hospital, police station and a Rest House of a lower degree of standard.

K = Kahatagasdigiliya. Fourth degree of centrality. Two circuit bungalows, hospital, police station, post office without any telephone or telegraph service and a Rest House of a lower degree of standard.

It seems quite clear that the two surveyed Wet Zone villages have a production system which gives priority to subsistence production and where cash-crop production is only the second most important activity. This entails that these two villages, according to question 4 in section 7, are less likely to be rapidly integrated into an external economic system. Also question 3 seems to be accurate according to the assumptions about the importance of a road connection, i.e. in this case the degree of accessibility.

However, it is more doubtful if question 2 can be answered properly, as paddy is cultivated as a cash crop in Bundala and Kumbukgolewa and as a subsistence crop in Pelawatte and Udakiruwa. Mean figures for per capita production of paddy in the two different cases will therefore be rather uninteresting in connection with question 2.

### 13.3.3 Summarized assumptions for questions 5 to 6 C in section 7

#### 13.3.3.1 General findings about the villages. Comments on questions 5 to 6 C

Three villages were found to be surplus villages: Kumbukgollewa, Pelawatte and Udakiruwa. This does not mean that they are completely and successfully cash crop oriented, but merely that the sum of the annual production divided between all the households allows a surplus. How biased or evenly this surplus was divided is explained in the summary for each of the three villages. Only one village, Bundala, was considered to be a deficit village in the sense that it was necessary to bring in more food and goods, than it was possible to transport out each year. The food pro-

duction deficit is covered by casual labour. Nevertheless fairly large transports were observed to leave the village after each harvest.

Another cleavage line was between basically commercialized and basically subsistence oriented agro-systems. Bundala and Kumbukgollewa were found to be commercialized agro-systems while Pelawatte and Udakiruwa are mainly subsistence oriented. There are some possible explanations to the degree of commercialization in the four villages:

I. Agroclimatic conditions.

1. Dry Zone villages such as Bundala and Kumbukgollewa have to rely on the monsoon and irrigation for their agriculture. That is a very insecure system for smallholders and the landless. The amount of water in the tank determines the outcome of the main activity, paddy cultivation. Those who are already privileged have priority to the irrigation water.
2. Wet Zone villages such as Pelawatte and Udakiruwa are normally evenly rainfed throughout the year which increases the independence and security for the farmers.

II. Topography.

This factor is of great importance. Communities without any road or cart track connections, and which are located in hilly or slopy areas, accessible only by climbing hills and mountains, are likely to have a rather high degree of self-sufficiency. This is obvious, as all goods or crops have to be carried in and out of the village.

13.3.3.2 Consequences of the type of agrosystem for economic structures in the four villages

- A) The commercialized agrosystem: Bundala and Kumbukgollewa. There is a clear division between the four economic groups in these two villages. A tendency towards polarization is clear as the most favoured and most neglected groups are the two biggest and they tend to increase their economic distance from each other.
- B) The subsistence oriented agrosystem: Pelawatte and Udakiruwa. Most households in these two villages are clustered together in the economic group with a high ability of economic resistance, which means that the villages are not greatly affected by external economic events such as inflation etc.

#### 13.3.3.3 Recommendations or prejudices for achievement of progress with development programmes

As always, it is very difficult to clarify and define what one means with a program of successful development. In the case of the villages surveyed, in this book, it should, briefly be understood as a successful attempt to remedy the problems that were understood and expressed by the villagers during the surveys.

#### Barriers against and advantages for development of traditional Sinhalese villages

- A) Pressure on land limits the prerequisites of a successful programme. Land reserves are normally required if no expansion out of the private system of land ownership is possible. This is especially true when the ownership of land is biased.

- B) In commercialized agrosystems, the surplus farmers dominate both the economic and social sectors, and most families from the other categories are in one way or the other dependant on this primary group. Only a minority of the households are able and motivated at the same time to participate in the long run in development programmes. In Bundala and Kumbukgollewa this seems to be the case as most households in some way are interdependent and, in the case of Pelawatte and Udakiruwa, most households have a high degree of economic resistance and are thus secure from external economic misfortunes and less motivated.
- C) From this follows the next conclusion, that a peasant household with a subsistence-orientation first and then a cash crop orientation is more likely to join a development programme than a family that concentrates basically on a cash crop first and then subsistence system. The latter category is also more vulnerable to economic crises on a regional or higher order. A high ability of economic resistance enables a household to take part in development programmes if motivated, while a low economic resistance ability hinders a family from participation.
- D) For this book it is assumed that in general it is easier to mobilize the people in Pelawatte and Udakiruwa in development programmes than in Bundala and Kumbukgollewa, although the situation is more urgent in these two villages.



This does not mean that Wet Zone villages in Sri Lanka as a rule are easier to develop than Dry Zone villages. In each case the general figures for economic resistance ability to a large degree determines the possible degree of participation and success.

This book has identified a number of obstacles for development and improvement, rather than provided solutions. It is my desire though, to clarify with this book that those people, the villagers in rural areas of Sri Lanka, whom many of us regard as people outside the hemisphere of the Western European economic and cultural system, on the contrary are part of it and in many cases dependant on it, whether they want to or not.

The reader of this book must not think that the main interest has been to investigate the problems of four villages as an isolated phenomenon. These four villages are part of a much wider reality and their problems must not be screened off from the regional and national levels and the problems existing there.

How would it be possible to recommend an overall increase of subsistence production in local communities in a country where the main economic problem is inability to produce a sufficient amount of food? On the contrary, all efforts must be made to stimulate more and more people to produce food for the country, but it seems as if the relative number of people who are able to do so may continue to decrease. It is not wise to sacrifice subsistence production for cash crop production in the villages, but the relative number of farmers or peasants cultivating both subsistence and cash crops must increase. If this is possible to achieve, then much of the backwardness and present food problems in the villages of Sri Lanka will be less acute problems in the future. It is therefore my desire that some of the conclusions and recommendations contained in this book should encompass a greater whole than traditional Sinhalese Sarvodaya paddy cultivating villages.

Appendices

Composite matrices for the villages Bundala, Panapola  
Pelawatte, Kumbukgollewa and Udakiruwa.

Explanation of codes in the matrices.

Section I. Key to the head of the matrices

Hh5	=	Household number 5
Hh Pr	=	Profession of household headman
Age H	=	Age " " "
Dw PA	=	Dwellers in productive ages 15-65
Sick or E (65-w)	=	Sick or above 65 years of age
I (< 15)	=	Infant under 15 years of age
RS/M	=	Household income each month in rupies
P	=	Acres of paddy land
C	=	" " swidden (chena) land
G	=	" " garden "
Est PY/A	=	Estimated annual paddy yield in bushels (one bushel = 36 L = 39 kg)
Cat	=	Reported number of possessed cattle heads
h/d Hm	=	Reported number of daily working hours of household headman
PA/IA	=	The quotient between dwellers in productive ages and dwellers who are unproductive for each household

Explanation of codes in the matrices.

Section II. Key to symbols in the matrices

A. Reported professions/occupation or civil status

Carp	=	Carpenter
CL	=	Casual labourer
Con	=	Contractor
Cult	=	Cultivator
Div	=	Divorced
Fi	=	Fisherman
HoB	=	Housebuilder
KitT	=	Kitul tapper = tapper of palmtree juice
LO	=	Land owner
Mu	=	Mudalali = merchant
PoM	=	Postmaster

ret = Retired  
ST = School teacher  
TrDr = Tractor driver  
TrO = " owner  
wb = Worker with water buffaloes  
VM = Veda mahatmiya = traditional indigenous doctor

B. Types of cattle

c = cow  
b = bull  
wb = water buffalo

C. Yield figures

55 b = bushels  
Nil = No yield  
(s) = sharing land and yield  
SF = sharing land with father  
25(60) = reported number of acres and within brackets  
estimated number of acres

D. Other

est. = estimated  
I.P. = inproductive household

E. Cultivated subsistence crops or cash crop products

A	=	Areca	Co	=	Coffee
Ab	=	"Abbe"	Cv	=	Cloves
Bl	=	Betelleaves	Dl	=	Lences
Bs	=	Beans	DP	=	Dry Paddy
Bt	=	Breadfruit	Fm	=	Finger Millet (Kurakkan)
Ca	=	Cocoa			
Cc	=	Coconuts	Gg	=	Ginger
Chi	=	Chillies	Gm	=	Grams
Ci	=	Cinnamon	J	=	Jakfruit
Cm	=	Cardamom	Ki	=	Kitul Palm

