

Impact of Informal Land Transactions in Settlement Schemes in Sri Lanka

J.K.M.D. Chandrasiri

Hector Kobbekaduwa Agrarian Research and Training Institute



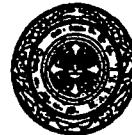
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Foreword

Initiation of irrigated settlement schemes had been a major rural development strategy before independence of Sri Lanka. So far, more than hundred settlement schemes have been established by settling about one hundred thousand families. According to Land Development Ordinance of 1935 and its amendments that govern the land in irrigated settlements, the subdivision and all forms of transactions such as leasing, mortgaging and selling of irrigated land are restricted. But, with time and development of these schemes lands are informally transferred to various groups of people including second generation members in various ways. Although this has become a popular phenomenon in irrigated settlements, still researchers and scholars have not paid much attention to this issue. So the real situation on the issue is unknown. In order to fill this information gap, the HARTI has recently conducted a study on informal land transactions in settlement schemes.

This study has investigated broader aspects of informal land transactions by looking at the issue from various angles. The points of view of land owners, operators, as well as conditions governing utilization and management of resources have been taken in to account in the study.

The aspects covered by the study includes nature and extent of spatial and temporal variations of informal land transactions, comparison between the production of land givers and operators, the impact of informal land transactions on investment in land, productivity, employment, income generation and well being of the settlers and implications of informal land transactions in managing settlements.

The information available in this report will be very useful to policy makers, planners, policy implementers, development workers, researchers, scholars and others who are interested in development of settlements.

I take the opportunity to congratulate the author, Mr. J.K.M.D. Chandrasiri, Research Fellow and the Head of the Agricultural Policy and Project Evaluation Division of the institute for undertaking the study which provides details on informal land transactions in irrigated settlements in the country.

Lalith Kantha Jayasekara

Director

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Mrs. Chandra Senarath, Residential Project Manager and Mr. W.D. Abeyratna, Deputy Residential Project Manager (Land) of Udawalawa Special Project Area under Mahaweli and Mr. P.P. Pathirana, former Residential Project Manager (Land), Mahawli-H provided office data and gave their own views on the subject under study.

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Prof. W.I. Suraweera, former Chairman of the University Grants Commission edited the final draft of the report. The printing staff of HARTI did an excellent job in printing. To all of them I express my deep gratitude.

**J.K.M.D. Chandrasiri
Coordinator**

Executive Summary

The study examined informal land transactions in irrigated settlement schemes in Sri Lanka paying particular attention to causes for such transactions and their impact on crop production, investment on land, management of settlement and the well-being of the settlers. The study was based on a sample survey of settlers under Parakrama Samudra, Mahaweli-H, Udawalawa and Kirindi Oya schemes.

According to the findings informal operation of low land is prominent in settlement schemes. The most popular informal transaction methods were leasing on fixed produce (*vee badu*), leasing on cash and mortgaging. The other methods were purchasing without legal documents, fragmenting, jointly managing and encroaching on government and private lands. The common reasons for informal land transactions were the shortage of family labour for cultivating the land and difficulty of cultivating because legally entrusted parties living far away from the land. The informal tenure /transaction methods were diverse depending on land rent, cultivation rights and terms and conditions on managing the land. The environmental conditions such as water availability, cultivable crops, cropping pattern, infrastructure, marketing facilities etc have also contributes to fragmentation of land.

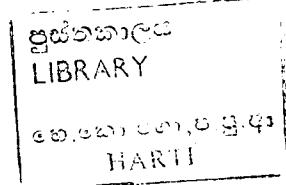
Although, generally the same group functions as land givers and takers, there are separate groups for each with specific characteristics. Greater involvement in paid jobs is a prominent characteristic of land givers while greater availability of family labour and greater involvement of them in farming were the important characteristics of land takers.

Informal operators seem to be managing land more productively than the owner operators by adopting modern technology. However, informal land transaction seems to be a barrier for common management of irrigation systems because the informal operators do not abide by common management rules. The absence of legal land rights has not been a severe restriction for informal operators to obtain loans because they depend much on semi-formal financial institutions. Since most of the informal land transactions have taken place between friends or relations, there is no ill effect on relationships between informal land owners and operators affecting the well being of either party.

There are some negative effects in fragmentation such as the emergence of uneconomic holdings. In schemes were freehold rights for land is available, these negative effects have been prevented via purchasing and amalgamation of uneconomic holdings. Hence, informal operation of land in colonization schemes should be formalized by permitting transfer of land legally into the hands of efficient operators.

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Chapter One

Introduction

1.1 Organization of the Report

This report has nine chapters. First chapter includes the study problem, objectives, methodology, and study area. Chapter two presents the results of the literature survey on informal land transactions in irrigated settlements. Chapter three gives general information about the settlement schemes where the study was conducted and the specific information of the locations selected for the study. Chapter four discusses informal land transactions in the study area covering their magnitude, diversity, spatial and temporal variations and their causes. Chapter five presents the socio-economic background of both land owners and takers regarding informal land transactions and the production relationship between two groups. Chapter six explains the economic and social impact of informal land transactions paying special attention to its impact on investment on land, obtaining of credit, types of crops grown, input and technological use and income and well-being of the settlers. Chapter seven is about the impact of informal land transactions on management of settlements. Possible effects of granting free hold titles for settlement land are discussed in chapter eight. Final chapter is devoted to present the summary of study findings, conclusions and the recommendations.

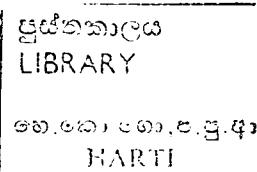
1.2 Major Settlements

In Sri Lanka, the history of settling people by alienation of various types of government lands as a development strategy goes back to the early decades of the 20th century (Report of the Land Commission, 2008). This became a popular rural development strategy during the pre and post independence eras. The land alienation which ultimately led to creation of human settlements was done under different types of schemes. The table 1.1 indicates those types of schemes as well as the number of allottees settled and the extent of land allotted for each of them. Accordingly, the regularization of encroachments, village expansion schemes and major settlement schemes appear to be important in terms of the number of allotments made to settlers and the area utilized for the establishment of settlements.

Table 1.1: Types of Settlement Schemes, Number of Allotters and Distributed Land Extent

Type of Scheme	No. of Schemes	No. of Allottees	Acreage
Major Settlement Schemes	109	100,317	417,620
Village Expansion Schemes	-	515,022	744,748
Highland Settlement Schemes	52	10,959	37,107
Middle Class Schemes	-	13,385	156,264
Youth Settlement Schemes	55	6,245	19,467
Regularization of Encroachments	-	520,834	667,130
Total		1,166,762	2,042,336

Source: Records of the Department of Land Commissioner, 2006.



Among various types of settlements, “Major Settlement Schemes” known as “Irrigated Settlements” or “Major Colonizations” were subjected to more debate than other schemes, due to their contribution to society and economy of the country. Hence, this study focuses mainly on major settlement schemes in which the policy makers, programme implementers and academics are more interested.

The initial objectives expected to be achieved from major settlement schemes were: (a) protecting of peasant farmers as a group; (b) alleviating land hunger among the poorest of the poor; (c) relieving population pressure of the villages in the wet zone of the country; (Farmer, 1957) (d) increasing food production, particularly paddy; (e) developing the scarcely populated dry zone. Some of the more recent objectives were: (a) generating hydro power; (<http://www.unescap.org/rural/doc/oa/Sri%20lanka.PDF>) (b) promoting industries; (c) promoting exports.

In order to achieve the above objectives, heavy investments were made to construct reservoirs and necessary infrastructure such as irrigation canals, roads, housing units, schools and hospitals. The land extent where people were settled varied from 8 acres or more at the initial schemes to 2½ acres in later ones. The settlers were assured free water and some other facilities like extension services and marketing of food crops. Therefore some scholars have commented that “The largest National investments in Sri Lanka since national independence were on the development of her land and water resources and the related land settlement schemes that culminated in Gal Oya and Mahaweli Development Projects” (Madduma Bandara, 1998).

1.3 Research Problem

The process of land alienation in major colonization schemes is under the provisions of the Land Development Ordinance No. 18 of 1935 and its subsequent amendments. Those provisions instituted the state of “protected tenure” for the lands granted to settlers by restricting sub-division and all forms of transactions such as transferring, leasing, mortgaging and selling. Accordingly, only a unitary system of succession was allowed to prevent fragmentation through inheritance. The later amendments to the Act allowed sub-division of land for transferring among more inhabitants but subjected to a minimum size for each type of land; 1½ acre for lowland and ¼ acre for highland. Selling is completely restricted by hard rules and regulations. Leasing and mortgaging were not allowed at the beginning, but later on mortgaging only to state banks and cooperatives, as a collateral to obtain loans, was allowed.

The empirical situation in settlements is much more complex than what is expected from the above mentioned provisions of the Land Development Ordinance. Despite the available legal restrictions against sale, mortgage and lease of allocated state land, a considerable degree of informal land transactions has been observed in the settlements (Land Commission, 1985). Large scale informal sub-division or hidden fragmentation has also taken place in the settlements (Sandaratne, 1974 quoted in Ellman *et al.* 1976).

The literature indicates that the type of tenure which defines the user rights determines the household behaviour indicating level of investment for productivity improvement and resource conservation, technological use, return and income from land. Further, the type of tenure affects the transferability of land and using it as collateral for obtaining loans. These

are some of the basic conditions for developing land markets as well as financial markets (Deininger, K. 2003). With regard to the Sri Lankan situation, there are limited studies focused on these aspects in state sponsored peasant settlement schemes in the country. Most of these studies have been conducted in 1980s except for some limited studies in 1990s which mainly depend on early literature.

Under the present context of liberalization and globalization, the agriculture in Sri Lanka has been transformed considerably with application of technological innovations and commercial orientation of production and investment. The form, magnitude, causes and consequences of the informal land transactions in settlement schemes also appear to have changed more than what has been documented by previous studies. This study attempts to fill in this information gap by investigating the current practices of informal land transactions in settlements.

As some scholars (Branda, 1995) argue, the lands in settlement schemes are used inefficiently. The existing rules and regulations prevent efficient land utilization which provides opportunity to invest in such land better productive purposes. The on going Land Title Registration and Related Services of the Government (which is operating at present on pilot basis in selected locations) aims to establish a free land market in settlement areas by giving free-hold rights to the settlers' land currently owned by the state (World Bank, 2000). But, the implementation of this project in settlement areas has been with-held due to protests by many parties. One argument of the protesters was that a large amount of settlement lands have been already transferred informally so that providing freehold rights to those land would lead to loss of lands creating landless groups in settlements. Hence, this study also attempts to serve the on-going project, Land Title Registration and Related Services by generating reliable data on the intensity of informal land transactions.

1.4 Objectives of the Study

The main purpose of this study is to examine the causes of informal land transactions in settlement schemes and their impact on production, investment, income and well-being of the settlers and to provide information on informal land transactions which are useful for policy makers in the land sub-sector.

The specific objectives of the study are:

- i. To examine the nature, magnitude and causes of informal land transactions and their spatial and temporal variations in state sponsored land settlement schemes.
- ii. To investigate the production and social relationships between settlers and informal land operators and their impact on crop productivity, income and agricultural investments.
- iii. To ascertain the impact of settler-informal landholder relationships on employment, income and conditions of day to day life of the settlers as well as informal land holders.
- iv. To find out to which extent informal land transactions have affected the management of settlements in terms of operating a scheduled production plan, maintenance activities, managing water etc.
- v. To investigate the possible effects of granting freehold titles in the context of various informal tenure systems.

1.5 Methodology

The study was conducted by collecting empirical data from selected settlement schemes. A number of methods were followed to obtain information. They were administering a structured questionnaire to a sample of lowland operators; discussions with people involved in informal land transactions (land givers as well as the takers) and conducting case studies on farmers, interviewing key informants such as Grama Niladharees, Samurdhi Niladharees, Krupanishas, Farmer Organization leaders etc; informal discussions with community members and groups; interviews on land matters with Government Officers such as Colonization Officers, Assistant Land Commissioners, Land Development Officers, Divisional Secretaries, Residential Project Managers and Unit Managers (in Mahaweli area) etc and collection of secondary data available at the Divisional Secretariats, District Land Offices, Project Management Offices and Mahaweli Project Offices etc.

1.6 Study Area

The magnitude and causes of informal land transactions seem to be different from one settlement scheme to another due to certain factors such as availability of water, possibility of diversifying crops, locational setup of the schemes, the duration of their existence etc. Therefore, the schemes were selected for the study by giving special attention to the factors mentioned above. The detailed information about the selected schemes is indicated in table 1.2.

Table 1.2: Irrigated Settlement Schemes Selected for the Study and the Specific Characteristics considered for the Selection

	Scheme	Specific characteristics
1	Parakrama Samudra	An older irrigated settlement scheme. The settlers were given a large extent of land, around 8 acres (5 acres of low land and 3 acres of high land). Paddy is the dominant crop. Farming practices are somewhat traditional.
2	Udawalawa	Irrigated Settlements were initiated in mid 1960s and about 5 acres (three or two acres of low land and the rest high land) were given to each settler family. Banana, paddy and some other crops are prominent and agriculture has been more commercialized.
3	Mahaweli – H	Irrigated Settlements were initiated in mid 1970s and each settler family was given 3 acres of land (2 ½ acres of low land and half acre of high land) Paddy as well as other crops are grown.
4	Kirindi Oya Irrigation and Settlement Project	Irrigated settlements were initiated in 1980s and each settler family was given 3 acres of land (2 ½ acres of low land and half acre of high land). Other field crops including banana are prominent. Water scarcity is a major issue.

1.7 Sample Size and Selection Procedure

The selection of sample for the questionnaire survey was followed by number of stages. In the first stage, three hamlets from the irrigated settlement schemes (Krupanisa divisions or a part of them) were selected on the basis of diversity of water availability, closeness to the urban centers and availability of other infrastructure and service facilities like transport and marketing. To represent these factors, three Krupanisa divisions or a part of it from head-end, mid part and tail-end of each of the scheme were selected.

In the second stage, the sample was selected from persons who operated lowlands (by considering the lowland operators as sample unit) in concerned locations during 2006/2007 *yala* and *maha*. This selection was done randomly from a list of land operators prepared by the relevant Krupanisas. The sample represents 30 per cent of the land operators in the selected locations. The total sample size of the household survey of the land operators was 669. General information as well as specific information related to the tenure conditions of their land was obtained from all representatives of the sample. The study locations selected from each scheme and the number of land operators selected from them are shown in table 1.3. In addition to the above, a small sample of owners of leased and mortgaged lands who were selected from all study locations was interviewed. The selection of this sample was done by considering easy access to them. Such cases came to light from the interview of sample farmers.

Table 1.3: Locations Selected from Each Scheme and the Number of Land Operators Selected for the Sample.

Irrigated settlement scheme	Study Location (Krupanisa area)	Sample Population (Farmers)	Sample size	%
Mahaweli – H	Kelegama	260	87	33
	Bellankadawala	105	32	30
	Nallachchiya	165	49	30
	Sub Total	(530)	(168)	(32)
Parakrama Samudra	Abhayapura	233	70	30
	Vijayabahupura	117	35	30
	Ganangolla	145	43	30
	Sub Total	(495)	(148)	(30)
Udawalawa (Left Bank)	Habaruwewa	166	49	30
	Habaru gala	182	60	33
	Kiri Ibban-ara	206	55	27
	Sub Total	(554)	(164)	(30)
Kirindi Oya (Left Bank)	Weera Hela	275	80	29
	Berali Hela	228	66	29
	Seenukkuwa	144	45	31
	Sub Total	(647)	(191)	(30)
	Total	2,226	(669)	(30)

1.8 Study Period

The field data collection of the study was done during the period between June and December, 2007. In collecting empirical data related to operation of land, production and income, one year period from *yala* 2006 to *maha* 2006/2007 was covered.

1.9 Problems and Limitations

In case of informal land transactions in settlement schemes, both land givers and takers did not like to reveal information related to such transactions. Therefore, the researchers had to create a correct picture about the study in each location by using the list of cultivators prepared by the relevant Krupanisa for the purpose of issuing subsidized fertilizer. This list was further updated with the personal knowledge of the Krupanishas. However there were also some cases where information was not revealed. Those cases were not included in this enumeration.

Informal land transactions prevail under highland as well as lowland. But transactions of lowland are more diverse and acute than that of highland. Hence, under this study more attention was given to analyse various aspects of informal land transactions of lowland while less attention was paid to analyse the incidence of highland. That was limited to indicate the spread and magnitude of the incidence.

As there were large numbers of informally operated methods of land, it was very difficult to concentrate on the impact of all of them on investment, production, employment and income of the settlers. So the analyses in relation to those aspects were limited into more popular informal land transaction methods such as leasing and mortgaging.

Chapter Two

Review of Literature

2.1 Introduction

It is attempted in this chapter to present a review of literature on informal land transactions in settlement schemes in Sri Lanka. For this review, published as well as unpublished research studies on the subject, journal articles, seminar papers and monographs were utilized. It was also attempted by this review to present information on general conditions of informal operation of land and their economic and social consequences.