KJ	=	Kitul "Jaggary"	R	=	Rubber
M	=	Manioc	Sm	=	Sorghum
Me	=	Maize	Sp	=	Sweet Potatoes
Or	=	Oranges	Spi	=	Spices
P	=	Papaya	T	=	Tea
Pa	=	Pineapple	To	=	Tobacco
Pe	=	Pepper	Ts	=	Tomatoes
Pk	=	Pumpkin	Wp	=	Wet Paddy
Pn	=	Plantains	Vs	=	Vegetables
Py	=	Paddy			

F. Common purchases

Bo	=	Books	Ke	=	Kerosene
Bp	=	Baby powder	Kp	=	Cooking pans
Bu	=	(Bulat) Betel	Mat	=	Matches
CBo	=	Childrens books	Os	=	Onions
Chi	=	Chillies	Re	=	Rice
Col	=	Coconut oil	Sp	=	Soap
cs	=	Clothes	Spi	=	Spices
ct	=	Chemical "things"	Sr	=	Sugar
Df	=	Dry fish	Ss	=	Spares
Dl	=	(Dal) Lences	St	=	Salt
Fr	=	Flour	To	=	Tobacco
Fs	=	Food stuffs	Top	=	Tooth paste
Fz	=	Fertilizer	Ts	=	Tools
Fu	=	Furniture	Vs	=	Vegetables
Gd	=	Gold			
Is	=	Insecticides			

G. Main "external" contacts

B	=	Bank	FB	=	Farmers Board
BG	=	Blood testing	GA	=	G.A. (Government Agent)
Coo	=	Cooperative	GM	=	Get medicines
DDT	=	DDT-spraying	MO	=	Medical Officer
DRO	=	D.R.O. (District Revenue Officer)	MP	=	MP (Member of Parliament)
Em	=	External market	RDO	=	Rural Development officer
			Pc	=	Policeman
			VC	=	Village Council

H. Reasons for contacts

Ai	=	Meet Agricultural Inspector	R	=	Registrations
Bl	=	Bank loan	Rl	=	Renewal of gun license
Hl	=	Hospital	Rr	=	Collect rationed rice
P	=	Pilgrimages	Sc	=	Sell cash crops
PF	=	Purchase food-stuffs	Si	=	Meet school inspector
Pg	=	Purchase other goods	SJ	=	Search job
			Sp	=	Sell paddy

I. Possessed "modern" items:

Aw	=	Alarm clock	Pl	=	Pressure lamp
Bc	=	Bicycle	Ra	=	Radio
Bo	=	Books	Tsch	=	Torch
Dn	=	Daily newspaper	Tob	=	Toothbrush
Ks	=	Kerosene stove	Ww	=	Wrist watch
Nc	=	Nylon clothes			
Ph	=	Photographs			

Hh nr	Hm Pr	Age Hm	Dw PA	SICK, OLD OR INFANT			RS/M	P	C	G	Est/PY/A	Cat	h/d/Hm	PA/IA	ERA	FC
				E (> 65)	IJ (< 15)											
1	CL	M 45	2	-	1		-	-	-	Nil	-	3	3	IV		
2	CL	M 53	5	-	4		-	-	1/8	Nil	-	2	3	IV		
3	Cult	F 37	2	1	3		1	-	1/8	30 b	-	0.5	2	II		
4	Cult	M 58	6	-	-		2	-	1/8	55 b	2 c	6	1	II		
5	CL	M 52	5	-	3		-	-	1/8	Nil	-	1.67	3	IV		
6	CL/Cult	M 28	3	1	-		1	-	1/8	30 b	-	3	1	III		
7	CL	M 45	2	-	1		-	-	1/8	Nil	-	2	3	IV		
8	Cult	M 60	3	-	-		2	-	1/4	55 b	3 c	3	1	II		
9	Cult	M 31	2	1	-		2	-	1/4	55 b	2 c, 2 b	2	1	II		
10	CL	F 55	2	-	1		-	-	-	Nil	-	2	3	IV		
11	Cult/CL	M 40	3	-	4		2	-	-	55 b	1 c	0.75	1	III		
12	Cult	M 35	3	-	-		2	-	1/8	55 b	-	3	1	II		
13	Cult/VM	M 52	5	-	2	150	2 1/2	-	1/4	75 b	-	8	2.5	1	II	
14	CL	M 55	6	1	-		-	-	-	Nil	-	6	3	IV		
15	Cult/CL	M 65	4	-	-	75	2	-	-	55 b	-	10	4	1	III	
16	CL	M 26	4	-	2		-	-	1/4	Nil	1 wb	2	2	1	III	
17	Cult	M 45	2	1	3		1	-	1/8	30 b	-	0.67	2	II		
18	Cult/Mu	M 32	3	1	1	500	2	-	-	55 b	20 c	10	4	1	I	
19 A	CL	M 40	2	1	2		-	-	-	Nil	-	0.67	3	IV		
19 B	CL	M 50	2	1	-	50 (est)	-	-	-	Nil	-	8	2	3	IV	
19 C	CL	M 28	4	-	-		-	-	-	Nil	-	4	3	IV		
20	CL	F 40	1	-	-		-	-	-	Nil	-	1	3	IV		
21	CL	M 30	5	-	2		-	-	1/4	Nil	2 c	2.5	3	III		
22	Cult	M 70	3	1	1		1.5	-	-	40 b	-	1.5	1	II		
23	Cult	M 64	7	-	-		3	-	-	85 b	3 c	7	1	II		
24	Cult	M 45	3	-	6		1.5	-	1/8	40 b	-	0.8	1	II		
25 A	Cult	M 70	1	1	-		5	-	1/4	125 b	6 c	1	1	II		
25 B	Cult	M 38	2	-	3		4	-	1/8	100 b	2 c	0.67	1	II		
25 C	Cult	M 45	3	-	3		4	-	1/8	100 b	3 c	1	1	II		
25 D	CL	M 50	2	-	-		-	-	-	Nil	-	2	3	IV		
26	CL	F 50	1	-	-		-	-	-	Nil	-	1	3	IV		
27	Pi/CL	M 39	2	-	2		-	-	-	Nil	-	1	3	IV		
28	Cult	M 40	2	1	7		2	-	1/8	55 b	-	0.5	2	II		
29	CL	F 36	3	1	1		-	-	1/8	Nil	-	1.5	2	III		
30	CL	M 35	2	-	2		-	-	1/8	Nil	-	1	2	III		
31	CL	F 60	4	-	1		-	-	-	Nil	-	4	3	IV		
32	Cult/LO	M 60	7	-	3		35	-	-	980 b	2b, 6wb, 11c	2.33	1	I		
33	VMu	M 27	1	-	-		-	-	-	Nil	-	1	2	I		
34	Lo/PcM	M 61	3	-	-	500	25	-	-	700 b	2b, 8wb, 30c	3	1	I		
35	Cult	M 55	7	-	2		5	-	1/8	125 b	3 c	3.5	1	II		
36	Cult	M 30	3	-	-		2	-	1/4	55 b	1 b	3	1	II		
37	Cult	M 56	5	-	1		2	-	1	55 b	-	6	1	II		
38	Cult/CL	M 38	2	1	4		1	-	-	30 b	-	0.4	2	III		
39	CL	M 25	2	1	-		-	-	1/4	Nil	-	2	2	III		
40	Cult	M 52	2	1	-		2	-	1/8	55 b	2 c	2	1	II		
41	Cult	M 40	4	1	3		1	-	1/8	30 b	-	1	1	II		
42	CL	M 30	2	1	-		-	-	1/8	Nil	-	2	3	IV		
43	CL	M 30	3	-	-		-	-	1/8	Nil	-	3	3	IV		
44	CL	M 28	7	-	-		-	-	1/8	Nil	-	7	3	IV		
45	CL	M 45	2	-	5		-	-	-	Nil	-	0.4	3	IV		
46 A	Cult/CL	M 40	2	-	5		1	-	-	30 b	-	0.4	2	III		
46 B	Cult	M 60	4	-	-		2	-	-	55 b	-	4	1	II		
47	Cult	M 56	4	-	1		3	-	1/2	85 b	2 wb	4	1	II		
48	CL	M 43	3	-	3		-	-	1/8	Nil	-	2	3	IV		
49	Cult	M 55	5	-	6		10	-	1/8	280 b	3 c	0.83	1	II		
50	Cult	M 38	2	1	3		2	-	1/8	55 b	-	0.5	1	II		
51	Cult	M 58	4	-	-		5	-	1/8	125 b	2wb, 1c	4	1	II		
52	Cult	M 53	5	-	-	25	1	-	1/2	30 b	-	7	5	1	II	