2.2 Review of Literature

Although there are a large number of studies on settlement schemes, only a few studies have focused on informal land transactions comprehensively. One such exercise is Wanigaratne's (1995) unpublished research study titled "Informal Tenure Conditions in Irrigated Settlements of Sri Lanka; A Review of Empirical Research Evidence". This study contains reviews of literature on informal land transactions in settlement schemes. He has attempted to examine the opinion of the Land Commission namely, "individual rights of land will foster a greater investment in land, better land management and higher inputs which promote higher return and better living standard among those who receive settlement land". In this exercise, the author has reviewed the informal tenure relations and their interactions with land management practices, input use, credit, and productivity and settler ability to invest in crop and enterprise diversification.

As Wanigaratne (1995) has noted, legally imposed tenure systems in settlement projects seem to be artificial arrangements as customary tenure relations continue to exist in them. As he further reveals, there is an amalgamation of both customary and legally prescribed tenure systems in settlements. According to him in irrigated settlement schemes equal sizes of lands have been distributed at the beginning and when the schemes developed with time the lands have been fragmented into wider range of operational sizes. The differentiation of operational holding sizes was caused by a dual process of land fragmentation through informal allocation among family members, lease, mortgage, sale and land accumulation by settler and non-settler investors.

In his conclusion, Wanigaratne mentions "the relationship that higher concentration of rights to land promotes more intensive land use was not established by empirical evidence. Settlement based paddy lands which were more intensively cultivated, had more inputs applied, and had more new technology adopted than freehold lands associated with rain-fed or irrigated village based paddies. There was no evidence that fragmented micro-operational holdings under various informal tenure arrangements used more inputs (including labour) than non-fragmented holdings which were owned and operated as integrated holdings under perpetual lease, nor was there any conclusive evidence that settler-owned and operated holdings were more productive than those operated by share tenants, lease holders or mortgagees" (Wanigaratne, 1995). Writing an article on agrarian changes and the peasantry under Mahaweli Development Programme, Wickramasekera (1985) has emphasized the increased incidence of diverse tenurial arrangements and social differentiations which have occurred there within a very short span of time compared to other settlement schemes.

Reviewing a number of studies done in Mahaweli H area, he has presented the general features of these two processes as follows;

- i. "Increased incidence of share cropping, leasing and mortgage-arrangements.
- ii. Tendency towards concentration of holdings through mortgage and dispossession of holdings.
- iii. Marginalization of substantial section of the rural population through indebtedness and increasing cost of cultivation.
- iv. Passing a part of the control over land into the hands of rich peasants, traders and public servants through the process; these groups have been able to consolidate their position mainly through money lending and trading activities." (Wickremasekera, 1985).

He has further explained the reasons for marginalization of the peasantry and also for giving out of land on "*ande*" (share-cropping). Accordingly, the reasons for marginalization of the peasantry are initial handicaps such as large dependency burdens, lack of capital, crop failures or poor irrigation supply to the holdings and increasing cost of cultivation which results in low income and indebtedness. The reasons he gave for giving out land on "*ande*" are difficulties in obtaining good water supply, lack of working capital or need to engage in daily wage-labour to obtain a more regular flow of cash income or personal distress and financial problems (Wickramasekara, 1985).

The paper titled "Problems of Assessing Efficiency of Paddy Small Holders in a Mahaweli Settlement" by Siriwardena S.S.A.L. (undated) indicates the social and economic differentiation and subsequent consolidation by means of production, especially land and the results of that situation in Mahaweli areas which reflect the general trend in other irrigated settlements too. According to this report, disparity between progressive and weaker settlers is a widespread feature in the settlements. As the same report has indicated "...there is hardly any visible trend towards the consolidation of holdings and polarization of the majority into landless labourers because all the settlers still remain as proprietors of land and are not fully separated from the means of production. This situation is even worse because there can be a large number of farms without families and families without farms. In other words, none of these families would be responsible for the improvement of farms; quality of soil, better management etc. of the leased or rented out lands" (Siriwardena, undated).

By synthesizing five articles in his book, "Capital and Peasant Production", Abeysekera, (1985) explains the above situation, under two concepts namely "pauperization" and "proletarianisation" which are two sides of the same process. Further explaining the situation, he points out that the settlers who mortgage or lease the land to newly emerging agrarian entrepreneurs become labourers. In this way, the settlers are being divorced from their means of production (Abeysekera, 1985)

According to Shilpi (1995), in most parts of the country land transaction is constrained by legal restrictions. In settlement areas, formal leasing of land is prohibited so that informal tenure exists there. As he further mentions, the ownership structure and legal restrictions on land transfer and leasing severely restrict the efficient operation of land market in Sri Lanka.

According to Brandao (1995), the available limitations to the functioning of the land market in Sri Lanka reduce the ability of the land market to allocate land to its best use. As he noted

this reduces opportunities for new entrepreneurs willing to take risks and invest in more profitable activities in agriculture.

2.3 Conclusion

According to literature, informal land transactions are prevalent in settlement schemes. Various types of informal transaction methods and informal allocation of land among family members have resulted in fragmenting of original land into different sizes. Accumulation of land by one group of people and losing of land by another group have resulted in polarization of the society in the settlements into two categories who own resources and who do not own resources. The ownership type has not become a factor in determining the application of inputs, technology and investments. But, the limitations for legal transfer have restricted the operation of land market by avoiding the involvement in land by the best users.

Background of the Selected Study Locations

3.1 Introduction

This chapter deals with the background information of the settlement schemes as well as the locations selected from them for this study, in order to set a proper environment for the analysis of data of the study. Accordingly, data and information related to the historical background of each settlement scheme, the type of settlers, the specific characteristics of the settler population, the extent of each type of land alienated per family, and also the land use pattern of the scheme were examined. Additionally, information on general administration system, water distribution mechanism and participatory organizational system of the relevant settlement schemes and the responsibility of the cultivators were obtained.

3.2 Parakrama Samudra Scheme

Parakrama Samudra is a well known ancient irrigation scheme built by king Parakramabahu I but fell into ruin after the decline and collapse of Polonnaruwa kingdom. It was rehabilitated in 1930s with the launch a domestic food production programme. Accordingly, the tank was rehabilitated between 1937-1944 and new settlers were allocated land around it. Under the scheme, three different groups of people have been settled: the first group was landless peasants selected by land kachcheries in different districts; the second group was retired soldiers participated in the Second World War; the third group was government workers served in relevant institutions related to development of land, irrigation and settlement.

Under this scheme, each family has been given comparatively a bigger size of land of 8 acres containing 5 acres of lowland and 3 acres of highland. Altogether, 25,000 acres of land had been alienated among the settlers from time to time. With time due to the increase of population, most of the allotments were divided into small plots legally as well as illegally to the descendants of the original settlers. (According to the prevailing legal provisions, the settler in this scheme is allowed to divide the land among three members of his family or among three children) The number of originally given land plots including later legal sub divisions are 2,844 lowland plots and 1,470 highland plots. However the number of families accommodated by the scheme including second and third generation members are around 5,600.

Administratively, the whole scheme belonged to two Divisional Secretariat areas namely Lankapura and Thamankaduwa and three Agrarian Development Center areas; Pulasthi Pura, Sevagama and New Town.

This scheme (with enough water for cultivation during both *yala* and *maha* seasons) is well known as a major rice producing area. Except in some places where papaw, banana and vegetables were grown, there was no crop diversification.

The three study locations selected for the study to represent the head end, middle area and the tail end of the scheme were Abhayapura, Vijayabahupura and Ganangolla Krupanisa divisions respectively. Abhayapura, about 15 kilometers away from Polonnaruwa town, was

a physically isolated area with poor accessible roads and also with poor market facilities. Lowlands were not diversified and only paddy was grown due to unsuitability of such lands for diversification. The Vijayabahupura which is in the middle part of the scheme is somewhat different from Abhayapura. There, lowlands were more diversified with cultivations of papaw, banana and vegetables. Most of the people settled in Vijayabahupura were soldiers involved in the Second World War and some of them were not residing in the settlement but their lands were cultivated by a caretaker or by a lease holder.

3.3 Mahaweli-H

The Mahaweli scheme is the largest development project undertaken so far by the Government of Sri Lanka. The scheme involves a multi-purpose development programme which is an integrated approach to development. The major components of the programme were; providing irrigation facilities for dry zone agriculture, generation of hydro electric power, settlement of displaced and landless families, providing required physical and social infrastructure for human habitation, providing marketing facilities for agricultural produce etc. The programme was initially designed to be implemented within a 30 year period step by step. But under Accelerated Mahaweli Development Programme in 1977, it was re-designed to be implemented within a 6 year period. The total land extent that was developed under the Accelerated Mahaweli Development project was 467,584 ha. The number of settlers benefited from it was 128,568. Under this project, a number of irrigated settlements were developed and H area is one of them. In spite of different areas, a unitary system has been followed with regard to alienating land, settling people and their management. Under the scheme, 2 ½ acres of lowland for cultivation purpose and ½ acres of highland for residential purposes have been given per family.

The people who were settled under Mahaweli-H belonged to three categories; (I) Evacuees (the people removed from Kotmale tank and other areas which subjected to earth slips) (II) Resettled (who were in the area before Mahaweli was initiated); (III) Electorate basis people (100 persons per electorate were selected). As about 30 years have passed since settling the people in H area, currently, the second generation members occupy and manage land.

This scheme has encouraged crop diversification and it has become successful. Banana, papaw, serials (such as soya bean and cowpea) and vegetables are cultivated in a considerable area of the scheme. However, in some areas crop diversification is unsuccessful due to unsuitability of soil for different crops.

The three study locations selected from the Mahaweli-H, namely Kallanchiya, Bellankadawala and Kelegama (Krupanisa areas) are within the service area of Thambuththegama Agrarian Development Center. These three locations represent head end, middle and tail end areas of the irrigation service supply respectively. Therefore, there were many differences among them not only in factors such as water availability that affect productivity but also in factors such as possibility for diversification of crops, accessibility to towns with market facilities and other services, types of people and population characteristics as well.

Kelegama is at a distance of 11 miles from Thambuttegama town. There was a mixed group of settlers. Majority of them were re-settlers in the same area before the Mahaweli scheme was started. Evacuees and people selected on electoral basis had also been settled there.

Due to non availability of sufficient water in Kelegama the settlers tended to construct agro-wells as a survival method. The availability of small old tanks in the area is conducive to keep the water table up. During the period of survey, there were 63 agro-wells. The area is suitable for crop diversification and diverse crops have been cultivated in a sizable area during the period of survey. In addition to paddy, banana, papaw, soya been, cowpea, vegetables were also grown at commercial level. The agro-wells had supported the cultivation of additional crops between *yala* and *maha* by utilizing supplementary irrigation. Although the area is far away from major towns and isolated, there had been better market opportunities for crops at the economic center in Thambuttegama. In Kelegama, there were firms involved in forward contracts with farmers for various products. This ground situation had created somewhat competitive environment among entrepreneurs to obtain lowland for commercial cultivation.

Bellankadawala is about 4 miles away from Thambuttegama. Most of the settlers were from around and were resettled in the scheme. There were no water problems, but soil was not much suitable for crop diversification. Growing of other crops was very rare.

Kallanchiya is along the Thambuttegama-Galnewa main road and about half a mile away from Thambuttegama town. Therefore it had many facilities in terms of extension, input supplies, credit and marketing which were provided by public as well as private channels. In Kallanchiya mainly evictees from Kotmale area had been resettled. The population of this colony consisted of a large number of sub-families of the second generation members as well as landless people who had been settled in small plots of half an acre size lands reserved for common purposes. Being the location in head end, there was ample water for cultivation in both *yala* and *maha* seasons. Crop diversification was also possible, but some lands were not suitable for different crops due to abundance of water. Paddy was the main crop grown. Because of high fertility of the soil in paddy lands a high yield; between 150-200 bushels per acre; could be gained. Therefore these lands had a high demand.

3.4 Udawalawa Scheme

The Udawalawa scheme which was initiated with the construction of a dam across the Walawe river was a multi-purpose irrigation and settlement project. The generation of employment by settling landless poor, producing food, growing industrial crops like sugar cane for industrial development and generation of electricity were the objectives of the scheme. Land settlement under this scheme had been initiated in 1954. At the time this survey was conducted, over 22,000 farm families had been settled in both left (11,634) and right (10,998) banks. Additionally, 15,154 non-farm families had also been settled under the scheme. The total population was 220,452. The total cultivated area was 16,412 hectares.

Initial illegal occupiers had been subsequently allotted same land legally irrespective of the extent of land they had occupied earlier. Because of this, uniform characteristics were not seen in land ownership e.g. some settlers had been given 3 acres of lowland and 2 acres of highland. There were also people who had been allotted 3 acres of lowland, 2 $\frac{1}{2}$ acres of highland for cultivation of crops and $\frac{1}{2}$ of highland for homestead.

The land under left as well as right bank of the scheme was highly diversified and commercialized. But only left bank was selected for this study. There the major crops grown

were paddy, banana, papaw, sugar cane and vegetables. Sugar cane was grown by the settlers as out growers of the Sevenagala Sugar Factory.

Three Krupanisa areas taken for the study were Habaralu Wewa, (head end), Kiri Ibban Ara (middle) and Habarugala (tail end). In Habaralu Wewa, the farm families have been given two and half acre of highland (1/2 acre for home garden), three acres of lowland. The cultivation of this area was limited to paddy because many lands were unsuitable for diversification due to excessive availability of water.

In Kiri Ibban Ara Krupanisa division, people selected from outside had been settled and given two acres of highland ($\frac{1}{2}$ acre for home garden) and three acres of lowland. A specific fact about this division was that a small group of people (24) selected from south-west coastal line who suffered from sea erosion had also been settled in one part of the division called "Muhudu Yaya" in 1967. But majority of them have left the scheme after selling or transferring land to others on lease, mortgage etc. The area was more suitable for crop diversification. Therefore banana was cultivated there as a popular crop and there was more demand from entrepreneurs for lowland to cultivate banana. The reason for high demand was the availability of infrastructure facilities closer to the location which was along the Embilipitiya – Kiri Ibban Ara road.

Habarugala was a somewhat remote area located about 10 km away from Udawalawa-Thanamalwila road. Most of the people were pre-settlers. Some were cultivating reserved land also. There was not much demand for its land for cultivation of commercial crops like banana due to problem of water scarcity and due to distant location of the area far away from the town and the main road.

3.5 Kirindi Oya Scheme

The major objectives of the Kirindi Oya irrigation and settlement project which was initiated in the first half of 1980s were, increasing food production and providing employments to landless poor. Under this project, it was expected to construct Lunugamvehera reservoir and provide water for 8,775 ha; of new lands which are on both right and left banks of the project. A number of 8,320 landless families were expected to be settled. Out of that number 3,280 allottees under left bank and 2,141 allottees under right bank of the scheme had been settled. The size of the land given for each settler family was 2 acres of lowland and half an acre of highland.

For this study, left bank was selected despite the availability of water for cultivating paddy in both *yala* and *maha* seasons. It was a greater problem for the whole scheme. As a remedial measure, paddy land had been converted into other field crops such as cowpea, green gram, vegetables for one season or into perennial crops like banana and papaw for both seasons on a large scale.

Under the left bank of the Kirindi Oya scheme, there are administrative blocks called "Kuda Gammana". From these blocks three Krupanisa locations or a part of those locations were selected for the study. Those locations were Weera Hela (under Kuda Gammana 7), Berali Hela (Under Kuda Gammana 3) and Seenukuwa (Under Kuda Gammana 1) to represent the tail-end, mid part and the head-end of the project respectively. Administratively these three locations belonged to different administrative areas. Seenukuwa belonged to Moneragala

district, other two locations were belonged to Hambantota district. The three locations, Seenukkuwa, Berali Hela and Weera Hela and belonged to Thanamalvila, Berali Hela and Yodakandiya Agrarian Development Centre areas respectively.

There were differences in selection process of settlers with regard to each of the study location. For example, all the families of Weera Hela had been selected from the landless and unemployed second generation members of the families who had lived in the project area before the project was started. Therefore all of them were well-experienced farmers who were involved in farming as their major livelihood. The settlers in Berali Hela had been selected from Hambantota and Matara districts. Most of them were also involved in farming: The settlers in Seenukkuwa had been from the Hambantota district and they were practicing some other vocations such as fishing and businesses. So, the absence of land owners was a major characteristic in Seenukkuwa.

With regard to infrastructure and marketing facilities and availability of water, each location had some differences. Weera Hela is located very close to Tissa-Kataragama main road, but the scarcity of water had limited the demand for its lowland. Berali Hela which had connected roads with Tissa town had marketing facilities and also better availability of water compared with Weera Hela. So, there was a good demand for its land especially for cultivation of banana. Seenukkuwa had no water problems. So the productivity as well as demand for its land was higher.

3.6 General Administration

The general administrative work in these settlement schemes was done under the same structure as in other areas of the country. At divisional level the Divisional Secretary and at grass root level Grama Niladhari functioned for general administration. For extension and support services nationally operated system namely the Agrarian Development Centers headed by Divisional Officers functioned at divisional level (there were one or two Agrarian Development centers in each Divisional Secretariat Division.) and Agricultural Research and Production Assistants (ARPAs) functioned at grass root level.

3.7 Operation and Maintenance of Irrigation Systems

With regard to operation and maintenance and rehabilitation of irrigation systems and conducting a production plan, there was a general uniform system for all schemes although some differences existed between Mahaweli and non-Mahaweli schemes. Under all settlement schemes participatory system of management operated where both farmers and officers cooperatively involved in the system management. Accordingly, all farmers/cultivators and officers in all schemes had a responsibility to be involved in management and also had tasks to perform. To get the participation of all farmers/cultivators, an organizational system with different tiers of management functions was in operation. At field channel level, farmers formed into field channel groups. The representatives of these groups were encouraged to form distributory channel organizations. These groups were responsible for operation and maintenance of respective channel systems. At the top level, there was a project management committee headed by the project manager. This committee was represented by both farmer representatives and officers who performed various functions under each scheme. This committee prepared a common cultivation plan

(with participation of farmers at *kanna meetings*) in which included the types of the crops to be grown, a detailed calendar of dates for repairing canals, preparing land, sowing seeds , releasing water etc.

In order to ensure keep the proper functioning of the arranged management system in relation to operation of a production plan and operation, maintenance and rehabilitation of irrigation canals, the active participation of all farmers/cultivators of the paddy land under each irrigation system is essential. To get their participation and arrange the respective work properly (arranging *Shramadana* to repair distributory canals, arranging tasks for individual farmers to repair respective part of their field channel, communicating information about production plan, arranging input supply including subsidized fertilizer, collecting fees for irrigation maintenance activities, etc.) farmer organizations had been formed (by linking field channel organizations). Since this system is in operation, all farmers involved in cultivation of paddy lands were expected to join these organizations.

The farmers/cultivators were supposed to pay various charges as members of farmer organizations. Those were membership charges, acreages taxes and other payments for *Jala Palaka* (water controller) like “*salaaris*”. Acreage tax which was fixed for all areas was Rs.7.50 per acre. Other fees were different from organization to organization.

Chapter Four

Informal Land Transactions in the Study Area

4.1 Introduction

This chapter discusses about different types of formal and informal tenure systems (under both high and lowlands) in the study area. Besides special attention was paid to the magnitude of informal land transactions, spatial and temporal variations of such informal land transaction methods in each study area and also to find out reasons for those variations.

There were diverse types of land ownership and tenure systems in the study area. For this study, the nature of all land ownerships and tenure systems practiced by the farmers were recorded separately, as indicated in the table 4.1. The ownership and tenure systems which were outside the accepted rules and regulations of the Land Development Ordinance of 1935 and its amendments, which are the major pieces of law that governs the settlement land, were considered as informal tenure systems in this study. Out of those informal tenure systems there were some systems based on transfer of land from one party to another through sale, lease, loan, gift or inheritance. In accordance with this, the land categories 1-4 in the relevant table (table 4.1) can be considered as formal and the rest, namely the land categories 5 -13 can be considered as informal. Their legal validity is discussed in detail in the next sections.

Table 4.1: Different Land Tenure Systems in the Study Area

Category no.	Tenure System
Formal Systems	
1	Legal owner operator
2	Purchaser with legal ownership
3	Owner operators without legal documents
4	Encroachers who had subsequently obtained ownership
Informal Systems	
5	Purchasing without legal documents
6	Operating separately without legal documents
7	Operating jointly without legal documents
8	Leasing on cash
9	Leasing on fixed produce (<i>vee badu</i>)
10	Mortgaging
11	Encroaching (private)
12	Encroaching (government)
13	Operating free of charge

The category 1 refers to the legally owned operators which cover original allottees of land and their inheritors to whom the settlement land was legally transferred. They had possessed temporary permit or other legal documents such as *Swarna Bhoomi*, *Jaya Bhoomi* or *Rathna Bhoomi* deeds to claim ownership of the land. The category 2 refers to the people who had purchased settlement land legally. Those were also considered as formal operators as they had obtained the valid permits or deeds from vendors. The later amendments to the Land

Development Ordinance have provided provisions to occasionally sell the settlement land with legal coverage to a person whose occupation is farming. The category 3 refers to the people who had legal ownership rights to the land through inheritance or nomination by their parents or someone else. But, the transferring process of land that takes normally a long period had not still been accomplished. With the time being, they will receive deeds to their land as they were also legally qualified for the purpose so that they were also categorized as formal operators. Encroachers who had subsequently obtained legal ownership were categorized (category 4) as a formal group of operators under this study.

There were people who had purchased land illegally and had no any legal document to prove the ownership. These land operators come under category 5 were considered as informal operators because purchasing of a settlement land is restricted by law and also this group had not qualified to obtain any legal titles for their land. The operators categorized under number 6, and number 7 were those who had or had not possessed a legal ownership for the colony land they operated. But they operated by fragmenting into equal sizes of parcels (category 6) or jointly/sharing together (category 7). This happened normally when there were more inheritors or dependents of the same land, but land was not legally partitioned. The fragmentation of colony land lower than the particular prescribed size that is $1\frac{1}{2}$ acres for lowland is prohibited, but (going out of this regulation) the settlers had fragmented the land into small plots (that were below than prescribed sizes) or they had joint operated it to protect the survival of more dependents. The traditional jointly operation system which was practiced in the settlements was also not legally recognized under the settlement law.

In the study area, there was traditional mortgage system as well as various types of leasing systems through which other parties were operating land other than their legal owners or occupiers on various conditions such as by paying land rent, claiming rights due to long use and so on. The agreements¹ under this type of transferring of settlement land appeared to have been varied from different tenure systems which were informal because transferring of colony land under methods mentioned earlier was completely restricted by the law. In addition to mortgage, different types of leasing methods were observed in the study area.

Under mortgage system, the owner or occupier of a land had obtained some amount of cash loan from the mortgagee who was a money lender, trader, businessman or paddy miller so that he had rights to cultivate the land until the loan was settled. Under leasing, there were basically two methods; one was based on cash payments (category 8) and the other was based on kind payments - a pre-agreed share of produce (lease on fixed produce)(category 8). Under cash lease system, some amount of money was given to the legal owner to take over land for cultivation for an agreed period of time. The amount of this monetary payment and the time period entitlement to cultivate the land varied from scheme to scheme based on different crops. Under lease on fixed produce system which was popularly known as "*Vee Badu*" (category 9), a certain amount of paddy for a given unit of land was paid to the legal owner and the person who paid the money received land for cultivation for a certain period of time. The payment per cultivation season was mostly 15 bushels for one bushel area of paddy / half an acre of paddy or 30 bushels for two bushel area of paddy / one acre of paddy. The amount of payments, payment condition and some other terms of this tenure system also had many variations from scheme to scheme and location to location under diverse conditions. For example, in certain arrangements the payment of land rent was allowed to be done in cash instead of kind by converting the due amount of paddy into monetary value. In

¹ These agreements were in oral or in written and made alone or in front of a lawyer.

addition, the cultivation of other crops was also allowed in some locations subjected to the payment of agreed amount of paddy or cash.

There were mortgage and lease (*vee badu*) systems operating together in certain cases, but the could not be enumerated accurately because this system operated secretly. Under this system, the farmers who had mortgaged out their land had taken back the cultivation rights of the same land from the mortgagee under the agreements of “*vee badu*”.

Encroaching of private (category 10) or government lands (category 11) was visible in the study area. The people, who did not possess land, had encroached some of the reserved lands which were abundant in concerned settlements. These reserved lands were for canals, forest reserves and common purposes. Some lands, vacated by settlers had been occupied by some others. These encroachers had no legal rights to use such land. However with time, these types of land occupiers claim legality and become legally recognized settlers. Other occupiers who had encroached land but had not accomplished the necessary conditions to become a legal occupier of the land at the time of the survey, were considered as informal operators of colony land. The land category 13 was in respect of the land was made use of free of charge although they were obtained from some others. As transferring of land in settlement areas was considered informal, land coming under this category was also considered as informal.

4.2 Magnitude of Informal Land Transactions

The findings of this study revealed that a greater amount of operational holdings and area of lowland and a considerable amount of operational holdings and area of highland in the study area were under informal tenure conditions. This is clearly indicated in table 4.2 which presents the percentages of the parcels and extents of lowland as well as highland operated by the sample farmers in the study area under formal as well as informal tenure systems during *yala* and *maha*, (2006/2007) cultivation seasons. According to table 4.2 about 60 per cent of concerned lowlands and about 20 per cent of highlands were under informal tenure conditions.

Table 4.2: Percentages of Operational Low and Highland Parcels of the Sample-Farmers in All Study Locations during *Yala*, 2006 and *Maha*, 2006/2007

Tenure Types	Land Type							
	Lowlands				Highlands			
	<i>Yala, 2006</i>		<i>Maha, 2006/2007</i>		<i>Yala, 2006</i>		<i>Maha, 2006/2007</i>	
	% of parcels	% of land extent	% of parcels	% of land extent	% of parcels	% of land extent	% of parcels	% of land extent
Formal	40.1	39.1	38.7	37.3	78.8	79.5	78.8	79.5
Informal	59.9	60.9	61.3	62.7	21.2	20.5	21.2	20.5
Total	100	100	100	100	100	100	100	100

*Note: In relation to highlands there was no severe change in tenure between two seasons

When lowlands operated by sample farmers under informal conditions are taken into consideration, there was no significant difference to be observed among percentage values of the land parcels and the land extent in different seasons (between *yala* and *maha*). For

example, 59.9% of land parcels and 60.9% of the area operated by sample farmers during *yala* 2006 season were under informal conditions indicating very slight difference of one per cent among the two concerned values (only one per cent increase of land than parcels in *yala*). For the period of *maha* 2006/2007, the percentage values of the informally operated land parcels and their areas were 61.3 and 62.7 per cent respectively indicating very slight difference of 1.4 per cent between those two values (only 1.4 per cent increase in area than parcels in *maha*). However, these data reflect a slight increase of the percentages of the land parcels and the area operated by sample farmers under informal tenure conditions during *maha* season than *yala* season: e.g. 1.4 per cent increase of land parcels and 1.8 per cent increase of land area. The utilization of all the lowlands of the concerned settlements for cultivation purposes in both seasons was the reason for the similarity of the incidence of informal operation of land between *yala* and *maha*.

In respect of highland also, there was no significant difference between the percentages of the number of land parcels and area of the parcels which were under informal tenure conditions. For example the percentage of the number of highland parcels was 21.1 while the percentage of the area was 20.5 during the study period. There was no significant variation between the percentages of informally operated highland parcels and extents in both seasons. One major reason was, using highland for homestead and perennial crops did not change often. There was no necessity to obtain highland for high value for short term crop cultivation. This lesser demand for highland also was a reason for the difference (40 per cent) between the extents of the high and lowland which were under informal tenure conditions.

Table 4.3 and table 4.4 present the spread of all operated lowland parcels of the sample farmers and the land extent which were under diverse formal as well as informal methods both in *yala*, 2006 and *maha* 2006/2007. According to these tables, among all the informal methods, leasing on fixed produce was more popular in the study area than all other methods; more than 30 per cent of the number of parcels and the area were operated under this method in both *yala* and *maha* seasons. Then the other informal methods such as leasing on cash, illegally fragmenting, mortgaging, purchasing, encroaching of government land, encroaching private land and jointly cultivating were prominent in the study areas (appendices 1 to 4).

Table 4.3: Percentages of Parcels and Land Extents of Operational Lowlands of the Sample Farmers in All Study Locations under Formal and Informal Tenure Systems during Yala, 2006

Category No.	Tenure System	% of Land Parcels	% of Land Extent
1.	Legal owner operator	36.2	33.9
2.	Purchasing with legal ownership	2.5	3.3
3.	Owner operator without legal documents	1.5	1.9
4.	Encroaching with legal ownership		
	Formal	(40.2)	(39.1)
5.	Purchasing without legal documents	4.5	4.6
6.	Operating separately without legal documents	6.1	4.3
7.	Operating jointly without legal documents	0.7	9.6
8.	Leasing on cash basis	8.0	10.5
9.	Leasing (on fixed produce)	30.1	32.9
10.	Mortgaging	5.3	4.7
11.	Encroaching (private)	1.3	0.7
12.	Encroaching (government)	3.9	2.6
13.	Operating free of charge		
	Informal	(59.9)	(60.9)
	Total	100.0	100.0

Table 4.4: Percentages of Parcels and Land Extent of Lowlands Operated under Different Formal and Informal Tenure Systems by Sample Farmers in the Study Area during Maha 2006/2007

Category No.	Tenure System	% of Land Parcels	% of Land Extent
1.	Legal owner operator	34.8	32.7
2.	Purchasing with legal ownership	2.5	3.0
3.	Owner operator without legal documents by the owner	1.4	1.7
4.	Encroaching with legal ownership		
	Formal	(38.7)	(37.4)
5.	Purchasing without legal documents	4.6	4.7
6.	Operating separately without legal documents	5.8	3.9
7.	Operating jointly without legal documents	0.7	0.6
8.	Leasing on cash	7.8	10.3
9.	Leasing on fixed produce	31.8	35.2
10.	Mortgaging	5.6	4.9
11.	Encroaching (private)	1.4	0.8
12.	Encroaching (government)	3.6	2.3
13.	Operating free of charge		
	Informal	(61.3)	(62.7)
	Total	100.0	100.0

There was a different situation (other than the picture given above) with regard to the distribution of highland operated by sample farmers in the study area under different informal tenure types. The most important informal tenure types, of sample farmers' highlands could be identified as ; (i) operation separately without legal documents; (ii) encroachment of government land and (iii) purchasing colony land without legal documents (table 4.5). The non-availability or less availability of leased or mortgaged highlands were noticeable facts in the study area and this change was due to less opportunity to use highlands for investment purposes (especially for high value crops) when compared to the use of lowlands for such purposes. Such highland had a demand from leased land holders. In the case of highlands, there were more encroached government lands than encroached private land. The encroached highland extents also appear to be higher than encroached lowland extent.

Table 4.5: Percentages of Parcels and Land Extents of Highlands Operated under Formal and Informal Tenure systems by Sample Farmers in the Study Area

Category No.	Tenure Type	% of Land Parcels	% of Land Extent
1.	Legal owner operator	70.4	70.5
2.	Purchaser with legal ownership	4.0	4.0
3.	Owner operator without legal documents	3.4	4.5
4.	Encroacher with legal ownerships	0.7	0.6
	Formal	78.8	79.6
5.	Purchasing without legal documents	4.4	3.6
6.	Operating separately without legal documents	6.2	4.9
7.	Operating jointly without legal documents	2.1	2.4
8.	Leasing on cash	-	-
9.	Leasing on fixed produce	0.4	0.7
10.	Mortgaging	-	-
11.	Encroaching (private)	1.8	1.2
12.	Encroaching (government)	5.8	6.3
13	Operating free of charge	0.4	1.4
	Informal	21.1	20.5
	Total	100.0	100.0

4.3 Spatial Distribution of Informal Tenure Systems

Specially informal operation of the lowland was a quite popular incident in all the irrigated settlement schemes selected for this study. But, the proportion of their distribution varied among different schemes. Table 4.6 and 4.7 show the percentage-wise distribution of operated lowland partials of sample farmers and their land extents under formal and informal tenure conditions during the study period (appendices, 1 to 4) According to this table, the incidence of informal operation of lowland was high in Parakrama Samudra Scheme followed by Mahaweli – H, Udawalawe and Kirindi Oya Schemes respectively. This is clearly indicated by percentages of all operational lowland partials and the land extent in *yala*, 2006 and *maha*, 2006/2007 seasons. (tables 4.6 and 4.7)

Table 4.6: Percentages of Low Land Parcels Operated under Formal and Informal Tenure Conditions by Sample Farmers in Each Settlement Scheme

Season	Scheme					
	Tenure condition	Mahaweli – H	Parakrama Samudra	Udawalawa	Kirindi Oya	Total
Yala, 2006	Formal	36.2	26.9	41.3	53.9	40.2
	Informal	63.8	73.1	58.7	46.1	59.8
	Total	100.0	100.0	100.0	100.0	100.0
Maha, 2006/2007	Formal	31.9	26.3	41.7	53.9	38.7
	Informal	68.1	73.7	58.3	46.1	61.3
	Total	100.0	100.0	100.0	100.0	100.0

Table 4.7: Percentages of Low Land Extent Operated under Formal and Informal Tenure Conditions by Sample Farmers in each Settlement Scheme

Season	Scheme					
	Tenure condition	Mahaweli H	Parakrama Samudra	Udawalawa	Kirindi – Oya	Total
Yala, 2006	Formal	37.1	28.7	43.9	50.3	39.1
	Informal	62.9	71.3	56.1	49.7	60.9
	Total	100.0	100.0	100.0	100.0	100.0
Maha, 2006/2007	Formal	34.4	28.0	44.6	46.5	37.4
	Informal	65.6	72.0	55.4	53.5	62.6
	Total	100.0	100.0	100.0	100.0	100.0

According to table 4.6 and 4.7, as much as 73 per cent of the lowland parcels and 72 per cent of area were under informal tenure conditions in Parakrama Samudra scheme during the period of survey. Under Mahaweli-H, the percentages were 66 per cent and 64 per cent respectively and under Udawalawa, 58.5 per cent and 55.75 per cent. Under Kirindi Oya scheme, this incidence was recorded as lesser than in the other schemes of the study; e.g. 46 per cent of its lowland parcels and 51.6 per cent of area were under informal tenure conditions.