135,5

7

94c, 7b, 19wb







Village: Pelawatte

District: Ratnapura

Hh nr	Hm Pr	Age H	Dw PA	SICK OR OLD W (>64)	INFANT I (<15)	RS/M	P	C	G	Est PY/A	Cat	h/d Hm	PA/IA	Cultivated Crops
1	Cult	M 48	2	-	2	18	1	1	1	55 b	-	8	1	WP, CI, Fm, T, J, Co, P
2 (sto)	Cult (ret)	M 75	-	3	-	-	3/4	-	1	30 b	-	-	0	A, R, Ki, Co, WP
3	Cult	M 32	2	-	3	30	-	1	3/4	Nil	2 c	8	0.67	WP, DP, CI, Fm, Bt, T,
4	Cult	M 52+58	4	-	-	10	1/2	-	1	30 b	-	7	4	WP, DP, CI, T, Co, M
5	Cult	F 45	4	-	1	50	3/4	-	3/4	45 b	-	6	4	WP, M, Co, CI, Pn
6	Cult	M 40	3	-	-	65	1/2	1	3/4	35 b	-	9	3	WP, Pn, Mc, A, J, CI, T
7	Cult	M 45	5	1	4	15	1/2	1	1/2	30 b	2 c	7	1	WP, M, A, Sp, Co, Co
8	Cult	M 38	3	-	5	30	1	1	1	55 b	-	6	0.6	WP, DP, Pn, CI, Co
9 (s)	Cult	F 53	1	4	-	20	1/2	-	1/2	30 b	-	7	0.25	WP, CI, Pn, A
10	Cult	M 45	2	-	3	35	1/4	1	2	15 b	-	7	0.67	WP, DP, CI, T, Co, J, F
11	Cult	M 28	2	-	2	100	1/2	1/2	2	30 b	-	9	1	WP, CI, Sp, M, A, Pn, A
12	Cult	F 44	4	-	3	15	1/2	1	5	30 b	-	8	1.33	WP, A, Co, CI, Co, Pn
13	Cult	M 55	6	-	2	25	1 1/2	1	1	75 b	-	4	7	WP, CI, M, Sp, Co, A, F
14 (s)	- sick	M 55	1	1	1	-	-	1/4	-	Nil	-	-	0.5	CI, Pn
15	Cult	M 34	2	-	2	250	1 1/2	2	5	75 b	2 wb	7	1	WP, DP, R, CI, M, Co
16	Cult	M 58	4	-	1	25	1/4	1	2	15 b	-	4	4	WP, Mc, CI, A, Co, Pn
17	Cult	M 28	2	-	2	35	SF	1/2	SF	SF	-	8	1	WP, CI, Pn, Co
18	Cult	M 60	5	-	2	70	3/4	1	4	45 b	-	6	2.5	WP, Sp, M, CI, A, Co
19 (s)	Cult/sick	M 50	-	1	-	-	-	-	2	Nil	-	-	0	M
20	Cult	M 57	3	-	-	50	-	-	2	Nil	-	4	3	CI, Co, Pn, M
21	Cult	M 30	2	-	1	35	1/4	1/2	1	15 b	-	4	2	WP, DP, CI, M, Co, Pn
22	Cult	M 35	3	-	6	20	1/2	-	1	30 b	-	7	0.5	WP, Co, Bl, Co, (amm)
23	Cult	M 30	2	-	2	50	1	1	1/2	55 b	-	8	1	WP, M, T, CI, Co, Pn, A
24	Cult	M 60	2	-	-	200	3/4	1 1/2	1	45 b	-	8	2	WP, DP, CI, Pn, Co, T
25	Cult	F 45	5	-	-	-	1/2	-	1/4	30 b	-	-	5	WP, T, Co
26	Cult	M 27	2	-	2	30	1/2	1	1	30 b	-	8	1	WP, CI, Co, M
27	Cult	M 35	2	-	2	-	1/2	1	1/4	30 b	-	-	1	WP, Bt, Pn, Co
28	Cult	M 65	4	-	-	-	1/4	1/4	1/2	15 b	-	-	4	WP, M, Co, A, T, CI, Pn
29	Cult	M 50	5	-	3	-	-	1	1/2	Nil	-	-	1.67	CI, Bt, Pn, M
30	Cult (ret)	M 70	-	2	-	-	-	-	1/2	Nil	-	-	0	CI, Bt, Co, M, Pn
31	Cult	M 33	2	-	5	50	1/2	1	1 1/2	30 b	2 c	8	0.4	WP, M, Sp, R, CI, A, Co
32 sto	Cult (ret)	M 70	1	1	-	5	-	-	3/4	Nil	-	4	1	WP, DP, CI, Sp, M, A
33	Cult	M 52	6	-	4	-	1/2	1	1	30 b	-	-	1.5	WP, CI, Ki, Bt, A, M, A
34	Quit/Ho B	M 58	6	-	3	250	-	7	1 1/2	Nil	-	9	2	CI, Sp, M, A, Cv, J, C
35	Cult	M 30	5	-	1	75	1/2	1 1/2	3	30 b	-	8	6	WP, CI, Co, A, Bt, Co
36 (o)	Widow (old)	F 75	-	1	-	-	-	-	1/2	Nil	-	-	0	M
37 (o)	Widow (old)	F 60	-	1	-	-	-	-	1/2	Nil	-	-	0	M
Σ							16 1/2	29 1/2	47 1/2					