The greater distribution of informally operated paddy lands, in Parakrama Samudra scheme was due to informal transfers, especially leasing to obtain a fixed produce. The main cause of this was less profits gained from farming of paddy which was the only possible crop in most parts of the scheme during the study period. In Mahaweli-H also, the incidence of informal operation of land was higher than Udawalawa and Kirindi Oya schemes. There also less profitability of predominant form of farming, namely paddy cultivation pushed the farmers towards the transferring land to others although the farmers adhered to cultivate more profitable crops in some limited locations. Even though there was possibility to shift into other commercial crops under prevailing conditions, another reason which encouraged transferring the paddy land under informal conditions was the occupation of land by absentee settlers. This was largely due to weaknesses in the selection process. Some allottees selected were not farmers and their main livelihood was occupations other than farming. In Udawalawa and Kirindi Oya schemes, although there were well-experienced farming communities they had leased their land to obtain big-amounts of money for certain activities like house building. Their lowland in fact had good demand for commercial cultivation. This

was observed at the prevailing level of informal operations of paddy lands in both Udawalawa and Kirindi Oya schemes.

When considering spatial distribution of informally operated lands in different schemes, there was no significant difference of percentages of the informally operated land parcels in both two cultivation periods-*yala* and *maha* in Parakrama Samudra and Udawalawa schemes. But, under Mahaweli-H and Kirindi Oya schemes, the situation was different. In Mahaweli-H, the percentages of informally operated land parcels and area in *maha* 2006/2007 season were higher than the informally operated land parcels and area in *yala* 2006, i.e. 4.3 per cent of land parcels and 2.7 per cent of area were higher in *maha* than *yala*. Under Kirindi Oya scheme, the percentage of informally operated land parcels was similar in both seasons, while only informally operated land area was 3.8 per cent higher in *maha* 2006/2007 season than *yala* 2006. The greater operation of lowland under informal conditions in *maha* indicates more demand for lowlands in that season due to sufficient water availability for cultivation compared with the *yala* season.

When the percentages of land parcels are compared with the percentages of area under informal conditions in the same cultivation season, in Mahaweli-H area, there were 0.9 per cent more land parcels than their extent in *yala*, 2006 season and 2.5 per cent of more land parcels than their extent in *maha*, 2006/2007 season. But, completely a different picture was observed in the Kirindi Oya scheme; a greater difference between the land parcels and extent in the same season. There, the difference between informally operated land area and land parcels in *yala* 2006 season was 3.6 per cent and in *maha* 2006/2007 season it was 7.1 per cent. This difference between Kirindi Oya and Mahaweli-H was a result of informal transfer of whole paddy plot, without breaking it into small plots, under lease system for banana cultivation which had become more popular in Udawalawa.

The appendices 1,2,3 and 4 indicate percentage distribution of land parcels operated by sample farmers under different tenure conditions in each colonization scheme during *yala*, 2006 and *maha*, 2006/2007 seasons. The data on informal transactions, in the above tables indicate that different methods of tenure had different levels of distribution under different schemes. As reported in the study, leasing on fixed produce was the most popular informal land transaction method under Parakrama Samudra, Mahaweli-H and Udawalawa according to their respective importance. Under these three schemes, over 30 per cent of operational land parcels and area belonged to sample farmers in both *yala* 2006, and *maha*, 2006/2007 seasons were leased on fixed produce. For example *yala* 2006 season, percentages of 42.6, 37.9 and 30.2 of operational land parcels and percentages of 47.7, 40.5 and 32.8 of area in Parakrama Samudra, Mahaweli-H and Udawala respectively had been leased on fixed produce. In *maha*, 2006/2007 season, percentages of 42.9, 43.0 and 30.0 of operated land parcels and percentages of 47.9, 43.9 and 32.7 of operated land area were under the same system in the above mentioned schemes. Under Kirindi Oya scheme also this system prevailed, although its distribution was not similar to other schemes. For example in the Kirindi Oya scheme nearly 10 per cent of land parcels and area operated in both *yala*, 2006 and *maha*, 2006/2007 seasons were under the system of lease on fixed produce.

The next notable informal land transaction system in the study area in terms of its distribution among the schemes and its occupation by land parcels and area, was leasing on cash. It was the most popular method of land transaction under Kirindi Oya scheme. In the Kirindi Oya scheme, 21.6 per cent of land parcels and 30.4 per cent of area operated by sample farmers in *yala*, 2006 season were under the system of leasing on cash. In *maha*,

2006/2007 season also, a similar percentage of land parcels and area was under this system. That system prevailed under other schemes also but was confined to small amount of land parcels and area. For example, under Udawalawa, Parakrama Samudra and Mahaweli-H there were 4.7, 2.4 and 0.4 per cent of operational land parcels. 3.6, 4.1 and 0.3 per cent of area in *yala*, 2006 and 4.6, 3.1, and 0.4 per cent of operational land parcels and 3.5, 4.8 and 0.4 per cent of area in *maha*, 2006/2007 seasons had been leased on cash.

The other important informal land transaction system operated in the study area was mortgaging. This system was somewhat popular in schemes such as Parakrama Samurdra and Mahaweli-H. But, in Udawalawa, it was not prevalent. In Kirindi Oya, it was reported very marginally. In Parakara Samudra and Mahaweli-H mortgaging was somewhat popular, e.g. 13.3 and 8.2 per cent of operational land parcels and 9.3 and 6.6 per cent of area respectively were under this system in *yala*, 2006 season. Meanwhile, 13.1 and 8.9 per cent of operational parcels and 9.3 and 7.3 per cent of area in *maha*, 2006/2007 had been under mortgage. In Kirindi Oya scheme, the reported operational parcels and area were less than one per cent in both *yala* and *maha* seasons.

When examined the distribution of each informal land transaction system in different locations under each scheme, there were certain differences apart from the conditions explained above. For example, in Mahaweli-H the leasing on fixed produce had spread in three locations. Mortgage system was popular in Kelegama and Nallachchiya. About 10 per cent of operational land parcels and about 8 per cent of area during *maha* 2006/2007 were under mortgage. Leasing on cash was not popular in Mahaweli-H. There only one case was recorded from Kelegama.

In Parakrama Samudra scheme also, though leasing on fixed produce had spread in all locations it appeared to be more popular in Vijayabahupura (recording 56.9 per cent of operational parcels and 57.2 per cent of area in *maha*, 2006/2007 season) than in other locations. The leasing on cash was somewhat popular in Vijayabahupura (recording 9.2 per cent of parcels and 14.7 per cent of area in *maha*, 2006/2007), while mortgage system was popular in Abhayapura (recording 11.7 per cent of parcels and 8.1 per cent of area in *maha*, 2006/2007 season) and in Gonagolla (recording 25.3 per cent of parcels and 20.0 per cent of area in *maha*, 2006/2007 season) only.

Under Udawalawa scheme, leasing on fixed produce was the most popular informal land transaction system. The whole Udawalawa scheme recorded 30 per cent of parcels and 32.7 per cent of area in *maha*, 2006/2007 season, the incidence had spread even into different locations. For example, it was more popular at Kiriibbanara (recording 39 per cent of partials and 39.3 per cent of area in *maha*, 2006/2007 season) followed by Haburugala (27.4 per cent of parcels and 32 per cent of area in *maha*, 2006/2007). Haburuluwewa recorded 22.2 per cent of parcels and 24.7 per cent of area under that system in *maha*, 2006/2007 period. Leasing on cash was somewhat popular at Haburugala reporting 27.4 per cent of parcels and 5.0 per cent of area operated under that in *maha*, 2006/2007 period spreading it at a very minor level in other areas like Kiriibbanara. Mortgage system had also spread at a very small scale at Kiriibbanara reporting 3.7 per cent of parcels and 1.7 per cent of area prevailed under it during *maha*, 2006/2007 period.

In Krindi Oya scheme, leasing on cash was more popular (It was recorded as twice higher in terms of operational land parcels and thrice higher in terms of area than the values under leasing on fixed produce). It had spread in all locations even though unevenly. For example,

in Weerehela, 16.7 per cent of operational parcels and 20 per cent of area, in Beralihela 26.5 per cent of operational parcels and 43 per cent of area and in Seenukuwa 22.5 per cent of operational land parcels and 23.5 per cent of area had been leased on cash during *maha*, 2006/2007 season. Although leasing on cash was more popular, the leasing on fixed produce also prevailed in all locations as the second important informal tenure system. In Weerahela, 21.1 per cent of operational parcels and 23.3 per cent of area, in Berelihela 8.8 per cent of operational parcels and 8.6 per cent of area and in Seenukuwa 5.6 per cent of operated parcels and 6.5 per cent of area had been leased on fixed produce during *maha*, 2006/2007 season. Mortgage system had not prevailed in Kirindi Oya scheme except for one case recorded in Weerahela in *yala*, 2006 and *maha*, 2006/2007 seasons.

The major reason for the disappearance of mortgage system which is normally popular in colonization schemes is the popularly expansion of leasing on cash which has become a better alternative for mortgage system. However both provide big amounts of cash needed in distress or emergencies.

The system of leasing on cash has become more popular than leasing on fixed produce in all locations under Kirindi Oya scheme. It was not only due to the above factor, but also due to the higher demand for land for less water required perennial crops like banana and papaw than much water required paddy.

4.4 Diversity of the Methods of Informal Land Transactions

With regard to the informal land transaction methods, there was significant diversity among and within each of them under different schemes in terms of the amount and the means by which rent was paid, cultivation rights, cultivable crops and other terms and conditions such as payment of water taxes etc. This diversity seemed to have caused by different factors which could be categorized as physical factors, environmental factors and social factors. Physical factors were water availability, cultivable crops and productivity of land. The environmental factors were availability of commercial farmers and other groups of people who created a demand for land, easy accessibility to town and transport facilities that facilitated market facilities for the crops grown. The social factors were the requirements and demand of the owners and the occupiers of the transacted land.

Leasing on fixed produce which is called “*Vee Badu*” had been a common system operated under paddy farming. It had become more popular as economic benefit of paddy farming have been reduced in recent years. The normal rule under lease was, cultivating the land for an agreed number of seasons or years to in return for payment of an agreed amount of produce, normally paddy (called as “*Vee Badu*”) The amounts varied from place to place. The produce paid recently under this system was the net profit of the paddy farmer as he was not required to perform any duty other than giving permission to cultivate his land. During the period of the study it was observed that paddy farming was more unviable and some settlers transferred their lands to other farmers under the lease system. This was also a risky transferring method (Wanigaratne), but gave more benefits than in cultivating land by themselves incurring a high cost. Because of this reason, in the locations where crop diversification was impossible and paddy farming could be done in both seasons successfully, the system of leasing on fixed produce was more popular.

Accordingly, in all three study locations in Mahaweli-H where paddy farming was popular in both seasons, leasing on fixed produce system was also popular, but with various differences in different locations which had different characteristics. For example, in Kelegama the tail-end village the produce rent varied from 18 to 24 bushels per acre for *maha* season and from 12 to 18 bushels per acre for *yala* season. Compared to this, the produce rent of Nallachchiya, the head-end location was very higher. It was 36 to 40 bushels per acre for *maha* and 1/4 to 1/3 of the produce per acre for *yala* (the rent varied according to yield which also varied due to high risk associated with water scarcity). Reason for this higher variation in the rent between tail-end and head-end locations was the differences of circumstances in these two locations such as water availability, productivity and other demanding factors categorized here as environmental factors. In Nallachchiya, yield levels of paddy lands were very high as they were very fertile lands and water availability was also not a problem for them. 150 to 200 bushels per acre were obtained from those lands. As crop diversification was also possible and location was near market, the demand for lowland was high from entrepreneurs. Other than this, there was very high demand for lowland there from third generation settlers who had settled there on highland plots, in one part of the same Krupanisa Division. They were unemployed or engaged in part-time employment or as labourers attempted to cultivate a paddy land for their subsistence purposes.

Unlike in many other areas in this location, the land rent for *yala* was decided as a portion of the total crop due to high risk condition of it because of water scarcity.

Compared to head-end village, the tail end village, Kelegama had a lower level of rent for leasing of paddy lands on fixed produce due to water scarcity and less productivity of its land. But unlike in head-end village, at Kelegama there was a fixed rent for *yala* season also. The reason for this change and demand for its paddy lands was the availability of many agro-wells which assured supplementary irrigation facilities for the land. The other reasons for the demand for its land were the nature of the population settled there and the greater suitability for diversifying its land with commercial crops. Many evacuees and people selected on electoral basis have also settled there, but reasonable numbers of these families had not permanently resided and preferred to lease out or mortgage out their lands.

Here also as in some other locations, leased land takers were allowed to cultivate other crops in paddy land which were taken under leasing on fixed produce while allowing to pay the land rent in paddy.

In the middle part village of the scheme, Bellankadawala the rent charged for leasing on fixed produce was 20 to 30 bushels of paddy per acre in *maha* and 13 to 25 per acre in *yala*. Although the area was not much suitable to diversify, the demand was there for its land from the second generation members of the adjoining villages such as Mehivelleva. The so called "low caste people" in these adjoining villages were looking for survival from agriculture as they had not obtained sufficient education to be involved in other professions.

The leasing on fixed produce method was similarly popular in all three locations under Parakrama Samudra Scheme as it was a major paddy producing area. Except in Vijayabahupura where other crops could also be cultivated, in all locations this system had expanded. The payment system in all locations was similar; 30 bushels per acre for both *maha* and *yala*. This similarity was due to non-variations of water availability and yield levels. Other reason was that there was no significant demand from head-end location for paddy cultivation unlike in Mahaweli-H because the type of people who would have

demanded a higher rent had involved in some attractive income earning activities like sand collecting. Regarding land rent in *yala* season, there was a possibility of paying 24 bushels per acre. In Vijayabahupura, there were more lands leased on fixed produce than leased on cash because cultivation of other crops was allowed in lands taken by leasing on fixed produce there.

Under Udawalawa Scheme also cultivation of commercial crops was more popular. As an informal tenure system, leasing on cash system was also popular. But, leasing on fixed produce was prominent there because paddy grown lands were not suitable for other crops like banana due to the wet condition of the land. The land rent was 30 bushels per acre for the leased lands on fixed produce for a season in all the locations under Udawalawa. Sometimes the payment for *yala* season was low and it depends on the water availability. The permission to cultivate other crops as well as to do the payments in cash was allowed on the agreement of each case. Normally in many areas, banana was not allowed to be cultivated when the land was leased on fixed produce. But in Habarugula where water scarcity was a major issue in *yala* there were cases that banana had been cultivated on lands leased on fixed produce. This was due to low demand for lands in such an interior location.

Unlike in other schemes, in Kiridi Oya, leasing on fixed produce was not so popular because paddy farming was not successful as growing other crops, especially banana due to scarcity of water. Instead of leasing on fixed produce which operated seasonally leasing on cash which operated on long-term basis for banana had become popular there. However, in Weerahela leasing on fixed produce was still popular since the farmers utilized that system to obtain short-term cash requirement instead of obtaining payment in kind. Being full-time farmers, almost all the farmers there did not lease out their land for more than one season.

The next important informal land transaction system in the study area, namely leasing on cash also had diversities within the schemes as well as among the schemes. This system had expanded much with crop diversification and commercialization of agriculture. The farmers who wanted to obtain land for the cultivation of perennial crops such as banana and papaw had to depend on this system which allowed utilizing land for many years on the payment of agreed amount of cash and other conditions.

Even under Udawalawa Scheme, the rent for the lands leased on cash was different from place to place and was based on factors such as water availability and productivity of land and accessibility. For example in Habaraluwewa, the head-end location, five year rent for cultivation of banana was Rs.100,000 per acre (Rs.18,000 to Rs.20,000 per year, per acre). In Habarugala, the tail-end village, the five year rent for such a land was Rs.40,000 (Rs.6000 to Rs.8000 per year), a lower amount than head end location due to water and accessibility problems.

Under Kirindi Oya Scheme also, there was diversity of the rent paid for land leased on cash for cultivation of banana. In Seenukkuwa, head-end location the rent was Rs. 150,000 for 2½ acres for 5 years period (Rs.12,000 per acre per year) while in Weerahela, tail-end village, it was Rs. 80,000 for 2 ½ acres for 5 years period (Rs. 6400 per acre, per year). This difference between the locations was due to the availability of enough water in head-end and water scarcity in tail-end when compared to the rent in Kirindi Oya. It was indicated as twice higher in Udawalawa due to permanent assurance of water supply for both seasons than Kirindi Oya.

Under Parakrama Samudra, there was a different type of leasing on cash other than the system referred to above. That was similar to the mortgage system. As under mortgage system, under this system also an attractive amount of money was obtained from the lease at the initiation of the agreement. This amount taken as land rent was cut off on the basis of Rs.1000 per season per bushel (half an acre) of paddy land. Until the full given amount was set off, the lease holder could cultivate the land. This system was not much beneficial for the lessee compared to mortgage system because unlike under mortgage system under referenced leasing system the lessee did not possess anything at the end of the agreed period (but under mortgage system mortgagee possessed repaid money). This system was disappearing in most locations, but still prevailed at substantial level at Vijayabahupura, because most of the entrepreneurial farmers used this system to obtain land there for cultivation of commercial crops like papaw, banana and vegetables.

Another popular informal land transaction method in the study area was the system of mortgage. This was a traditionally practiced system which was beneficial for the settlers to satisfy their financial requirements, especially on emergencies and also for investment purposes. According to study information, mortgage system appeared to be popular still in the areas where paddy farming was prominent like Parakrama Samudra and Mahaweli-H. Less return from paddy farming encouraged the paddy farmers to find money for investment in other crops in his farm or some other activities. One specific finding of the study was that in areas where there was crop diversification and operation of methods of land transactions that provided a substantial amount of money in advance, the mortgage system had disappeared. For example, in Udalawala Scheme where commercial cultivation of perennial crops was popular and leasing on cash was popular, no any mortgage cases were recorded. In Kirindi Oya Scheme, only one mortgage case was recorded. In Vijayabahupura, the only commercial crop cultivation area, and in Polonnaruwa no single mortgage case was recorded.

Interviews of the farmers revealed that mortgaging of same land on a number of occasions from time to time was a common practice. This was done to prevent mortgagee getting the ownership when the mortgage was not possible to be settled within the agreed time period. On these occasions the mortgager re-mortgaged the land to a higher amount to obtain release from early mortgage. This process has been called as “rolling mortgages” by Wanigaratne (1995).

Another interesting feature of informal tenancy operations was the mortgaging and leasing on fixed produce systems together. The prevailed situation of paddy cultivation allowed for the money lenders, entrepreneurs and millers to obtain paddy land through these means to increase their profits. So the investors used to obtain mortgage the paddy land and lease it on fixed produce. This process was observed as a means of increasing profit margin other than investing money in a bank at that time. This was a popular investment method of most of the money lenders, investors and millers in major paddy producing areas like Abayapura under Parakrama Samudra Scheme. They used to maximize their profit by stocking paddy until a better price could be obtained in the market.

On the other hand, there was a tendency among the farmers especially those who were in distress, to get back their land to cultivate under lease on fixed produce for their own survival on occasions where they had mortgaged the land. In order to get realized this objective they tried to mortgage the land to a person (non-farmer) who could not cultivate it. So they know that they could get it back on lease for cultivation.

There were some other new informal tenure systems emerging in the areas where new crops like banana were spreading. For example, in Udawalawa and Kirindi Oya Schemes there was a tendency to give the cultivation rights of a land "freely" for a season or two. Sometimes in the second season, half of the rent was obtained. This system had emerged when the land owners, who had given out their land in previous seasons for banana cultivation, wanted to get their land suitable for cultivation purpose.

Selling the land was also an informal method of land transaction which prevailed to a considerable extent in the study area. Its percentage was higher in Mahaweli-H areas than others. This was due to selecting of unqualified people especially under the "electoral based selection" system. Many of them had left the scheme and sold their land. But the later occupiers had not been able to take the legal ownership. There was also a tendency of selling the land when the second and third generation members found remunerative occupations in some where else.

4.5 Temporal Variations of Informal Land Transactions

It seems that there had been temporal changes in informal land transactions in the study area in terms of their magnitude and structure resulting in the emergence of new systems.

According to some studies, leasing on cash arrangements had been a popular informal tenure system in Mahaweli-H and other schemes. In the beginning of 1980s; a substantial amount of land, about 40 per cent had been under that system (Siriwardena, 1981 and Alwis *et al*, 1983 quoted in Wanigaratne, 1995). But according to the present study, this system was not reported from Mahaweli-H area (except one case reported from Kelegama). Under Parakrama Samudra Scheme that system had not prevailed in areas where paddy farming was dominant (e.g. from Abayapura and Ganangolla each, one case was recorded). The reason was that this was not favourable for the owner who cultivates paddy, but when the settlement was initiated, settlers used to lease out their land under this system occasionally because they wanted (leveled) the land prepared by some other cultivator (it automatically happened when the land was cultivated by some one). However, leasing on cash system had become popular when commercial farming was established in all locations in Udawalawa and Kirindi Oya Schemes and in Vijayabahupura under Parakrama Samudra.

The incidence of leasing on fixed produce arrangement had also gone down compared to earlier situations. At the beginning of 1980s in Mahaweli -H area, about 60 per cent of land had been under arrangements of leasing on fixed produce. But, it had come down to around 40 per cent by the time the present study was conducted. The expansion of area under other tenure systems including owner operator system, with conditions for better social life has been the reason for this reduction. The incidence of mortgage as a way of providing big-sum of money in emergency occasions also has gone down with the expansion of the system of leasing on cash especially in commercial crop growing areas like Udawalawa and Kirindi Oya. The reason behind this change is that emergency requirements of money could be better fulfilled by the latter system than by the former system.

The combined operation of mortgaging with leasing or leasing on fixed produce was a new arrangement which had not been reported earlier.

After banana harvesting was over the freely given system of same land for cultivation of another crop in subsequent season, by taking certain proportions of land rent were new arrangements that had come into existence under environment of crop diversification and commercial farming.

4.6 Causes of Informal Land Transactions

The table 4.8 indicates the reasons for leasing out land by the settlers in the study area. The important reason for such leasing has been the shortage of family labour for cultivating the land. This was a common reason for more than 50 per cent of the settlers for leasing out their land in all the areas. This was the most important reason for leasing under Parakrama Samudra (76%) and Udawalawa(80%). One major reason for the labour problem in settler families was dislike of second and third generation members of settler families to engage in agriculture as income from agriculture was unattractive. The next important reason for leasing out land was the need of money for emergency requirements. This was a more pronounced reason under Kirindi Oya (37%) than in other areas which reported the incidence as 12 per cent. The other important reasons were non-resident ownership of land and temple ownership of land. For example, some settlers under Parakrama Samudra and Mahaweli-H; were the retired soldiers and some others were selected on electoral basis. But these retired soldiers had not made the settlement their permanent place of living. Most of the people selected for the settlement on electoral basis also have not taken up permanent residence in these settlements. As a result, these people have leased out their land. Temple lands have also been leased out giving the excuse that there was no one to cultivate these lands (accounting 5 per cent of the reasons for leasing). The other minor reasons that resulted in leasing were the need to get a release from the former lease and the need to prepare the land for paddy cultivation by removing the old and unproductive banana trees.

Table 4.8: Reasons for Leasing Low Land by the Settlers

Reasons	Colony								Total	
	Mahaweli System H		Parakrama Samudra		Udawala-we		Kirindi Oya			
	No	%	No	%	No	%	No	%	No	%
Money needed for emergency activity	2	3.0	3	4.5	3	5.5	22	36.7	30	12
Lack of family labour for cultivating the land	45	68.2	50	75.8	44	80.0	32	53.3	171	69
Could not maintain the land	3	4.5	30	4.5	2	3.6	0	0	8	4
Living out of the area	5	7.6	5	7.6	1	1.8	2	3.3	13	5
Wanted to release from former leaser	3	4.5	0	0	0	0	0	0	3	1
Since the land belongs to Temple/Devalaya	9	13.6	2	3.0	0	0	1	1.7	12	5
Losses incurred in paddy cultivation	0	0	2	3.0	0	0	0	0	2	1
No livelihood	0	0	2	3.0	4	7.3	1	1.7	7	3
Land preparation for paddy cultivation by removing the existing banana cultivation	0	0	0	0	1	1.8	2	3.3	3	1
Total	66	100	66	100	55	100	60	100	241	100

Notable: The totals and percentages are based on respondents

The table 4.9 indicates the reasons for mortgaging low lands by settlers. According to the mortgage system money need to obtain for emergencies was the major reason for mortgaging paddy lands by settlers. This was the major reason for 52 per cent of setters to mortgage land in the whole area. It was predominant under Parakrama Samudra: about 63 per cent of settlers. The next important reason was the shortage of family labour (19%). The recorded reasons for mortgaging paddy land were need of money to construct / repair the house, need for changing the current mortgage for a higher value and need for settling a loan. In addition obtaining some capital for investment purposes or the settling loans, or changing the current mortgagees by settling loans obtained from them were the other reasons for mortgages under the last category settlers mortgage the same land for a higher amount to another person.

Table 4.9: Reasons for Mortgaging Low Land by Settlers

Reasons	Colony				Total	
	Mahaweli System H		Parakrama Samudra			
	No.	%	No.	%	No.	%
Money needed for emergency activity	6	40.0	10	62.5	16	51.6
Lack of family labour for cultivating the land	5	33.3	1	6.3	6	19.4
Money needed to construct/repair the house	2	13.3	0	0	2	6.5
Living out of the area	0	0	2	12.5	2	6.5
Necessity of changing the mortgage for a higher value	1	6.7	1	6.3	2	6.5
No reason	1	6.7	1	6.3	2	6.5
Requirement for paying a loan	0	0	1	6.3	1	3.2
Total	15	100.0	16	100.0	31	100.0

Notable: The totals and percentages are based on respondents.

Chapter Five

Socio-economic Conditions of Land owners and Informal Land Operators and Production Relationships among Them

5.1 Introduction

In this chapter an attempt is made to investigate the types of production relationships between the settlers and those who cultivate their land under different informal transactions mentioned in this study. Production relationships can be mostly determined on the socio-economic conditions of both parties; land givers and takers. An attempt is made here to examine social characteristics of both parties such as family background, types of employment, educational levels, housing conditions and ownership of assets.

5.2 General Characteristics

Thirty two per cent of those who gave (transacted) their land to others were over 65 years of age. Another 25 per cent was between 55-65 years of age. This indicates that the inability of the old people to manage their land has considerably affected transferring land. However, about 4 per cent of young people who were 25-35 years of age had also transferred land and it indicates that there are some other reasons for such transfers.

Out of those who temporarily gave over their land to others, about 7 per cent were females. Their percentages of transactions such as leasing on fixed produce, leasing on cash and mortgaging were 5 per cent, 9 per cent and 16 per cent respectively.

In terms of education, out of those who transferred their land for temporary periods 6 per cent had no school education but were literate, 35 per cent were educated from grade 1-5, 7 per cent had obtained a substantial level of good education such as passes in G.C.E A/L and over. This information indicates that there is no relationship between education and informal land transactions.

5.3 Household Size

As paddy cultivation is a labour-intensive activity, the study examined the availability of labour in family unit of both groups, land owners and operators, in order to find out the existence of any relationship between land transaction and labour availability. According to study data, with regard to the household size of the land giver families, in 8 per cent of families there was only one member (only the chief occupant) of the household while in 11 per cent of the families there were only two members. In 64 per cent of the families there were 3 to 6 members. In 18 per cent of families, there were 6-8 members.

Regarding availability of members that can be categorized as belonging to labour force¹, in 14 per cent of the land giver families there was no any member. There was only one member in 38 per cent of the families while there were 2 members in 26 per cent of the families. In families where members belonging to labour force were less, land was leased on fixed produce; e.g. in 18 per cent of families there was not a single labour force member while in 39 per cent of families there was only one labour force member.

In contrast to the above situation, in all the families that obtained land for cultivation under informal methods, there were at least 2 family members who could be categorized under labour force. The families which had two labour force members were 2 per cent while in 90 per cent of the families there were 3 to 6 members. In the category of land takers in every household there was at least one member. The total households where there was one labour force member were 30 per cent. There were two labour force members in 35 per cent of households. In 16 per cent, there were 4 to 6 members indicating more availability of labour force members than land owners' families. Especially in families in which lands were taken for cultivation on the basis of lease on fixed produce, the availability of labour force members were higher than the families who took lands on the basis of mortgage.

5.4 Types of Employment

The types of employment of the employed members in the families of land owners were examined. The majority of them (61%) seemed to be employed in jobs outside agriculture; e.g. 15 per cent of them were engaged in government employments, 24 per cent in private sector jobs and 14 per cent were engaged in self-employment. 4 per cent were involved in skill work such as masonry, carpentry and welding 4 per cent were involved in foreign employment. Only 28 per cent were involved mainly as farmers but some of them were involved in part-time jobs as well.

Compared to the above, in the families that obtained lands under different informal methods the majority of the members were involved in farming (54 per cent)² as an employment. More than 15 per cent were involved as farm helpers. The percentage of the members who were involved in non-agricultural activities was 29 per cent only. Of them 9 per cent were engaged in government employments, 12 per cent in private sector employments, 5 per cent in self-employments, 2 per cent in skill based works and 1 per cent in foreign employments.

5.5 Housing Conditions

The ownership of houses of the land givers was examined and observations indicated that 96 per cent of them had their own houses while 2 per cent of them lived in parents' houses and 2 per cent in rent free houses. The land takers' ownership of houses was examined and only 78 per cent of them had their own houses while 10 per cent lived in parents' houses. More than 9 per cent of them were in houses built in encroached land

¹ Availability of labour force members indicates a certain possibility of operating the land by the family although those labour force members are employed or not.

² Among these, landless people who cultivate for their subsistence and also others engaged in farming as a profitable venture of business, were there.

and another 4 per cent were in others' houses which were looked after by them. This information indicates that some of the informal operators are poor and desperate.

With regard to the condition of the houses of the land givers, about 78 per cent of them had a permanent house while the rest had semi-permanent houses. More than 80 per cent of the houses of the land takers were in permanent condition while the rest were semi-permanent.

5.6 Ownership of Assets

Different types of assets owned by both land givers and takers were examined. Accordingly main assets owned by land givers were motor bike (29%), two wheel tractors without threshers/agri-mec (6%), sprayers (11%), boutiques and shops (11%), and water pumps (6%). The land taker families had more items than land givers. For example, 20 per cent of those families had two wheel tractors without combined threshers/agri-mec while 4 per cent had two wheel tractors with agri-mecs. More than 27 per cent had sprayers while 9 per cent had water pumps. Eighteen per cent of them had motor bikes. This indicates that most important instruments needed for agriculture were owned by many of them.

5.7 Sources of Income

Some of both land giver and receiver families had more than one income source. The income sources of many land giver families were paddy farming (47 per cent) employments (25 per cent), pensions (14 per cent), skill based works like carpentry, masonry (10 per cent) and cultivation of subsidiary food crops (8 per cent). About 3 per cent of those families were Samurdhi income earners. This means that there were families belonging to lower income stratum (below poverty line group) among land givers.

The income sources of 87 per cent of land receivers were paddy farming while 34 per cent of those families were income receivers from subsidiary food crops. Among other income sources of land receivers, paid jobs (29 per cent), fruit crops (22 per cent) casual labour and skill based works (18 per cent) were prominent. More than 12 per cent of them were Samurdhi income earners and that means a large group of land receivers were in the lowest income stratum which comes under official poverty line. Among the cultivators who received land to cultivate on basis of lease on fixed produce, more than 15 per cent were the Samurdhi income receivers.

5.8 Income

The annual gross income of the land giver families indicated that 27 per cent of those families were having an income over Rs. 240,000/=. The percentage of land takers' families belonging to this income category was only 19 per cent, i.e. 8 per cent less than the former group. However, the percentage of the land mortgagers belonging to this category was 26 per cent. There were lower income families in both groups; land owners and land takers. For example, about 11 per cent of land owner families were having an

annual income of Rs. 30,000/= or less. 15 per cent of land taker families were in the same income category and it indicates that there were more poor among land taker families. The other income categories in both groups were more or less equally distributed. This indicates that in terms of income some of the land owners were in a better position compared to the land takers, but in certain cases there were similarities between the two groups.

5.9 Relations of production

Production Relations are mostly determined by social relations (www.en.wikipedia.org/wiki/Relations_of_production). In the present study, type of relationships between land givers and takers were well examined. As revealed by survey data most of the informal land transactions had occurred between friends and relations other than between the people not known to each other. More than 79 per cent of cash transactions for leasing the lands had occurred between people who had a friendship and 13 per cent of same type of transactions had been between relations. Only 8 per cent of the cash transactions for leasing the land were between people who had trade transactions. Fifty per cent of transactions of lease on fixed produce had taken place between relations while 42 per cent and 7 per cent were between friends and others who had trade transactions respectively. Most transactions of mortgage had also been between friends, namely 69 per cent. More than 27 per cent of mortgage transactions had taken place between people who had trade transactions while only 4 per cent had occurred between relations.

The above data indicates that the type of relationships between land giver and taker was important for certain type of land transactions. For example the lease transactions on fixed produce had taken place between people who had faith in each other.

The type of responsibilities of land givers and takers under informal land transactions indicate that except for leasing on the fixed produce, under other informal land transactions such as leasing on cash and mortgaging there was no any kind of obligation to be performed by any party other than what had been agreed by the legal contract. Even under leasing on fixed produce system there was no occasion to develop an obligation performing environment, because the settlers were used to give out land only for one or two seasons to the same person. Under these types of transactions there did not develop a situation of performing various obligations by land givers or takers. The land owners also did not expect to develop patron-client type of relationships with cultivators of their land. On the other hand as most of the transactions have been with relations and friends, there were no conditions to create patron-client type of relationships.

However, there were very few cases in which the relationships between two parties were strong and maintaining the bond for comparatively longer periods. But it was between poorer cultivators and land owners who could influence the farmers.

5.10 Conclusion

This study indicates that there were no specific groups of people with specific characteristics who fall into the category of land giver or land taker. Many of the land

givers functioned as land takers also in the same season. Sometimes the land giver in one season was a land taker in another season. However, the prominent characteristics of some of the land giver families were the shortage of labour force members and involvement of more members in their families in salaried jobs and deriving most of their income from other sources rather than agriculture. The availability of more labour force members in their families, involvement of family members in farming or working as family helpers and deriving major portion of their income from agriculture including paddy farming were the prominent characteristics of land takers. The farmers who had leased the land on cash as well as those who had mortgaged were in a better position compared to the farmers who had given land on fixed produce. The relationship between the land owners and takers were more close to the type of relationships between friends as well as between relations unlike the type of relationship between clients and peasants as the relevant transactions have taken place mainly between known parties or relatives.