h/d Hm	PA/IA	Cultivated Crops (E)	Cash crops or sold items (E)	Common purchases (F)	Visits from outside or main external contacts (G)	Reason(s) for contacts (H)	Possessed modern items (I)
8	1	WP,Ci,Em,T,J,Co,Pa,Pn	Ci,KJ,A	Cc,Ke,Fr,Sr	Em,Coo	PF,Pg,Sec	Ra,Tch
	0	A,R,Ki,Cc,WP					
8	0.67	WP,DP,Ci,Em,Bt,T,M,Cc	Ci,KJ	Fs,Cs	Em,Coo	PF,Sec,Pl	Tch
7	4	WP,DP,Ci,T,Cc,M	KJ,Ci	Cs,Fs,DF,Ke,Bu	Em,Coo	PF,Sec,HL	Ra,Pl,Ww,Ph
6	4	WP,M,Cc,Ci,Pn	Ci	Cs,Chi,Cc,Sr,Spi	Em,Coo	PF,Sec,Coo	Tch
9	3	WP,Pn,Mc,A,J,Ci,T,Ki	A,KJ,Ci	Cc,DF,Cs,Ts	Em,Coo	Pg,PF,Sec	Ra,Tch
7	1	WP,M,A,Sp,Cc,Co	A,Py	Cs,Ts,Ke,Spi	Em,Coo	Pg,PF,Sec,Pl	Ra
6	0.6	WP,DP,Pn,Ci,Cc	Pn,KJ,Ci	Cs,Cbo,Fs,Sp,Ke	Em,Coo,VC	Sec,Pg,PF	Tch,Bo
7	0.25	WP,Ci,Pn,A	Ci	Fs,St,Ch	Coo,Em	Sec,PF	-
7	0.67	WP,DP,Ci,T,Cc,J,Bt	Pn,Ci,A	Ts,Ke,St,Col,Vs	Em,Coo	Sec,Pg,PF,HL	-
9	1	WP,Ci,Sp,M,A,Pn,J	A,KJ,Ci	Cs,Vs,Fs	Em,Coo,DRO	Sec,Pg,PF,HL	Tch
8	1.33	WP,A,Cc,Ci,Co,Pn	A,KJ,Ci	Cs,Chi,Fs	Em,Coo	Sec,Pg,PF	Nc,Pl,Ww,Bo,Ph
4	7	WP,Ci,M,Sp,Cc,A,Ki,J,Pn	KJ,A,Ci	Cs,Fz,Fs,Kc,St,Sp	Em,Coo,VC	Sec,Pg,PF	Ra,Pl,Aw,Ww,Tob,Ph
	0.5	Ci,Pn					
2 wb	7	1 WP,DP,R,Ci,M,Cc	Ci,Cm,A,Cv	Cs,Ts,Fs,DF,KJ	Em,Coo	Sec,Pg,PF	Ra,Nc,Tch,Pl,Ww,Aw
	4	4 WP,Mc,Ci,A,Co,Pn,Cc	KJ,A	Fs	Coo,Em	PF,Sec	-
	8	1 WP,Ci,Pn,Cc	KJ	Cs,Bp,Sp,Fs,DF	Em,Coo	Pg,HL,Pl,PF,Sec	Pl
	6	2.5 WP,Sp,M,Ci,A,Cc	Ci,A	Ts,Cs,Fs,Sp,Ke,Col	Em,Coo	PF,Pg,Sec,Pl,HL	Pl,Bo
	0	M					
	4	3 Ci,Cc,Pn,M	Ci,KJ,A	Fs,Ke,Cc,To	Coo,Em	PF,Sec	Nc,Tch,Ww,Bo
	4	2 WP,DP,Ci,M,Cc,Pn	Ci,KJ	Cs,Fs,Ke,DF	Em,Coo	PF,Sec	Ra,Tch,Pl,Ph
	7	0.5 WP,Cc,Bi,Co, (ammo) Pe	KJ,A,Ci	Cs,Cbo,Vs,Fs,Ke	Em,Coo	PF,Sec,Pg	Ra,Bo
	8	1 WP,M,T,Ci,Cc,Pn,Ki	KJ,Ci	Fs,Ke	Em,Coo	Sec,Rr	Ra,Tch,Pl,Ww
	8	2 WP,DP,Ci,Pn,Cc,T	KJ,A,Ci	Fs,Cc,DF,To,Ke,Cs	Em,Coo	Sec,PF,HL,Pl	Tch
	5	WP,T,Cc					
	8	1 WP,Ci,Cc,M	KJ,Ci	Fs,Bu,Ke	Em,Coo,DRO	PF,Sec	Nc,Tch,Ww,Bo
	1	WP,Bt,Pn,Cc					
	4	WP,M,Cc,A,T,Ci,Pn,Co					
	1.67	Ci,Bt,Pn,M					
	0	Ci,Bt,Cc,M,Pn					
2 c	8	0.4 WP,M,Sp,R,Ci,A,Co,Ki,Cc,Pn	Ci,R,KJ	Cs,Fs	Em,Coo	Sec,PF,VC	Tch,Bo
	4	1 WP,DP,Ci,Sp,M,A	Ci	To,Chi,Cc,Cs	Coo,Em,VC	PF,Sec	-
	1.5	WP,Ci,Ki,Bt,A,M,Pn,Cc					
	9	2 Ci,Sp,M,A,Cv,J,Ci	Ci	Cs,Re,DF,Fs	Em,Coo	PF,Sec,HL	Ra,Nc,Tch,Pl,Ww,Tc
	8	6 WP,Ci,Cc,A,Bt,Cc,Pn	Ci	Cs,Fs	Em,Coo	PF,Sec	Bi,Ra,Tch,Pl,Ww,Tc
	0	M					
	0	M					

Assessed modern items ( )	Used ferti- lizer	Comments	Economic Resistance Ability	Farmer Category
a,Tch	Yes	Collecting Dummele for sale	1	II
	-	Sick and old	3	IV
ch	Yes	Sharing with father	2	III
a,Pl,Ww,Ph	Yes		1	II
ch	Yes		1	II
a,Tch	Yes	Collecting Dummele for sale	1	II
a	Yes		1	II
ch,Bo	No	Has fallen down from Kital palm tree/sick	1	II
	Yes	Selling handmade mats/hats/Selling eggs	3	IV
	Yes	Collecting Dummele for sale	1	II
ch	No	Selling basket-works and dummele	1	II
a,Pl,Ww,Bo,Ph	No	Selling Ke, Df and other things in Potupitiya	1	II
a,Pl,Ww,Ww,Tcb,Ph	Yes		1	II
	-	Sick	3	IV
a,Nc,Tch,Pl,Ww,Aw,Bo,Ph	Yes	Gaming on wife's land. Selling Dummele	1	II
	No	Illness	1	II
l	Yes	Helping father with his cultivation	1	II
l,Bo	Yes	Selling Dummele	1	II
	-	Sick	3	IV
c,Tch,Ww,Bo	Yes	Cultivating unspecified crops for subsistence and collecting Dummele. Fell from Kital palm tree.	2	III
a,Tch,Pl,Ph	No	Fell down from Kital palm tree/sick	1	II
a,Bo	Yes		1	II
a,Tch,Pl,Ww	Yes		1	II
ch	Yes	Selling Dummele	1	II
	-		2	III
c,Tch,Ww,Bo	-		1	II
	-		1	II
	-		1	II
	-		2	III
	Yes	Children give help. Retired	3	IV
ch,Bo	Yes		1	II
	No	Old and sick	3	IV
	-	Absent	1	II
a,Nc,Tch,Pl,Ww,Tob,Bo,Ph	Yes	Sharing with wife's brother Owns sewing machine	1	II
l,Ra,Tch,Pl,Ww,Tob,Ph	Yes		1	II
	-	Old widow	3	IV
	-	Old widow	3	IV

Village: Kumbukollewa

District: Anuradhapura

Hh nr	Hm Pr	Age H	Dw PA	Sick or Old E (>65)	INFANT I (<15)	RS/M	P	C	G	Est PY/A	Cat	h/d Hm
1A	Cult/CL	M 62	4	-	-	35	2	3	-	60 b	-	6
1B	Cult/CL	F 27	1	-	5	N.A.	0	1	-	(Failure 3)	-	N.A.
2	Cult/CL	M 30	2	-	2	30 (100)	-	1	-	Nil	-	7
3	Cult/CL	M 35	2	-	4	150	-	4	-	Nil	-	10
4	Cult/CL	M 38	1	-	2	50	6(2)	2	-	60 b	-	6
5	Cult/CL	M 28	2	-	3	75	3	2	-	90 b	-	9
6	Cult/CL	M 32	2	-	4	50	(3 SF)	2	-	-	-	6.5
7	Cult/CL	M 32	2	-	1	55	-	1	-	Nil	-	8
8	Cult/CL	M 30	2	-	3	70	2.5	3	-	75 b	4 c, 1 b	8
9	Cult/CL	M 24	2	-	1	100	(2 SF)	0	-	-	-	6
10	Cult	M 37	2	-	7	200	5	2	-	150 b	1 wb	9.5
11	Cult	M 60	4	-	-	100	7	2	-	180-200	5 wb, 10c, 2 bw	7
12	ST/Cult	M 30	2	-	2	350(s)	(4 SF)	-	-	Nil	-	6
13	Cult/CL	M 29	2	-	6	120	3	1	-	90	-	7
14	Cult	M 36	3	-	4	N.A.	2	2	-	60	3 c	N.A.
15	Cult/con	M 30	2	-	6	200	8	2	-	180-200	3 c	7
16	Mu/LO	M 55	7	-	-	1800	75	10	-	2000 b	40 c, 2 b, 5 wb	6
17	Cult/TrO	M 29	2	-	3	250	3	2	-	90 b	2 c	6
18	Div. woman	F 52	3	-	-	N.A.	-	-	-	Nil	-	-
19	Cult	M 50	2	-	1	200	7.5	3	-	180 b	3 c, 15 wb	6
20	CL	M 37	3	-	4	90	-	-	-	Nil	-	8
21	Cult/CL	M 40	3	-	4	50	7	1	-	150 b	2 c	8
22	Old	M 80	-	2	-	-	-	-	-	Nil	-	0
23	CL	M 32	2	-	6	90 (est)	-	1	-	Nil	-	8 (est)
24	Cult	M 50	3	-	2	50	1	-	-	30 b	5 wb	8
25	Cult/CL	M 34	1	-	1	40	-	1	-	Nil	-	8
26A	Cult	M 40	4	-	2	150 (est)	5	2	-	150 b	3 wb, 6 c	8 (est)
26B	Cult/TrDr	M 22	2	-	1	100 (est)	2	1	-	60 b	2 c	8 (est)
27	Mu/Cult	M 40	3	-	2	500	8	1	-	200 b	25 c	7
28	Widow	F 70	-	1	-	-	-	-	-	Nil	-	-
29	CL/Widower	M 35	1	-	6	90 (est)	-	1	-	Nil	-	8 (est)
30	Cult/CL/Div	M 45	2	-	-	60 (est)	-	2	-	Nil	-	7 (est)
31	Cult	M 50	4	-	3	500 (fi)	8	2	-	210	2 c	7
32A	Cult	M 45	3	-	4	125	10	-	-	250 b	2 b	5
32B	Cult/CL	M 22	2	-	-	200	Sharing 32A	-	-	-	-	-
33	Cult/CL	M 40	3	-	1	-	1	-	-	30 b	-	-
34	Mu/LO/TrO	M 70	7	1	-	1000	50	5	-	140 b	15 c	-
35	Cult/Con	M 48	5	-	4	1500	7	-	-	200 b	25 c + 25 wb	10
36	Cult	M 38	4	-	4	55	10	1	-	280 b	1 c, 1 wb	7
37	Cult	M 55	7	-	-	150	7	-	2	200 b	-	6
38	Cult/CL	M 45	3	-	6	40	6	1	-	160 b	-	8
39	Cult/CL	F 55	4	-	1	reciev. food	(10) not cul- tivated	-	-	-	-	5
40	Cult/CL	M 28	2	-	1	100	-	1	-	Nil	-	8
41	Cult	M 60	3	-	1	150	4	4	-	110	-	7
42	Cult	M 65	5	-	1	125	8.5	3	-	220	20 c	8 (sor)
43	Cult	M 45	3	-	6	125 (est)	2	2	-	60 b	2 c	7 (est)
Σ							270.5	70	2			

Id Hm	PA/IA	Cultivated Crops (E)	Cash crops or sold goods (E)	Purchased goods (F)	Visits from outside or main external contacts (G)	Reason(s) for external contacts (H)	Possessed modern items (J)
	4	WP,M, Vs		Cl,Ts,Aa,To,Fs	Coo,Em,Bg,DDT	PF,Pg	-
A.	0.25						
	1	Fm,Vs,Gm,M	Pk	Cl,Fs,Ke,Col,KJ,Tea	Coo,Em,Bg,DDT	PF,Pg	Bo
	0.50	Vs,M,Spi	M,Vs	Cl,Fs	Coo,Em	PF,Pg	-
	0.50	WP,M,Pk,Fm	Py,Vs,Pk	Ts,Cl,Fr,Cc,Df,Spi	Em,Coo,FB,DDT	Sp,PF,Pg	-
	0.67	WP,Fm,Ab,Vs	Py,Fm,Ab	Cl,Ts,Fr,Sr	Em,Coo	Pg,PF,Sp,Sj	Ph
.5	0.50	WP,Fm,Mc	Py	Cl,Ts,Bo,Tea,Sr,Spi	Em,Coo	Pg,PF,Sp,Sj	Tch,Bo
	2	Mc,Vs	-	Cl,Ts,Fs,Spi,Ke,KJ	Coo,Em	PF,Pg	Nc,Bo
	0.67	WP,Mc,Vs,Fm	Py	Cl,Ts,Sr,Fr,Spi,Sp,Bu	Em,Coc	PF,Pg,Sp	Tch,Bo,Ph
	2	WP,Mc,Pk	-	Cl,Fs,Col,Bu	Coo,Em	PF,Pg	Tch
.5	0.29	WP,Fm,Pk,Mc	Py	Cl,To,Sr,Ke,Col,Tea,KJ,Bu	Em,Coo,Bg,DDT	PF,Pg,Sp	Bc,Ra,Nc,T
	5	WP,Fm,Ch,DI	Py	Ts,Cl,Fs,Ke	Em,Coo	Pg,PF,Sp	Bc,Tch,Pl,
	1	WP		Cl,Fs,Spi	Em,Coo,Si	Pg,PF	Bc,Ra,Nc,T
	0.33	WP,Fm	Py	Cl,Ts,Ps,Sr,Fr,Col,Ke,St	Em,Coo	Pg,PF,Sp	Tch,Bo
A.	0.75		-	-	-		
	0.33	WP,Me,Chi,Pk	Py	Ts,Cl,Sp,Bu,Ke,KJ	Em,Coo	Pg,PF,Sp	Fa,Tch,Bo,
	7	WP,Fm,Me,Pk,Or	Py	Cl,Ts,Spi,Fs,Bu,To,SS	Coo,Em	Sp,Pg,PF	Fa,Bc,Nc,T
	0.67	WP,Fm,Gm, Vs	Py	Ct,Js,SS,Cl,Ts,Sr,Fr,Df,Spi,Bu,To	Em,Coo	Sp,Pg,PF	Bc,Ra,Tch,
	3						
	3	WP,Fm,Ab,Vs	Py,Fm	Cl,Ts,Spi,Col,Ke,To,Cc	Em,Coo	Sp,Pg,PF,GM	Bc,Tch,Pl,
	0.75	-	-	Cl,Fs,Col,Sp	Coo,Em,DDT	PF	
	0.75	WP,Fm,Pk,Me	Py	Cl,Ts,Spi,Sr,Fr,Os,Cc,KJ,Bu	Em,Coo,DDT,Bg	Pg,PF,GM,Sp	-
	0	-	-	-	-	-	-
(est)	0.33						
	1.5	WP,Cc	Py	Cl,Fs,To,Bu,Ke	Em,Coo	PF,Pg,Sp	Tch
	1	Fm		Cl,Fs,Ke,To,Sr	Coo,Em	Rr,PF,Sj	Tch
(est)	2						
(est)	2						
	1.5	WP,Fm,Ch,Ab,M,Vs	Py	Cl,Ts,Fs	Em,Coo,DDT,Bg,G.S	Pg,PF,Sp	Bc,Ra,Nc,T
	0						
(est)	0.4						
(est)	2						
	1.33	WP,Fm,M,Ab,Vs	Py,Chi,Fm	Cl,Ts,Fu,Fs,Spi,Ke,KJ	Em,Coo	Pg,PF,Sp,Sc	Bc,Nc,Tch,
	1	WP,Fm,Vs,Chi	Py,Fm,Vs,Chi	Cl,Ts,Fr,St,Ch,Tea,Sr,Bu,KJ,Gd	Em,Coo,DDT,Bg	Pg,PF,Sp,Sc	Bc,Tch,Bo
	2	WP	-	Gd,Cl,Fs,St,KJ	Em,Coo	PF,Pg,Sj	Nc,Tch,Pl,
	3						Bc
	7	WP,Fm,Ab,Vs	Py,Fm,Ab,Vs	Fz,Js,Cl,SS,Ts,Fs,To	Em,Coo,VC	Pg,PF,Sp,Sc	Bc,Ra,Nc,Tch
	1.25	WP	Py	SS,Cl,Ts,Fs,Ke,Spi,Cc,Bu	Em,Coo,G.S.	Pg,PF,Sp,GM	Bc,Ra,Nc,T
	1	WP,M,Fm,Vs	Py,Fm,Ab,Gg	Cl,Gd,Ts,Sr,Cc,Re,Fs,KJ,Tea	Em,Coo,G.S.,DRO	Pg,PF,Sp,Sc	Bc,Ra,Tch,
	7	WP,Cc,Fm,Vs,M	Py	Cl,Ts,Fr,Sr,Spi,Tea,KJ	Em,Coo,FB	Pg,PF,Sp	Bc,Tch,Pl,
	0.8	WP,Fm	Py	Tea,KJ,Sr,Ps	Em,Coo	PF,Pg,Sp,Sj	-
	4	Cc	-	Cl,Re,Spi,Fs,Col	Em,Coo,Rr	Rr,PF,Sj	Nc,Bo,Ph
	2	M,Chi,Pn,Vs,Fm,WP	Py <sup>x</sup> ,Chi,Fm	Cl,Gd,Fr,Re,Fs,Col,Ke	Em,Coo	Pg,PF,Sp,GM	Nc,Ww
	3	WP,Cc,Chi,Ab,Vs	Py	Cl,Ts,Os,Ch,Cc,Fs,Ke,Col,To	Em,Coo,DDT,Bg,Ai	Pg,PF,Sp,GM	Pl
(son)	6	WP,Fm,M,Vs	Py,Fm,Vs	Fs,Cl,Ts	Em,Coo	Pg,PF,Sp	Bc,Ra,Nc,T
(est)	0.8	WP	-	Fs,Ms,Ke,To	Em,Coo,GS,MO	Pg,PF	Bc,Ra,Nc,T