Chapter Six

Economic and Social Impact of Informal Land Transactions

6.1 Introduction

The major objective of this chapter is to investigate the impact of informal transactions of settlement land on aspects of its production economy particularly on selection of crops, level of utilizing capital (investment), and application of inputs like fertilizer and chemicals and labour use. In addition, the impact of informal land transactions on land productivity, yields and income and the way they affect the settlers socially and economically will also be examined.

6.2 Impact on Investment

According to a number of studies, greater tenure security of land, as measured by the rights possessed by the owner, significantly increases landlords' investment (Deininger, 2003). But, despite the fact of tenure security all categories of informal operators in the study area were encouraged to do investment properly on short-term crops or production activities instead of doing long-term investments such as repairing of canals and ridges and leveling of land. Under short term crop cultivation, all types of informal land operators attempted to obtain maximum return from land by investing on cultivation of diverse crops (such as banana, papaw, soya bean, cow pea, green gram, black gram and vegetables) utilizing modern inputs and advanced technology (including use of highbrid seeds and planting materials, chemical fertilizer and agro-chemicals, tractors, combine-harvesters and threshers), and resorting to better management practices (like doing application of fertilizer and chemicals for controlling weed and pests in proper time and correct amount, turning water in real occasions) etc. which were needed for maximum productivity of land. For example, according to table 6.1, the informal land operators who cultivated paddy in the period under study (*yala*, 2006 and *Maha*, 2006/2007) have resorted to cash as well as non-cash investments in the same manner as owner cultivators (table 6.1).

Table 6.1: Investment for Paddy under Different Tenure Conditions (Acre/Rs.)

Tenure	Amount Invested			
	<i>Yala, 2006</i>		<i>Maha, 2006/2007</i>	
	Cash Investment	Non Cash Investment	Cash Investment	Non-Cash Investment
Legally Owned	19,387	4,669	19,798	4,451
Leased on Cash	20,286	5,307	17,903	4,411
Leased on Paddy	18,891	4,214	18,985	4,198
Mortgaged	18,439	5,186	18,009	4,700

6.3 Credit and Investment

As Deininger states theoretically there is a relationship between land rights, credit and investments. The lands with characteristics of greater tenure security and transferability, will qualify to be used as collateral to obtain credit from formal as well as informal markets, and will increase the investment capability (Deininger, 2003). However, the data of this study reveal different conditions than what the theory says. In the study area the rights of land had not affected significantly in obtaining credit for investing on short-term crops. Appendix 9 indicates the number of farmers under different tenures who obtained credit. Accordingly informal operators have utilized both formal and informal sources to obtain credit in the same manner as legal operators. The utilization of credit from banks and financial institutions by the farmers who had obtained the lands on fixed produce (52 per cent) and on mortgage (30 per cent) had been higher than that of the credit receiving legal operators (30 per cent).

In case of obtaining credit from semi-formal institutions like village level organizations the number of informal operators was more than the number of legal operators. Thus farmers who had leased on fixed produce and on mortgage had obtained credit equal to 13 per cent and 16 per cent of their total number respectively while credits obtaining legal operators obtained were only 10 per cent of their total number.

Table 6.2: Sources of Institutional Loans Obtained by Informal Operators in the Study Area

Source	No. of operators	%
State Banks	19	15.2
Private Banks	07	5.6
Provincial Development Banks	26	20.8
Farmers Bank	19	15.2
Samurdhi Bank	28	22.4
Co-operative Rural Banks	04	3.2
Sarvodaya	01	0.8
Other Private Financial Institutions	21	16.8
Total	125	100.0

Note: The percentages are based on the no. of responses

The major reason for greater accessibility to financial institutions, particularly to semi-formal financial institutions by informal operators in the study area was the possibility of obtaining credit under group guarantee systems in a flexible manner not only from micro-finance institutions, but also from the type of other formal institutions. The table 6.2 indicates the sources of institutional loans obtained by informal operators. Accordingly, out of 125 loans obtained only 41.6 per cent have been obtained from formal financial

institutions including state banks, private banks and provincial development banks. These provincial development banks also follow some flexible procedures in issuing credit. About 42 per cent of credit has been obtained from Farmers Banks, Samurdhi Banks, Co-operative Rural Banks and Sarvodaya Seed Societies which accept group guarantees and individual savings as collateral. Next, 16.8 per cent has been obtained from some other financial institutions such as Ceylinco Grameen, Janashakthi Bank etc. which are also micro-finance institutions.

6.4 Crops Grown

With regard to crops grown, except in the cases of leasing fixed produce which was given for cultivation of paddy, under other tenure systems such as leasing on cash and mortgaging, the cultivator had the sole right to grow a crop he wanted. Especially land taken by leasing on cash was utilized for cultivation of perennial crops like banana and papaw. Even in lands taken by leasing on fixed produce, the cultivator had an opportunity to grow another crop instead of paddy with prior permission of the land owner. However, compared to owner operators, more farmers of leased and mortgaged lands used to diversify crops in lowlands with papaw, onion, soya, cowpea etc. (appendix 7).

6.5 Input and Technological Use

6.5.1. Application of Fertilizer

The appendix table 6 shows the average level of application of fertilizer by farmer/acre under different tenure conditions. The table indicates that there is no clear relationship between the application of fertilizer and the tenure system. In general, all tenure categories have utilized more or less recommended level of fertilizer which is 185 kg/acre for dry zone including all elements such as nitrogen, phosphorus and potassium.

Supplying of required fertilizer at a higher level of subsidy (50/kg bag for Rs.350/=) is one reason for better use of fertilizer by all tenure categories. Under the government's subsidy policy all cultivators are entitled to obtain subsidized fertilizer despite the type of tenure. This policy has resulted in equal application of fertilizer by all tenure categories.

6.5.2. Application of Chemicals

For application of chemicals the other tenure categories have spent more than the owner operators. For example in *yala*, 2006 season the farmers who had obtained lands on leased on cash, on fixed produce and on mortgage had spent Rs.2,066 and Rs.1,616 and Rs.1,641 respectively while the farmers who are legal owners had spent only Rs. 1,471 per acre. The reasons for this change in expenditure for chemicals between formal and informal operators are the better care and prompt action of the informal operators than formal operators in during pest attacks or some times prior to pest attacks.

6.5.3. Labour Use

Generally, an equal number of total labour days (slightly changing from 20 to 24 per acre) has been used by all tenure categories of paddy lands (table 6.3). The data indicate that the owner operators tend to use more hired labour than the other categories. The farmers who had leased lands on cash, on fixed produce and on mortgage tend to use more family labour.

Table 6.3: Use of Man Days per Acre by Different Tenure Operators in the Study Area during *Yala*, 2006 and *Maha*, 2006/2007

Season	Tenure Category	Family Labour	Hired Labour	Total
<i>Yala</i> , 2006	Legally Owned	11	13	24
	Leased on Cash	12	11	23
	Leased on Paddy	10	10	20
	Mortgaged	13	11	24
<i>Maha</i> , 2006/2007	Legally Owned	11	13	24
	Leased on Cash	10	12	22
	Leased on Paddy	10	10	20
	Mortgaged	12	12	24

6.6 Impact on Productivity and Income

6.6.1. Tenure Systems and Yield

The yield obtained by farmers under different tenure categories was examined. The farmers belonging to the informal tenure categories seemed to have obtained considerably a higher level of yield than the owner operators during both *yala*, 2006 and *maha*, 2006/2007 seasons. (Table 6.4). The survey information revealed that the above achievements of the yield level is a result of timely cultivation, using of better seeds, timely application of proper amounts of fertilizer and chemicals and better care including timely allocation of water.

Table 6.4: Average Yield per Acre under Different Tenure Categories in the Study Area

Tenure Category	<i>Yala</i> , 2006 (Bu/acre)	<i>Maha</i> , 2006/2007 (Bu/acre)
Legally Owned	91	96
Leased on Cash	104	106
Leased on Paddy	99	102
Mortgaged	93	104

6.6.2. Tenure Systems and Return from Land

The return from paddy under different tenure conditions in the study area (table 6.5) indicated that return under concerned tenure systems (leased on cash, leased on fixed produce and mortgaged) excluding as well as including family labour were higher than under owner operator system. For example, the profit of the farmers from leased lands on cash, excluding family labour was 73 per cent higher than owner operators in *maha*, 2006/2007 season. The percentage of profit from leased lands on fixed produce and mortgaged lands were 24 per cent and 36 per cent respectively for the same season. During the same season, the net profit obtained by the three tenure categories, including family labour was 126 per cent, 45 per cent and 58 per cent respectively higher than the net profit obtained by owner operators.

For increasing their net profit, the informal land operators have followed different methods such as increasing yield levels, using more family labour than hired labour and cultivation of rice varieties which have greater demand like keeri samba that can derive a higher price than others. In addition, they had followed some other methods such as producing seed paddy and stocking paddy until the prices increase in the market.

Table 6.5: Return from Paddy under Different Tenure Conditions in the Study Area

Season	Tenure Category	Net. Income Excluding Family Labour (Rs/Acre)	Net. Income Including Family Labour (Rs/Acre)
<i>Yala</i> , 2006	Legally Owned	7,879	3,210
	Leased on Cash	13,274	7,967
	Leased on Paddy	11,442	7,228
	Mortgaged	10,418	5,231
<i>Maha</i> , 2006/2007	Legally Owned	10,621	6,170
	Leased on Cash	18,366	13,955
	Leased on Paddy	13,160	8,963
	Mortgaged	14,430	9,730

6.7 Impact on Quality of Land

The research findings indicate that legally secure rights for land will encourage not only long-term investments but also activities related to productivity, resource use and sustainability of land such as cleaning drains, applying manure, growing trees etc. (Deininger, 2003). In terms of security, except in the case of lease on cash all other tenure systems under informal transactions had very short periods of security. In the case of lease on fixed produce, generally leasing is done for one or two seasons. Then it is easier to change the cultivator in the next season in order to break his continuous occupation of land to prevent the cultivator from claiming ownership. In the case of mortgages there are instances of delays in settling the loans but there is no tenure security for the mortgagee. But under these methods, the cultivators try to obtain maximum level of yield

by properly applying necessary inputs and resorting to proper management practices because they had already paid or were supposed to pay some considerable portion of produce equivalent to the value of money to the land owner.

However, under both these tenure systems, the land owners do not invest for improving the long-term? productivity of land such as preparation of ridges, and maintenance of canals. Discussions with farmers revealed that farmers who had leased lands on fixed produce had applied weedicides to prevent weeds on the ridges instead of repairing them in order to save money.

Farmers who had taken lands leased on cash for cultivation of perennial crops like banana and papaw for 4 or 5 year period has some level of security. Therefore they are concerned on fertility of land. But they tend to prepare drains and beds as they want and left the land without leveling.

6.8 Impact on Income and well-being of the Settlers

Different informal tenure systems differently affected the settlers who transacted their lands. Leasing on fixed produce system, which was very popular in all study areas except in Kirindi Oya was more beneficial to the land owners. Although it prevented of the land owner cultivating his land during leased period, the land rent (fixed produce) was a better remuneration for his survival. On the other hand, the rent paid was more attractive than benefits that would have been obtained by cultivation. This was mainly due to prevailing high cost of production and risk.

Under leasing on cash system also, the land owner lost the cultivation rights of land for about 4 to 5 years, especially when banana was cultivated. In some of these cases the land owner had become a labourer on his own land under the leased holder. In addition to the income, the land owner earned by hiring his labour in his own land. This did not mean the land owner was permanently bound to his land as a labourer. Under prevailing circumstances, he was providing his labour independently. At the beginning of the season he had obtained a big some of money as land rent, which could have been invested for activities like building a house on his highland or repairing the existing house.

Under mortgage system, the land owner lost cultivation rights of his land until the loan obtained from the mortgagee is paid. These transactions were mostly done when the land owners were in economic distress. Therefore in many cases, they couldn't repay the loan in due time. The result was mortgaging it again and again in a cycle to settle the earlier mortgage bonds. Some mortgage cases covered under this study sample were in a vulnerable position of loosing the land.

6.9 Unequal Distribution of Land

The informal land transaction leads to fragmentation of land which results in the emergence of uneconomic holdings on the one hand and consolidation of land on the other hand. Survey data reveals that both take place, but do not dominate one another (see Appendix Table 10 that indicates the size of land possessed by sample farmers). According to the referred Table, one per cent of the sample farmers in the study area

possessed land extent of one acre or less. As stated at the very beginning of this study the minimum size of a land partial distributed in a colony was $2\frac{1}{2}$ acres. About 10 per cent of the farmers in the sample possessed more than 5 acres of land and 0.5 per cent of farmers possessed land extents of 15 to 20 acres. Further, 0.8 per cent of farmers possessed more than 20 acres. This picture is more acute regarding with some study locations. For example under Mahaweli-H, in a situation where the distributed land extent was $2\frac{1}{2}$ acres, about 42 per cent of the farmers in the sample possessed lands more than the originally distributed extent. Under Parakrama Samudra scheme where the distributed land size was 5 acres per family, 44 per cent of the farm families possessed 3 acres or less while 24 per cent of the farm families possessed more than 5 acres. Within this group 2 per cent of farmers possessed more than 15 acres and 20 acres of land respectively. Marginalization of farmers and consolidation of land has been emphasized by some scholars as an accelerated process taking place in colonization schemes. The study observations revealed that although some commercial farmers consolidate land with change of their investment priorities some of them would give back those lands to their owners once the legal owners fulfill their financial obligations.

Impact of Informal Land Transactions on Management of Settlements

7.1 Introduction

This chapter attempts to examine the manner in which the informal land transactions in settlements have affected the management of the schemes in terms of efficient utilization of land, water and other resources to increase the production and productivity to the maximum level and stabilize incomes and ways of surviving. Main emphasis is on the level of adaption by informal land operators the common decisions taken at *kanna* meetings and meetings of farmer organizations, their participation in irrigation maintenance activities such as canal clearance and participation in *shramadana* works to clean main and branch canals, participation in water sharing activities and paying of water taxes. Additionally this chapter investigates the adverse effects of informal land transactions on agriculture and settlers.

7.2 Impact on Common Decisions Making and on Implementation of a Production Plan

Under irrigation systems, a common plan of crop production is implemented in order to utilize all resources such as physical, human and financial efficiently and effectively. This plan is approved and accepted at the *kanna* meeting. The decisions taken on this production plan the *kanna* meetings are expected to be followed by all the farmers who are involved in cultivation in the scheme. These decisions include the performance of certain activities such as fencing, starting and ending of cultivation and following the number of days for land preparations and adhering to types of crops to be grown.

Many officers interviewed mentioned that before the fertilizer subsidy several informal land operators normally did not follow the decisions taken at the *kanna* meetings and did not bother about the common cultivation schedule prepared at the *kanna* meeting. But the fertilizer subsidy scheme has enabled the farmer organizations to control their behavior. To obtain fertilizer subsidy, all farmers in a certain area have to obtain a certification from the farmer organization in that area if they were cultivating lands within the area coming under authority of the farmer organization. By rejecting this certification for the informal land operators who did not fallow the instructions, as well as common rules and regulations regarding cultivation in the area, the farmer organizations had been able to control the behaviour of the informal operators, especially involved in paddy farming.

But, according to officers under Udawalawa scheme, the lease holder farmers involved in banana cultivation could not be controlled as they did not participate in the *kanna* meeting and pre-cultivation training classes and did not fence the land, or cultivate specific crop varieties. This happened because banana crop was not covered under fertilizer subsidy. This proves that informal land transaction was a severe burden for implementation of a common production plan.

7.3 Impact on Irrigation Maintenance Activities

Although the farmers were supposed to clean canals adjacent to their paddy lands, the informal land operators normally did not obey this rule. The distributory canals were cleaned by the village level farmer organizations through a *shramadana* campaign by sharing labour of all farmers. Normally the informal land operators did not participate in these common activities also. Although some of them participated in cleaning the canals closer to their paddy fields, they refused to participate in cleaning the canals located far away from their paddy field.

However, under the present fertilizer subsidy policy, the farmer organizations as well as Krupanisas have been able to make the informal land operators obey farmer organizations and participate in operation and maintenance activities. By rejecting granting approval for the fertilizer subsidy applications which were supposed to be channeled through farmer organization and krupanisa respectively they could change the behaviour of the informal land operators positively. But in the case of banana, it was impossible to control their behaviour positively because they were not entitled to the fertilizer subsidy.

Some farmer organizations had fined farmers who did not clean canals (eg. *Habarugala* Farmer Organization fined Rs. 500/-). As this has had good results, other farmer organizations had also followed the same rule. Some farmer organizations in *Mahaweli-H* had decided that if the operator of a informal land did not clean canals or obey rules and regulations of the organization, the owner of that land had to take the responsibility. Meanwhile some organizations had decided that it was the duty of the land owner to inform the organization that he had transferred his land to another party.