x) For father-in-law.Gets profits

	Visits from outside or main external contacts (G)	Reason(s) for external contacts (H)	Possessed modern items (J)	Used fertilizer	Comments	Economic Resistance Ability	Farmer Category
	Coo, Em, Bg, DDT	PF, Pg	-	Yes	Casual labourer. 5 RS/day	2	III
						3	IV
	Coo, Em, Bg, DDT	PF, Pg	Bo	No	Casual labourer. 5 RS/day	3	IV
	Coo, Em	PF, Pg	-	Yes	Casual labourer. 5 RS/day	3	IV
	Em, Coo, FB, DDT	Sp, PF, Pg	-	Yes	Casual labourer. 5 RS/day	1	III
	Em, Coo	Pg, PF, Sp, Sj	Ph	No	Casual labourer. 5 RS/day Eating Gobkolle	1	I
	Em, Coo	Pg, PF, Sp, Sj	Tch, Bo	Yes	Casual labourer. 5 RS/day Sharing py with father	1	III
	Coo, Em	PF, Pg	Nc, Bo	No	Casual labourer. 5 RS/day Hm not fr.k.	3	IV
	Em, Coc	PF, Pg, Sp	Tch, Bo, Ph	Yes	Casual labourer. 5 RS/day	1	III
	Coo, Em	PF, Pg	Tch	No	Casual labourer. 5 RS/day Sharing Py with father	3	IV
	Em, Coo, Bg, DDT	PF, Pg, Sp	Bc, Ra, Nc, Tch, Pl, Bo	Yes		1	I
	Em, Coo	Pg, PF, Sp	Bc, Tch, Pl, Ww, Bo, Ph	Yes		1	I
	Em, Coo, Si	Pg, PF	Bc, Ra, Nc, Tch, Ww, Tob, Bo, Ph, Dn	Yes	Schoolteacher. Paddy cultivation for father-in-law	1	I
	Em, Coo	Pg, PF, Sp	Tch, Bo	No	Casual labourer. 5 RS/day Selling rice for 20 RS/Bush	1	III
	-					1	III
	Em, Coo	Pg, PF, Sp	Ra, Tch, Bo, Ph	Yes	Hm runs a small shop	1	I
	Coo, Em	Sp, Pg, PF	Fa, Bc, Nc, Tch, Aw, Ww, Tob, Ph	Yes	Rich "mudalali"	1	I
pi, Bu, To	Em, Coo	Sp, Pg, PF	Bc, Ra, Tch, Pl, Ww, Tob, Bo, Ph	Yes	Tractor owner	1	I
					Divorced woman. Very poor	3	IV
	Em, Coo	Sp, Pg, PF, GM	Bc, Tch, Pl, Bo, Ph	Yes	Casual labourer. 5 RS/day	1	I
	Coo, Em, DDT	PF		No	Casual labourer. 5 RS/day	3	IV
Bu	Em, Coo, DDT, Bg	Pg, PF, GM, Sp	-	Yes	Casual labourer. 5 RS/day	1	III
	-	-	-		Old, starving	3	IV
					Casual labourer. 5 RS/day	3	IV
	Em, Coo	PF, Pg, Sp	Tch	No	Casual labourer. 5 RS/day	1	III
	Coo, Em	Rr, PF, Sj	Tch	No	Lost his paddy land to Hh 16; Wage labourer 5 RS/day	3	IV
						1	III
						1	III
	Em, Coo, DDT, Bg, G.S	Pg, PF, Sp	Bc, Ra, Nc, Tch, Ww, Bo, Ph	Yes	Shopowner	1	I
					Old widow	3	IV
					Casual labourer. 5 RS/day	3	IV
						3	IV
	Em, Coo	Pg, PF, Sp, Scc	Bc, Nc, Tch, Pl, Ww, Tob, Bo, Ph	Yes		1	I
KJ, Gd	Em, Coo, DDT, Bg	Pg, PF, Sp, Scc	Bc, Tch, Bo	Yes	Hm buys gold to keep for security. Sometimes hirework	1	I
	Em, Coo	PF, Pg, Sj	Nc, Tch, Pl, Ph	Yes	Sharing paddy land with 32A. Casual labourer. 6 RS/day	1	III
			Bc		Casual labourer. 5 RS/day	2	III
	Em, Coo, VC	Pg, PF, Sp, Scc	Bc, Ra, Nc, Tch, Pl, Ww, Ww, Tob, Bo, Ph	Yes	Tractor owner	1	I
	Em, Coo, G.S.	Pg, PF, Sp, GM	Bc, Ra, Nc, Tch, Pl, Aw, Ww, Bo, Ph	Yes	Tractor owner	1	I
Tea	Em, Coo, G.S., DRO	Pg, PF, Sp, Scc	Bc, Ra, Tch, Pl, Ww, Tob	No		1	I
	Em, Coo, FB	Pg, PF, Sp	Bc, Tch, Pl, Ww, Bo, Ph	No	Work with carpentry	1	I
	Em, Coo	PF, Pg, Sp, Sj	-	No	Casual labourer. 5 RS/day	2	III
	Em, Coo, Rr	Rr, PF, Sj	Nc, Bo, Ph	No	Casual labourer (woman) 5 RS/day. Not mn. 6 RS/each	3	IV
	Em, Coo	Pg, PF, Sp, GM	Nc, Ww	No	Casual labourer. 5 RS/day. Works with py for father-in-law	2	III
, To	Em, Coo, DDT, Bg, Ai	Pg, PF, Sp, GM	Pl	Yes	Occasional casual labour. 5 RS/day	1	III
	Em, Coo	Pg, PF, Sp	Bc, Ra, Nc, Tch, Pl, Ww, Tob, Bo	Yes	Hm has a small shop	1	I
	Em, Coo, GS, MO	Pg, PF	Bc, Ra, Nc, Tch, Aw, Ww, Tob, Bo, Ph	Yes	Schoolmaster. Work with paddy as a shareholder.	1	I

Village: Udakuruwa I & II

District: Badulla

Udakuruwa I														
Hh no	Hh Pr	Age Hh	Dw PA	Sick or Old E (>65)	INFANT I (<15)	RS/M	P	C	G	Est PY/A	Cat	h/d Hh	PA/IA	Cultivated crops (P, O, S, Ch, T, M, Pk)
1	Cult	M 42	3	-	5	75	1	3	2	55 b	3 c	8	0.6	WP, Or, M, CC, Ch, Sp,
2	TobF/Cult	M 41	2	-	2	500	-	-	21	(160)b	-	12	1	To, Sn, Ch, T, S, M, Pk
3	Cult/KitT	M 30	3	1 (blind)	1	50	3/4	-	2	45 b	2 b	6	1.5	WP, DP, Fm, Me, Kl
4	Cult/Carp	M 35	3	-	5	20	1/4	2	1	15 b	-	7	0.6	WP, Me, Fm, Bs, Ab
5	Cult	M 67	4	1	-	40	2	2	3	110 b	4 wb 5 c	7	4	WP, CC, Or, A
6	Cult	M 50	3	-	1	10	3/4	-	4	45 b	-	5	3	WP, Fm, Me, Bs
7	Cult	M 60	4	-	2	15	3/4	-	1 1/2	45 b	-	5	2	WP
8	Cult/CL	F 70	2	1	-	-	1/2	-	1/2	30 b	-	2	2	WP, Fm, Me
9	Cult	M 38	2	-	6	16	-(s)	1 1/2	2	(c)	-	7	0.6	-
10	Cult	M 30	2	-	-	120	Hh 11 SF	Hh 11 SF	Hh 11 SF	(c)	-	4	2	WP, Or, Pn, CC, Vs
11	Cult	M 60	2	-	-	25	1/2	1	1 1/2	30 b	-	8	2	WP, Me, Fm, Or, CC, Ca,
12	-	M 35	2	1	-	-	-	1	-	Nil	-	2	-	-
13	Cult	M 29	3	1	4	200	1 1/2	3	2	75 b	-	9	0.6	WP, DP, Fm, Me, A, Or
14	Cult	M 45	4	1	4	35	2	2	1	110 b	-	5	0.8	WP, Fm, Sn, Me, Bs
15	Cult	M 63	3	0	3	15	1	3	-	55 b	2 c	8	1	WP, DP, Me, Fm
16	Cult	M 38	2	-	3	5	1/2	-	-	30 b	2 c	3	0.67	WP, DP, Fm, Me
17	-	M 32	2	-	3	80	SF	2	SF	-	-	7	0.67	WP, DP, Fm, Me
18	Cult/Carp	M 63	7	-	-	25	2	7	-	110 b	8 c	4	7	WP, DP, Fm, Me
19A	Cult/L (wb)	M 45	6	-	3	30	1	1 1/2	-	55 b	8 wb 2 c	2	2	WP (chena destroyed)
19B	Cult/L (wb)	M 39	3	-	6	25	1	1 1/2	-	55 b	4 wb 3 c	5	0.5	WP, Me, Fm
20	Cult/Ho B	M 35	2	-	2	80	1/2	1/2	-	30 b	-	8	1	WP, M
21	Cult	M 44	5	-	5	10	SF	SF	SF	-	-	8	1	WP, DP, Me, Fm
22	Cult	M 52	3	-	9	-	1 3/4	2	-	100 b	-	-	0.33	-
23	Cult	M 58	4	-	5	10	3/4	-	1	45 b	-	5	0.8	WP, Pn, M, Ca
24	Cult	M 30	2	-	2	30	1/4	1	-	15 b	-	5	1	WP, DP, Me, Fm
25	Cult (ret)	M 77	5	1	2	-	3/4	5	2	45 b	2 c	-	1.67	WP
26	Cult (son Hh 25)	M 23	4	2	1	10	1	2	2	55 b	2 c	6	1.33	WP, DP, Me, Fm, Ca, CC
27	Cult/CL	M 60	2	-	2	15 (est)	1/2	2	-	30 b	2 c	8	1	WP, Me, Fm
28	Cult/CL	M 24	2	-	2	5	-	2	-	Nil	-	6	1	Me, Fm
									21	57	46 1/2			
Udakuruwa II														
II 1	Cult/KitT	M 55	7	-	2	25	2	3	2	110 b	3 c	6	8	WP, Fm, Me
II 2	Cult	M 31	4	-	4	10 (est)	-	2	2	Nil	-	5	1	DP, Fm, Me
II 3	Cult/CL	M 32	2	-	2	175	1/2 (t)	3	-	30 b	-	12	1	WP, Me, Fm
II 4	Cult/CL	M 33	2	-	2	30	1/2 (t)	-	1	30 b	2 c	6	1	WP, Me, Fm, Pn
II 5	Cult/CL	M 60	1	-	-	100	-	1	1	Nil	-	8	1	DP, Me, Fm, Pn, Or
							2 (3)	9	6					
							23	54	52 1/2					



G	Est FY/A	Cat	h/d Hm	PA/IA	Cultivated crops (E)	Cash crops or sold goods (E)	Common purchases (F)	Visits from outside or main external contacts (G)	Reason(s) for external contacts (H)	Pos
2	55 b	3 c	8	0.6	WP, Or, M, CC, Chi, Sp, Pn	A, Pn, Bs, Kj, Py	Ts, Cs, CBo, St, Ke, Fs, Chi	Em, Coo	Sp, Sf, Pf, Pg	Tch
21	(160) b	-	12	1	To, Sm, Chi, Ts, M, Pk	To, Vs, Or, A	Cs, Ts, Fs, Ts	Em, Coo, B, DRO	Bl, Pf, Pg, Scc	Ra
2	45 b	2 b	6	1.5	WP, DP, Fm, Me, Ki	Kj	Vs, Ch, St, Ke, Fs, Cs, Ts	Em, Coo, DRO	Pf, Scc	-
1	15 b	-	7	0.6	WP, Me, Fm, Bs, Ab	Kj, A	Fs, Ke, Chi, Ts	Em, Coo	Pf, Scc	Tch
3	110 b	4 wb 5 c	7	4	WP, Cc, Or, A	A, Or	Fs, Re	Coo, Em	Rr, Pf, Scc	Tch
4	45 b	-	5	3	WP, Fm, Me, Bs	A	Fs	DRO, RDO, Em, Coo	Pf, Rr, Scc	Nc
1 1/2	45 b	-	5	2	WP	A, Kj	Fs, Chi, Cs	Coo, Em	Rr, Pf, Scc	Nc
1/2	30 b	-	-	2	WP, Fm, Me	A	Cs	Em, Coo, Rdo, Pc	Rr, Pf, Scc	Tch
2	(c)	-	7	0.6	-	-	-	-	-	-
Hh 11 SF	(c)	-	4	2	WP, Or, Pn, Cc, Vs	Kj, A, Vs, Pn, Bl	Ts, Cs, Chi, Ke, Mat, St, Col, Top, Sp	DRO, MO, Pc, Em, Coo	Pf, Scc, Pg, Rr	Nc
1 1/2	30 b	-	8	2	WP, Me, Fm, Or, Cc, Ca, Co	A	Ke, St, Chi, Os, Fs	Coo, Em, DRO	Scc, Pf, Pg, Rr	Ra
-	Nil	-	-	2	-	-	-	-	-	-
2	75 b	-	9	0.6	WP, DP, Fm, Me, A, Or	A, Or	Cs, Vs, Spi, Fs	Coo, Em, DRO, Pc	Pf, Scc, Rr	Ra
1	110 b	-	5	0.8	WP, Fm, Sm, Me, Bs	A, Or	Vs, Fs	Coo, Em, DRO, Pc	Rr, Pf, Scc, Rl	Nc
-	55 b	2 c	8	1	WP, DP, Me, Fm	A	Re, Chi, St, Fr, Spi, Cs	Coo, Em, DRO	Rr, Scc, Pf	Nc
-	30 b	2 c	3	0.67	WP, DP, Fm, Me	A	Cc, St, Ke	Coo, Em	Rr, Scc, Pf	-
SF	-	-	7	0.67	WP, DP, Fm, Me	Or, Pn	Cs, Ts, Fs, Ke	Coo, Em, DRO, Si, Al	Pf, Scc	Nc
-	110 b	8 c	4	7	WP, DP, Fm, Me	A, Or	To, Cs, Fs, Df, Ke, Spi	Coo, Em, DRO, Pc	Rr, Pf, Scc	Nc
-	55 b	8 wb 2 c	-	2	WP (chena destroyed)	A	Cs, Fs	Coo, Em, Pc	Rr, Pf, Scc	Nc
-	55 b	4 wb 3 c	5	0.5	WP, Me, Fm	A	Cs, Chi, Spi, Fs, Ke	Em, Coo, Pc	Rr, Pf, Scc	Pl
-	30 b	-	8	1	WP, M	-	Cs, Fr, St, Chi, Ke	Em, Coo, Pc	Rr, Pf	Nc
SF	-	-	8	1	WP, DP, Me, Fm	A, Or	Cs, Fs, Chi, Os	Em, Coo	Rr, Pf, Scc	Ra
-	100 b	-	-	0.33	-	-	-	-	-	-
1	45 b	-	5	0.8	WP, Pn, M, Ca	A	Cs, Fs, St	Em, Coo, Pc	Rr, Pf, Scc	-
-	15 b	-	5	1	WP, DP, Me, Fm	A, Pn	Cs, Fs, Ke, Col, Spi	Coo, Em	Rr, Pf, Scc	Tc
2	45 b	2 c	-	1.67	WP	-	-	-	-	-
2	55 b	2 c	6	1.33	WP, DP, Me, Fm, Ca, Cc	Me, Fm	Cs, Fs	Coo, Em, Pc	Rr, Pf, Scc	Tc
-	30 b	2 c	8	1	WP, Me, Fm	A	Cs, St, Chi, Fs	Coo, Em	Rr, Pf	Tc
-	Nil	-	6	1	Me, Fm	-	Fs	Coo, Pc	Rr	Tc
46 1/2										
2	110 b	3 c	6	8	WP, Fm, Me	A, Kj	St, Chi, Spi, Fs, Ke	Coo, Em, Pc, DRO	Rr, Pf, Scc, Rl	M
2	Nil	-	5	1	DP, Fm, Me	A	Fs, Ke	Coo, Em	Rr, Pf	Nc
-	30 b	-	12	1	WP, Me, Fm	A	Cs, Re, Fl, Fs	Coo, Em, Pc	Rr, Pf	R
1	30 b	2 c	6	1	WP, Me, Fm, Pn	A, Pn	Cs, St, Chi, Fs, Ke	Coo, Em, Pc	Rr, Pf, Scc	Tc
1	Nil	-	8	1	DP, Me, Fm, Pn, Or	A, Or, Pn	Cs, Ts, Fs, Ke, St, Spi	Em, Coo	Rr, Pf, Scc	-
6										
52 1/2										