7.4 Impact on Sharing of Water

As informal land operators were not following common decisions (such as deciding the dates for preparation of land and issue of water, type of seed varieties grown etc.) taken at the *kanna* meeting or by farmer organizations, many difficulties were created in sharing water in irrigation schemes where release of water was based on the crops grown. This created difficulties and water shortages to informal operators who tended to grow different crops or same crop with different time periods. The result was not only conflicts among informal operators and other farmers, but also misuse and waste of water. Discussions revealed that the informal land operators belonged different categories of people unlike other farmers in a track who had uniform characteristics. Sometimes, among the informal operators, there were wage earners and government employees such as policemen who had no time to look after the land well. Such people used to interfere in obtaining water for their crops even by cutting the bunds and ridges, on occasions they were free from the duty.

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7.5 Aspects Adversely Affecting Agriculture

According to discussions with key informants the way the leasehold operators or mortgagees managed the land adversely affected the land owner in several ways. Some farmers who leased land for a very short period of time used to maximize his profit even without spending much labour or money to repair ridges of the land leading to reducing quality of the ridges as well as the water retention capacity of the paddy field.

Lease holders of banana cultivated lands used to give up land after harvesting was over, without clearing it. That had been a reason for spread of various crop diseases. According to agricultural instructors in *Berelihela*, “Kahasika” disease had been spread from spoiled banana trunks.

Some informal operators used to fence the land to protect the cultivation from cattle. These fences were also built in order to change the boundary of the land. This created problems for future. Transactions of land created social problems too. Sometimes, son had leased or mortgaged the land, without the father’s knowledge. These incidents have broken down the social relationships within the family by ending up all parties going to the police for interventions and settlements.

Possible Effects of Granting Freehold Titles

8.1 Introduction

This chapter discusses the possible effects of granting freehold titles to settlement land in the context of different tenure systems taken into consideration in the study. Accordingly, the possible effects, especially on owner operator lands, mortgaged lands and leased lands are discussed here. The experience gathered from some selected irrigated settlement schemes where freehold land was available was also incorporated in order to give a picture of the empirical situation. Those schemes are Ridibendiela, Nachchaduwa and Batalagoda¹ major settlement schemes and Thuruwila village irrigation scheme.

8.2 Importance of Freehold Titles

In settlements, the lands are held on protected rights instead of freehold rights. These lands are managed by the rules and regulations of the Land Development Act of 1935 and its amendments. According to this act, the settlement lands can not be transferred through selling, leasing and mortgaging. They also cannot be subdivided into plots less than one and half acres in case of lowlands and quarter of an acre in case of highlands. Because of the existing restrictions in transferring settlement lands, they are not accepted as sureties by the private banks for granting credit. Giving free hold titles to such settlement land will remove all the above restrictions prevalent under the existing law. Accordingly, it will create an opportunity for land holders to sell, lease, mortgage or subdivide them and also to pledge land to commercial banks as sureties.

8.3 The Possible Effects

As revealed in discussions held with several parties, subdividing and transferring of small parcels or distributing the ownership of land among a number of children equally is a major requirement for many of the legal owner operators in the settlement schemes. Granting of free hold titles will allow them to effect such transfers legally. But there is a possibility of fragmentation of land into uneconomic smaller parcels. This will be an impediment to achieving objective of settlements namely, increasing productivity. It is also contradictory to the important concepts using resources such as land and water more effectively and efficiently because fragmentation would cause wastage of water and breakdown of the common system of managing water.

According to the observations made on some other major settlement schemes and a village irrigation scheme where land was withheld under freehold rights, it was revealed that the land owners were engaged in various types of land transactions freely, i.e. selling,

¹ All of these major irrigation schemes or their relevant tanks have been initiated in the ancient periods and rehabilitated during the British rule or in 1950s. In those irrigation schemes, there were families which had large extents of land. Under Redeebendiela and Nachchaduwa, there were families newly settled.

mortgaging, leasing, transferring and fragmenting. The land owners had divided their land equally among children in most of the cases. But there were social arrangements to reconcile the adverse effects of uneconomic size of holdings. When the lands become uneconomic in size after dividing, the owners of such uneconomic land parcels, make arrangements to combine them to economically productive holdings sizes. The case study 8.1 indicates that the owners have occupied two $\frac{1}{2}$ acre size land parcels together in order to cultivate by each owner under different seasons. The same case study reveals another type of reconciliation measure to combine land namely, the rotational cultivation (*tattumaru*) of one acre size land by six owners of the same family without dividing it into smaller parcels.

Case Study: 8.1

Mr. U.B. Gunasekera at Suhadagama, Thuruwila is a retired bus driver of 61 years of age. He is a member of a farm family with six children, four males and two females, under Thuruwila village tank.

His family owned 3 acres of lowland under Thuruwila Tank and one acre of lowland under Nellikulama Tank. The land extent under Thuruwila tank was equally distributed among all the children. Accordingly, every child received half an acre under Thuruwila tank. In addition, all members were given equal rights for the acre under Nellikulama Tank and accordingly each and every member had cultivation rights for land under Nellikulama Tank once in 6 years as it was given without deviding in order to prevent the emergence of uneconomic size of holdings.

Out of four male members, only two are living in Thuruwila. Two female members and two male members including Mr. Gunasekera are living out of Thuruwila.

The land plots owned by family members are not enough for their sustenance and all of them depend on other income earning activities or on other land purchased, leased or mortgaged. Mr. Gunasekera has also settled in a purchased land outside Thuruwila, but very closer to it. He has also purchased half an acre size lowland, under Thuruwila tank, that belonged to one of his sisters. Further, he has leased and mortgaged two acres of lowland from each category. Meanwhile, his sister and brother who are living out of Thuruwila have leased out their half an acre paddy plots to the brothers residing in Thuruwila.

Mr. Gunasekera has six children, four sons and two daughters. One of his sons is employed in Sri Lanka Army as a soldier and married to a girl in Eppawala. Both of them reside there. Another son who was in the Army had died and his salary is also paid to Mr. Gunasekera's family. Another son of Mr. Gunasekera has a boutique and he earns an additional income by cultivating a leased paddy land. Out of Mr. Gunasekera's two daughters one is married to a person who owns about five acres of land. The other daughter is married to a person cultivating a leased land. This couple is living on Mr. Gunasekera's own land.

When questioned about the distribution of his wealth among his children, Mr. Gunasekera replied that the person who looks after the parents (Mr. Gunasekera and his wife) should be given more attention than others. Further, he said it is a custom in villages that if some one has a livelihood, he has no tendency to ask for land from parents.

The discussions with farmers under Rideebendiela scheme where they freely enjoy the benefits of free hold rights such as fragmenting and transferring, revealed that when such land become smaller and uneconomic they opt to sell the land to the neighbour who could expand his operating area. Sometimes when the same land is fragmented into uneconomic sizes of smaller parcels, several parcel owners get together and sell their parcels to another in the same unit.

The same case study (case study 8.1) further indicates that though there is a greater possibility to divide a land equally among children of a family, the society is so rational not to do so in order to prevent fragmentation of land into uneconomic smaller holdings.

On the other hand, people argue that granting freehold titles will result in loosing land by the present settlers because after obtaining free hold titles they might sell them. According to investigations done on the particular irrigated settlement schemes this has normally happened when the family members were utilizing resources carelessly. Specifically the people who were opt to indulge in drinking and other socially unacceptable behaviours had a tendency to loose their land properties. On the other hand, people who used to live a luxurious life also had a tendency to sell their land. There are also people who expand their land by purchasing more. (Case study 8.2 explains the above two incidents)

There is a possibility to sell the land on occasions of distress. The people, who have already mortgaged land several times in a cycle without resettling the transaction, will never be able to resettle the borrowed money. Under these types of mortgage cases the early transactions would be settled from the money of latter transactions which will be effected by obtaining more money than earlier. The second mortgage would be settled by taking some more cash for a third mortgage. Discussions with key informants revealed that these types of incidents are many in the study area although they are not revealed to others. In some of those cases the legal owner loses the land, but under many mortgage cases it is not actually happening due to existing legal restrictions¹.

Case Study: 8.2

Mr. A.M.S. Samaraweera, a former businessmen and a present land proprietor at Divulwewa in Nachchaduwa scheme is a young person of 35 years of age. He is a partial owner of the land popularly known as Samaraweera Kotuwa. His grand farther has come to Nachchaduwa scheme in 1926 and purchased low as well as highland s from time to time. Ultimately he owned a big size land of 32 acres, 20 acres of highland and 12 acres of lowland. He had only one child who is the farther of Mr. A.M.S. Samaraweera. Mr. A.M.S. samaraweera had 3 sons and one daughter and all low and highlands belonging to him was equally distributed among his siblings. All paddy lands given to these family members have been sold to the share holders of the same paddy lands. According to them the major reasons for selling their land were the less profitability of by paddy cultivation and difficulty in managing them.

All brothers and sisters of Mr. A.M.S. Samaraweera appear to have no inclination for cultivating paddy. One of his brothers is following a computer management degree course in England and the other brother is working in a leading computer company, East west. The sister of Mr. Samaraweera is married to a person who works at a garment factory as a manager.

Most of the owners of lease land reside outside the colony. They depend on non-agricultural income and the income derived from settlement land is an additional one. Many of the electoral based applicants of the Mahaweli-H belong to this category. Some of the War Heroes settled under Parakrama Samudra Scheme also live somewhere the life is more comfortable. A considerable number of people settled in Seenukuwa under Kirindi Oya scheme are fishermen from Tangalle and are still engaged in fishing activities. These groups will sell their land if a better land market would be developed

¹ With regard to mortgage cases, although the land owner was loosing land he was continuously claiming the ownership of his land, while the mortgagee was discouraging.

with freehold rights. The losing of land by the concerned parties will not affect their sustenance because they have already been involved in some other activities for a living. According to W.D. Ariyasena Perera, the Treasurer of the Ruhunusiri Farmer organization in Kuda gammana 1 and Beralihela, under Kirindi Oya Scheme, the possibility of selling land by owners under a free hold right will result in the emergence of a group of true farmers involved in cultivation by living on land. According to him, such a situation will provide the environment for a well- integrated society with better social relationships in settlement areas. That will also create farmer organizations in the same areas where members are bound to rules and regulations of such organizations.

Summary of Findings, Conclusion and Recommendations

9.1 Introduction

The study concentrated on various types of informal land transactions in settlement schemes in Sri Lanka, especially on the causes for informal land transactions and their impact on crop production, investment on land, management of settlement and well-being of the settlers. The study findings have been summarized in this section. In the conclusion recommendations have been made to make settlements more economic, socially integrated and peaceful and managerially efficient.

9.2 Findings

The study reveals that informal operation of land in colonization schemes is a popular phenomenon. It was common for both lowland as well as highland s, but greatly prevailed under lowland.

As a whole, in the study area about 60 per cent of lowland was under informal tenure conditions. The percentage of lowland under informal tenure conditions is higher in some colonization schemes like Parakrama Samudra and Mahaweli-H where the percentages are 73 per cent and 68 per cent respectively. With regard to highland, overall percentage was about 20 per cent.

There was no significant difference between the informally operated lowland parcels and their extents in both *yala* and *maha* seasons.

The existing informal tenure systems in the study area were diverse and some of them were based on informal methods of transactions. Among these informal land transaction methods leasing on fixed produce, (*vee badu*), leasing on cash and mortgaging were more popular. The other informally operated tenure or transaction methods were purchasing without legal documents, freely obtaining, fragmenting, jointly managing and encroaching on government or private land.

There were diverse Informal tenure systems or transaction methods based on land rent, cultivation rights, and some other terms and conditions. Each of these method or system appeared to have been shaped by particular environmental conditions which differ due to water availability, type of cultivable crops, cropping pattern, infrastructure and marketing facilities, social and economic factors. As a result, different informal tenure methods have become popular in different locations in the study area under consideration.

Similar reasons have caused transaction of land under different tenure systems in the study area. However different reasons had prominently affected each informal tenure system. The most common reasons were; (a) lack of family labour for cultivating land and (b) difficulty of cultivating land as they were living far away from the land. Lack of family labour was the major reason for leasing land, while need of money for emergencies was the major reason for mortgaging the land.

Study indicates that there are no specific characteristics differentiating land givers and land takers. In many occasions same category of people has functioned as land givers as well as land takers in different transactions. However, there were very few land givers and land takers with some specific characteristics. The specific characteristics of some land givers were: shortage of labour in the family, greater involvement in paid jobs and deriving most of their income from non-agricultural sources. The specific characteristics of some land takers were: greater availability of family labour, involvement of more family members in farming and deriving much of their income from agriculture.

Most of the transactions have taken place mostly among friends and relatives. Therefore the type of relationship between land givers and takers has prevailed in an independent environment unlike a peasant client relationship. There has not been any influence of these relationships on the decision making process with regard to the investment of land and the day to day life of the land operators.

Regarding land management, the normal behaviour of informal land operators was unsatisfactory before the introduction of the fertilizer subsidy. They had not participated in pre-cultivation meetings of the farmer organizations, had not followed any decision of these organizations or had not adapted the cultivation schedule in the area. However, at present through the control of requirement certification to obtain subsidized fertilizer, the farmer organizations have been able to keep the informal land operators under control.

Non-availability of land rights or clear titles had not become an issue for obtaining credit for investment in short-term crop production in colony land, because most informally operated farmers depended on micro-financing institutions like Farmer Bank, Samurdhi Bank and Provincial Development Banks which accepted group guarantees for giving credit.

In terms of investment on paddy, especially for application of advanced technologies including fertilizer and chemicals and also for labour, the informal paddy farmers were in a better condition than the owner cultivators. In terms of productivity and profitability also the informal operators were in a better position than the owner cultivators. The productivity of lands which had been leased on cash or fixed produce and on mortgage was higher than the productivity of legally owned operator's land.

Informal land transactions had encouraged efficient and effective use of land, water and labour with the input of capital and advanced technology for commercial agriculture for higher productivity and profits.

Operation of land with freehold rights under some colonizations has become a reason for fragmentation into very smaller sizes. But further fragmentation of land into more uneconomic sizes is prevented by the owners themselves. Some people consolidate size of their land by purchasing others land.

9.3 Conclusion

The widespread prevalence of informal methods of land transactions as well as tenure systems such as leasing, mortgaging, selling, encroaching and fragmenting in irrigated settlement schemes imply that it exists because of a social requirement. One group does not utilize land productively due to various reasons such as shortage of labour and capital or non-availability of management capability. Another group utilizes it more productively by using their capabilities to use advanced technology, invest capital and application of knowledge. This process of informal land transaction seems to be positively functioning although it has some bad effects on management of irrigation systems, operation of a common production plan and occasional displacement of land owners. But, it provides foundation for efficient utilization of resources such as land, water and manpower which are not productively used under irrigation systems.

Granting of freehold rights to settlement lands seems that it will provide the opportunity to the settlers to handle land freely without any restriction. This in fact is an aspiration of many settlers. Though it would also cause negative results, it seems that there is no great disadvantage in granting freehold titles for settlement lands when considering the positive results. For example such freeholds will provide the opportunity for transference of land to people who use the land productively.

9.4 Recommendations

Some of the land transaction methods such as leasing in irrigated settlement schemes have positively functioned in terms of efficient operation of land for increased production. Hence, there should be some ways to transfer land legally to improve cultivation. Legislative provisions should be made to fulfill this requirement.

There should be rules and regulations to bring all the cultivators including lease holders and those who operate land informally into a uniform management system of land by registering them and supervising their activities.

It should be made compulsory for informal operators of land to become the members of the relevant farmer organization in the area and abide by its rules and regulations especially with regard to operation and maintenance activities of the irrigation system and adherence to the decisions of the cultivation programme.

Issue of free hold titles to settlement land may have positive as well as negative results. It may encourage absentee land holders and settlers who handle the land inefficiently to sell their land. Other group that may sell land is the settlers who have already mortgaged land. But farmers who efficiently use lands are also among them. Issue of granting free hold titles may also result in fragmentation of land into small parcels. These ill effect results should not be deterrents for granting free hold titles especially when economic benefits of freehold land are considered. Hence, any effort to issue free hold titles should be assured by taking counter measures to avoid bad consequences. For example, giving a loan for settlers who had mortgaged their land to settle the previous mortgage transactions is recommended. Imposing a minimum participating size to avoid fragmentation of land into smaller sizes is also recommended.

References

Abeysekera, C. (1985). "Capital and Peasant Production; Studies in the Continuity and Discontinuity of Agrarian Structures in Sri Lanka", Social Scientists Association of Sri Lanka.

Brandao, Antonio Salazar p. (1995). "Outward Orientation, Income Distribution and Employment in Sri Lanka's Non-plantation Crop Sector", working paper 3, in Robert Hunt and Douglas Lister (edited), Sri Lanka. Non-plantation Crop Sector Policy Alternatives, World Bank Working Paper 1-6, Agriculture and Natural Resources Division, Country Department 1, South Asia Region.

Ellman, A.O., Ratnaweera, D.de.S., Silva, K.T., and Wickramasinghe, G.(1976). Land Settlement in Sri Lanka 1840–1975; A Review of the major writings on the subject, Agrarian Research and Training Institute, Colombo.

Farmer, B.H. (1957). Pioneer Peasant Colonization in Ceylon; a Study in Asian Agrarian Problems, Oxford University Press.

Land Commissioners Department. (2006). a progress report.

Madduma Bandara, C.M. (1998). "Land Use and Land Settlements; The Last Fifty Years and Some Thoughts on Future Policy" in Indraratne, A.D.V. de S. (edited) Fifty years of Sri Lanka Independence; A Socio Economic Review, Sri Lanka Institute of Social and Economic Studies (SLISES).