ts from side or main mal contacts	Reason(s) for external contacts (H)	Possessed "modern" items (I)	Used ferti- lizer	Comments	Economic Resistance Ability	Farmer category
oo	Sp,Sf,PF,Pg	Tch,Ww,Bo	Yes		1	II
oo,B,DRO	B1,PF,Pg,Sc	Ra,Nc,Tch,Pl,Ww,Tob,Bo,Ph,Dr	Yes		1	I
oo,DRO	PF,Sc	-	Yes		1	II
oo	PF,Sc	Tch	No		1	II
Em	Rr,PF,Sc	Tch,Bo,Ph	Yes		1	II
DRO,Em,Coo	PF,Rr,Sc	Nc,Bo	No		1	II
Em	Rr,PF,Sc	Nc,Tch,Pl,Ph	Yes		1	II
oo,Rdo,Pc	Rr,PF,Sc	Tch,Bo,Ph	Yes		2	III
	-	-	-		2	III
MD,Pc,Em,Coo	PF,Sc,Pg,Rr	Nc,Tch,Ww,Tob,Bo,Ph	Yes		1	II
Em,DRO	Sc,PF,Pg,Rr	Ra,Tch,Pl,Bo,Ph	Yes		1	II
	-	-	-		3	IV
Em,DRO,Pc	PF,Sc,Rr	Ra,Nc,Tch,Ww,Tob,Ph	Yes		1	II
Em,DRO,Pc	Rr,PF,Sc,RL	Nc,Tch,Bo,Ph (rifle)	Yes		1	II
Em,DRO	Rr,Sc,PF	Nc	Yes		1	II
Em	Rr,Sc,PF	-	No		1	II
Em,DRO,S1,Al	PF,Sc	Nc,Tch,Tob,Bo,Ph	Yes	Working as school peon and letter carrier.Earning 30 RS/month	1	III
Em,DRO,Pc	Rr,PF,Sc	Nc,Tch,Pl,Ww,Tob,Bo,Ph	Yes	Carpenter	1	II
Em,Pc	Rr,PF,Sc	Nc,Tch,Ww,Bo	No	Plowing paddy fields with buffaloes for others	1	II
oo,Pc	Rr,PF,Sc	Pl,Ph	Yes		1	II
oo,Pc	Rr,PF	Nc,Tob,Bo	Yes	Housebuilder	1	III
oo	Rr,PF,Sc	Ra,Nc,Bo,Ph	Yes	Used to earn 65-70 RS/month earlier	1	II
	-	-	-		2	II
Coo,Pc	Rr,PF,Sc	-	No		2	II
Em	Rr,PF,Sc	Tch,Bo,Ph	Yes	Most isolated settlement	2	II
	-	-	-	Father to Hm Hh 26	2	II
Em,Pc	Rr,PF,Sc	Tch	No	Cultivating own and father's land	1	II
Em	Rr,PF	-	No	Wahangpura caste	2	III
Pc	Rr	Tch	No	Wahangpura caste	3	IV
Em,Pc,DRO	Rr,PF,Sc,RL	Nc,Tch,Pl,Ww,Tob,Ph (rifle)	Yes	Wahangpura caste	1	II
Em	Rr,PF	Nc	No	Wahangpura caste	2	III
Em,Pc	Rr,PF	Ra,Nc,Pl,iW	No	Wahangpura caste	1	III
Em,Pc	Rr,PF,Sc	Tch	No	Wahangpura caste	1	III
Coo	Rr,PF,Sc	-	No	Wahangpura caste	2	III

Castes and Subcastes Found in Sinhalese Regions of Contemporary Ceylon

Rank	Caste Name	Traditional function
High castes	Goyiagama	Agriculturalists
	Radala	Holders of royal appointments
	Mudali	Popular leaders
Subcastes	Patti	Cowherds to the king
	Katupulle	Royal clerks
Goya	Nilamakkara	Temple servants
	Porovakara	Wood choppers
	Vahal	Domestic servants for the Radala
	Gattara	Goyiagama outcaste
	Guruvo (Found in N.C. Province)	
	Karava	Fishermen
	Subcaste	" Porovakara
Subcastes	Salagama	Cinnamon peelers
	{ Hevapanne	Soldiers
	{ Kurundukara	Cinnamon peelers
Subcaste	Durava (only in low c.)	Toddy tappers
Low castes	Navandanna (Acari)	Craftsmen, including smiths
	Hannali	Tailors
	Hunu	Burners of lime
	Hena (Rada or Dhoby)	Laundrymen for higher castes
	Vahumpura (Hakuru)	Jaggery makers
	Hinna	Laundrymen to Salagama
	Badahala	Potters
	Panikku	Barbers
	Velli-durayi	Keepers of the sacred Boo tree
	Panna-durayi	Probably grass cutters
	Berava, Batgam Berava	Tom-tom beaters
	Batgam (Padu)	Bearers of king's palanquin
	Oli	Dancers
	Pali	Laundrymen for low castes
	Kumara	Matweavers
	Gahala-berava	Drummers at funerals
	Rodiya	Beggars

Pattern of harvested or otherwise extracted edible items in the village Bukmitiyawa 1975 with selected nutritional values.

Items harvested or otherwise extracted	Protein	Calcium	Iron	Vitamin A	Riboflavin	Comments
<b>1. Nuts</b>						
Coconut	4.5	10	1.7	0	100	perennial
Ground nut	26.7	90	2.8	19	130	
Gingelly seeds	18.3	1450	10.5	30	340	
<b>2. Yams</b>						
(potatoes)	1.6	10	0.7	12	10	
(potatoes, sweet)	1.2	46	0.8	3	40	
Manioc	0.7	50	0.9	-	100	
(Yams, ordinary)	2.5	12	0.4	130	155	
<b>3. Vegetables Leafy</b>						
Kankun	2.8	110	3.6	990	130	
Mukunnuwenna (Gotukola)	5.6	510	16.7	963	140	
Sarana	3.8	220	68.8	920	50	
(Thampala)	1.4	52	2.4	827	130	
(Nivithi)	3.8	397	24.2	2261	105	
	1.7	73	10.9	2790	260	
<b>4. Vegetables Seasonal</b>						
Jack, tender	2.6	30	1.7	0	40	perennial
Jack, seeds	6.6	50	1.5	17	110	
Bread Fruit	1.4	25	1.1	15	-	
<b>5. Vegetable Fruit</b>						
(Ash Plantain)	1.4	10	0.6	15	20	perennial
Brinfals	1.4	17	0.9	37	110	
(Bandakkas)	1.9	66	1.5	88	100	
(Cucumber)	0.9	10	1.5	-	-	
Ash pumpkin (Wattakolu)	0.4	30	0.8	-	10	
	0.5	18	1.6	-	60	
Red pumpkin	1.2	20	0.7	84	40	
<b>6. Fruits</b>						
Plantains	1.1	7	0.5	30	50	perennial
Papaws	0.6	17	0.5	330	250	perennial
Pineapple	0.4	20	1.2	9	120	
Oranges	0.7	26	0.3	9	30	perennial
Mangoes	0.6	14	1.3	1371	50	perennial
<b>7. Pulses</b>						
(Dhall)	25.1	68	4.8	135	200	
(Green gram)	24.5	124	7.3	4.7	390	
(Cow pea)	24.6	77	5.9	6	200	
<b>8. Betel</b>						
One Chew of betel (1 leaf and piece of areca-nut)	0.6	230	0.5	586	330	Almost 50% of vitamin A at low income levels is supplied by betel and if the leaf is presumed to be swallowed, then the intake could be considered adequate

Items harvested or otherwise extracted	Protein	Calcium	Iron	Vitamin A	Riboflavin	Comments
9. Condiments:						
Dried chilies	15.9	160	2.3	272	430	
Green chilies	2.9	30	1.2	87	390	
(Red onions	1.8	40	1.2	25	20	
Limes	1.5	90	0.3	-	-	
Recommended per capita daily allowance for Sri Lanka	45 gr	519 mg	23 mg	(retinol) 642 mcg	1220 mcg	Calories 2200

Comment:

There is a deficit of calcium among the bulk of the population, but the habit of chewing betel leaves smeared with slaked lime (calcium hydroxide) increases the intake of calcium. (Nutritional Newsletter, 1973).

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