Shilpi Forhad, (1995). "Policy Incentive, Diversification and Comparative Advantage of Non-plantation Crops in Sri Lanka", Working Paper 2, in Robert Hunt and Douglas Lister (edted) Sri Lanka Non-plantation Crop Sector Policy Alternatives, World Bank Working papers 1-6, Agriculture and Natural Resources Division, Country Department 1, South Asia Region.

Siriwardena, S.S.A.L. (undated). "Problems of Assessing Efficiency of Paddy Smallholders in a Mahaweli Settlement".

Siriwardhana, S.S.A.L.(1981). Emerging Economic Inequalities and Forms of Hidden Tenancy in the Mahaweli H area, Monograph, Peoples' Bank Research Department.

State Council, Land Development Ordinance No.19 of 1935 and its amendments.

Wanigaratne, R.D. (1995). Informal Tenure Conditions in Irrigated Settlements in Sri Lanka: A Review of Empirical Research Evidence, Land Tenure Center, University of Wisconsin, Madision.

Wickramasekera, Piyasiri. (1985). "The Mahaweli Development Programme and the Peasantry" in Abeysekera Charles (edited) Capital and Peasant Production; Studies in the Continuity and Discontinuity of Agrarian Studies in Sri Lanka, Social Scientists Association, p.83-p.139.

World Bank. (2000). Borrower Project Implementation Plan in Sri Lanka, Land Titling and Related Services Project, Vol. 1 and II.

Deininger (2003). Land Policies for Growth and Poverty Reduction; a Publication of the World Bank and Oxford University Press.

<http://www.unescap.org/rural/doc/oa/Sri%20lanka.PDF>

<http://www.en.wikipedia.org/wiki/Relations>

Appendix Table 1: Extent and the Percentage of Lowland Parcels Operated in *Maha*,

2006/2007 by Sample Farmers in Each Scheme under Different Formal and Informal Tenure Systems

Tenure Type	Settlement Scheme									
	Mahaweli – H		Parakrama Samudra		Udawalawa		Kirindi-oya		Total	
	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%
FORMAL										
1. Legal owner operator	192.5	34.4	191.5	28.0	157	44.6	269.0	46.5	810	37.4
2. Purchasing with legal ownership	181.5	32.5	129.0	18.9	138.5	39.3	260.5	45.1	709.5	32.7
3. Owner operator without legal document	2.5	0.4	31.0	4.5	0.0	0.0	2.5	0.4	36.0	1.7
INFORMAL										
4. Purchasing without legal documents	366	65.6	192.8	72.0	195.3	55.4	308	53.5	1362	62.6
5. Operating separately without legal document	50.5	9.0	8.5	1.2	10.5	3.0	33.0	5.7	102.5	4.7
6. Operating jointly without legal document	11.0	2.0	53.0	7.7	16.0	4.5	5.0	0.9	85.0	3.9
7. Leasing on cash basis	5.0	9.0	2.0	0.3	3.0	0.9	2.5	0.4	12.5	0.6
8. Leasing on pre-agreed amount of paddy (share cropping)	2.0	0.4	33.0	4.8	12.5	3.5	175.3	30.4	222.8	10.3
9. Mortgaging	245.0	43.9	328.0	47.9	115.3	32.7	75.5	13.1	763.8	35.2
10. Encroaching (Private)	40.8	7.3	63.5	9.3	0.0	0.0	2.5	0.4	106.8	4.9
11. Encroaching (Government)	8.3	1.5	0.8	0.1	4.3	1.2	4.8	0.8	18.0	0.8
Total										
	558.5	100	684.3	100	352.3	100	577.0	100	2172.0	100

Appendix Table 2: Amount and Percentage of Lowland Parcels Operated in *Maha*,

2006/2007 by Sample Farmers in Each Scheme under Different Formal and Informal Tenure Systems

Tenure Type	Settlement Scheme									
	Mahaweli – H		Parakrama Samudra		Udawalawa		Kirindi-oya		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
FORMAL	86	31.9	68	26.3	100	41.7	155	54	409	38.7
1. Legal owner operator	81	30.0	46	17.8	90	37.5	151	52.6	368	34.8
2. Purchasing with legal ownership	4	1.5	9	3.5	10	4.2	3	1.0	26	2.5
3. Owner operator without legal document	1	0.4	13	5.0	0	0.0	1	0.3	15	1.4
INFORMAL	184	68.1	191	73.7	140	58.3	132	46.0	647	61.3
4. Purchasing without legal documents	23	8.5	4	1.5	6	2.5	16	5.6	49	4.6
5. Operating separately without legal document	9	3.3	29	11.2	19	7.9	4	1.4	61	5.8
6. Operating jointly without legal document	3	1.1	1	0.4	2	0.8	1	0.3	7	0.7
7. Leasing on cash basis	1	0.4	8	3.1	11	4.6	62	21.6	82	7.8
8. Leasing on pre-agreed amount of paddy (share cropping)	116	43.0	111	42.9	72	30.0	37	12.9	336	31.8
9. Mortgaging	24	8.9	34	13.1	0	0.0	1	0.3	59	5.6
10. Encroaching (Private)	5	1.9	2	0.8	4	1.7	4	1.4	15	1.4
11. Encroaching (Government)	3	1.1	2	0.8	26	10.8	7	2.4	38	3.6
Total	270	100	259	100	240	100	287	100	1056	100

Appendix Table 3: Extent and Percentage of Lowland Parcels Operated in *Yala*,

2006 by Sample Farmers in Each Scheme under Different Formal and Informal Tenure Systems

Tenure Type	Settlement Scheme									
	Mahaweli – H		Parakrama Samudra		Udawalawa		Kirindi-oya		Total	
	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%	Extent (Ac.)	%
FORMAL	144	37.1	188.5	28.7	150.5	43.9	264.3	50.3	747.3	39.1
1. Legal owner operator	134.0	34.6	126.0	19.2	132.0	38.5	255.8	48.7	647.8	33.9
2. Purchasing with legal ownership	7.5	1.9	31.5	4.8	18.5	5.4	6.0	1.1	63.5	3.3
3. Owner operator without legal document	2.5	0.6	31.0	4.7	0.0	0.0	2.5	0.5	36.0	1.9
INFORMAL	2453.3	62.9	466.8	71.3	192	56.1	261	49.7	1163	60.9
4. Purchasing without legal documents	38.5	9.9	6.5	1.0	9.5	2.8	33.0	6.3	87.5	4.6
5. Operating separately without legal document	9.0	2.3	53.0	8.1	16.0	4.7	5.0	1.0	83.0	4.3
6. Operating jointly without legal document	4.0	1.0	2.0	0.3	3.0	0.9	2.5	0.5	11.5	0.6
7. Leasing on cash basis	1.0	0.3	27.0	4.1	12.5	3.6	159.8	30.4	200.3	10.5
8. Leasing on pre-agreed amount of paddy (share cropping)	157.0	40.5	312.5	47.7	112.3	32.8	46.5	8.9	628.3	32.9
9. Mortgaging	25.7	6.6	61.0	9.3	0.0	0.0	2.5	0.5	89.3	4.7
10. Encroaching (Private)	4.5	1.2	0.8	0.1	3.5	1.0	4.8	0.9	13.5	0.7
11. Encroaching (Government)	3.5	0.9	4.0	0.6	35.3	10.3	7.0	1.3	49.8	2.6
Total	387.3	100	655.3	100	342.5	100	525.3	100	1910.3	100

**Appendix Table 4: Number and Percentage of Lowland Parcels Operated in Yala,
2006 by Sample Farmers in Each Scheme under Different Formal and Informal Tenure Systems**

Tenure Type	Settlement Scheme									
	Mahaweli – H		Parakrama Samudra		Udawalawa		Kirindi-oya		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
FORMAL										
1. Legal owner operator	84	36.2	67	26.9	97	41.3	155	53.9	103	40.2
	80	34.5	45	18.1	87	37	151	52.6	363	36.2
2. Purchasing with legal ownership	03	1.3	09	3.6	10	4.3	03	1.0	25	2.5
3. Owner operator without legal document	01	0.4	13	5.2		- 0.0	01	0.3	15	1.5
INFORMAL										
4. Purchasing without legal documents	148	63.8	182	73.1	138	58.7	132	46.1	600	59.8
	21	9.1	03	1.2	05	2.1	16	5.6	45	4.5
5. Operating separately without legal document	09	3.9	29	11.6	19	8.1	04	1.4	61	6.1
6. Operating jointly without legal document	03	1.3	01	0.4	02	0.9	01	0.3	07	0.7
7. Leasing cash basis	01	0.4	06	2.4	11	4.7	62	21.6	80	8.0
8. Leasing on pre-agreed amount of paddy (share cropping)	88	37.9	106	42.6	71	30.2	37	12.9	302	30.1
9. Mortgaging	19	8.2	33	13.3		- 0.0	01	0.3	53	5.3
10. Encroaching (Private)	04	1.7	02	08.8	03	1.3	04	1.4	13	1.3
11. Encroaching (Government)	03	1.3	02	0.8.8	27	11.5	07	2.4	39	3.9
Total	232	100	249	100	235	100	287	100	1003	100

Appendix Table 5: Reasons for Leasing the Land for Cultivation by the Settlers

Reasons	Colony								Total	
	Mahaweli-H		Parakrama Samudra		Udawalawe		Kirindi-oya			
	No.	%	No.	%	No.	%	No.	%	No.	%
Money needed for emergency activity	2	3.0	3	4.5	3	5.5	22	36.7	30	12
Lack of family labour for cultivating the land	45	68.2	50	75.8	44	80.0	32	53.3	171	69
Could not maintain the land	3	4.5	30	4.5	2	3.6	0	.0	8	4
living out of the area	5	7.6	5	7.6	1	1.8	2	3.3	13	5
Wanted to release from former leaser	3	4.5	0	.0	0	.0	0	.0	3	1
Since the land belongs to Temple/Devalaya	9	13.6	2	3.0	0	.0	1	1.7	12	5
Losses incurred in paddy cultivation	0	.0	2	3.0	0	.0	0	.0	2	1
No livelihood	0	.0	2	3.0	4	7.3	1	1.7	7	3
Land preparation for paddy cultivation by removing the existing banana cultivation	0	.0	0	0	1	1.8	2	3.3	3	1
Total	66	100	66	100	55	100	60	100	247	100

Percentages and totals are based on respondents

Appendix Table 6: Application of Fertilizer under Different Tenure Systems, Kg/Acre

Tenure	Area								All Areas	
	Mahaweli -H		Parakrama Samudra		Udawalawe		Kirindi-oya			
	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>
Legally owned with a heir	215	183	197	195	196	189	181	180	196	186
Leased on cash	-	-	200	203	172	184	185	132	190	156
Leased in on paddy	197	198	196	198	186	182	183	165	193	192
Mortgaged	209	197	202	216	-	-	-	-	205	206

Percentages and totals are based on respondents

**Appendix Table 7: The Number and Percentage of Farmers who Cultivated Different Crops in Yala,
2006 under Different Tenure Categories**

Crop	Tenure Category					
	Owner Operator		Leasing		Mortgaging	
	No.	%	No.	%	No.	%
Paddy	200	55	157	67	24	83
Banana	86	23	27	12	-	-
Papaw	3	1	7	3	1	3
Onion	7	2	6	3	1	3
Soya	1	0.3	2	1	1	3
Cowpea	1	0.3	2	1	-	-
Black gram	3	1	2	1	-	-
Pumpkin	7	2	2	1	1	3

Note: Percentages are based on the number of operators under each category.

**Appendix table 8: Use of Man Days per Acre by Different Tenure Operators in the Study Area during *Yala* ,
2006 and *Maha*, 2006/2007**

Season	Tenure Category	Family Labour	Hired Labour	Total
2006 <i>Yala</i>,	Legally owned	11	13	23
	Leased on cash	12	11	23
	Leased on paddy	10	10	20
	Mortgaged	13	11	24
2006/2007 <i>Maha</i>,	Legally owned	11	13	24
	Leased on cash	10	12	21
	Leased on paddy	10	10	20
	Mortgaged	12	12	23

Appendix Table 9: The Number and Percentages of Credit Utilized from Different Sources by Different Land Operators in the Study Area during 2006 *Yala* and 2006/2007 *Maha* Seasons together

Tenure Type	Source								Total	
	Banks and Financial Institutions		Village Level Organizations		Money Lender		Traders Service Provides			
	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>	<i>Yala</i>	<i>Maha</i>
Legally Operated	83	30	27	10	42	15	07	03	159	58
Leased in for Paddy	99	52	24	13	31	16	12	06	166	87
Leased in for Cash	12	21	-	-	05	09	-	-	17	30
Mortgaged in	12	39	05	16	04	13	01	03	22	71

Note: Within brackets are the percentages from the no belonged to each land tenure category: the same operator may have obtained credit twice from same source

Appendix Table 10: The Size of Low Lands Possessed by Farmers in the Sample, Maha 2006/2007

Extent (Ac.)	Colony								Total	
	Mahaweli System H		Parakrama Samudraya		Udawalawa		Kirindioya			
	No.	%	No.	%	No.	%	No.	%		
Ext<=0.5	1	.6%	2	1.4%	8	4.9%	14	7.3%	25 3.8%	
0.5<Ext<=1.0	7	4.2%	12	8.3%	49	30.2%	28	14.7%	96 14.4%	
1.0<Ext<=1.5	17	10.2%	13	9.0%	14	8.6%	30	15.7%	74 11.1%	
1.5<Ext<=2.0	6	3.6%	11	7.6%	41	25.3%	17	8.9%	75 11.3%	
2.0<Ext<=2.5	66	39.5%	15	10.3%	11	6.8%	50	26.2%	142 21.4%	
2.5<Ext<=3.0	2	1.2%	12	8.3%	13	8.0%	3	1.6%	30 4.5%	
3.0<Ext<=5.0	57	34.1%	45	31.0%	20	12.3%	34	17.8%	156 23.5%	
5.0<Ext<=10.0	9	5.4%	22	15.2%	6	3.7%	12	6.3%	49 7.4%	
10.0<Ext<=15.0	2	1.2%	7	4.8%	0	.0%	1	.5%	10 1.5%	
15.0<Ext<=20.0	0	.0%	3	2.1%	0	.0%	0	.0%	3 .5%	
20.0<Ext	0	.0%	3	2.1%	0	.0%	2	1.0%	5 .8%	
Total	167	100.0%	145	100.0%	162	100.0%	191	100.0%	665 100.0%	

List of the Personnel Interviewed

Officers Interviewed

- 1) Mrs. Chandra Senarath, Residential Project Manager, Udalawala Scheme.
- 2) Mr. Pathirana, Former Residential Project Manager (Land), Mahaweli-H.
- 3) Mr. W.D. Abeyratna, Deputy Residential Project Manager(Land), Udalawala, Scheme.
- 4) Mr. C.S. Dahanayake, Statistical Assistant, Udalawala Scheme.
- 5) Mr. A. Jayasekera, Land Officer, Udalawala Scheme.
- 6) Mr. W.W. Premadasa, Land Officer, Udalawala Scheme.
- 7) Mr. Weerasinghe, Unit Manager, Kiribbanara, Udalawala Scheme.
- 8) Mr. Selaka Bandara, Block Manager, Kiribbanara, Udalawala scheme.
- 9) Mr. Siribaddana, Deputy Agrarian Development Commissioner, Polonnaruwa.
- 10) Mr. H.M. Eranga Athapattu, Divisional Officer, New Town, Polonnaruwa.
- 11) Mr. V. Nanayakkara, Colony Officer, Parakrama Samudra Scheme.
- 12) Mr. P.W. Thilkaratna Banda, Residential Project Manager, Parakrama Samudra Scheme.
- 13) Mr. K. Rathnayake, Deputy Commissioner (Land), Kirindi-Oya Scheme.

Agricultural Research and Production Assistants Interviewed

- 1) Mr. D.W. Sunil Wickramaratna, ARPA, Abhayapura, Parakrama Samudra Scheme.
- 2) Mr. K.A.G. Kaluarachchi, ARPA, ADC, Pulathisigama.
- 3) Mrs. Chandani Galaboda arachchi, ARPA, Ganangolla, Parakrama Samudra Scheme.
- 4) Mr. M. Jayathilake, ARPA, ADC, Sevagama, Parakrama Samudra Scheme.
- 5) Mr. W.M. Sisira Kumara, ARPA, Pulasthigama, Parakramasamudra Scheme.
- 6) Mr. K. Wijeweera, ARPA, Kelegama, Mahamli-H.
- 7) Mr. K. Jayaratne, ARPA, Bellankadawala, Mahaweli-H.
- 8) Mr. U.G.G. Sisira Kumara, ARPA, Nallachchiya, Thambuttegama, Mahaweli-H.

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Farmers Discussed with

- 1) Mr. Upali Vigithakusum, Abhayapura, Parakrama Samudra Scheme.
- 2) Mr. K.G. Lokubanda, Abhayapura, Parakrama Samudra scheme.
- 3) Mr. K.G. Lokubanda, Abayapura, Parakrama samudra scheme.
- 4) Mr. W.P. David, Abayapure, Parakrama Samudra Scheme .
- 5) Mr. Gamini Kulathunga, Gangasiripura, Kelegama,Mahaweli-H.
- 6) Mr. Sarath Wijesinghe, Gangasiripura, Kelegama, Mahaweli-H.