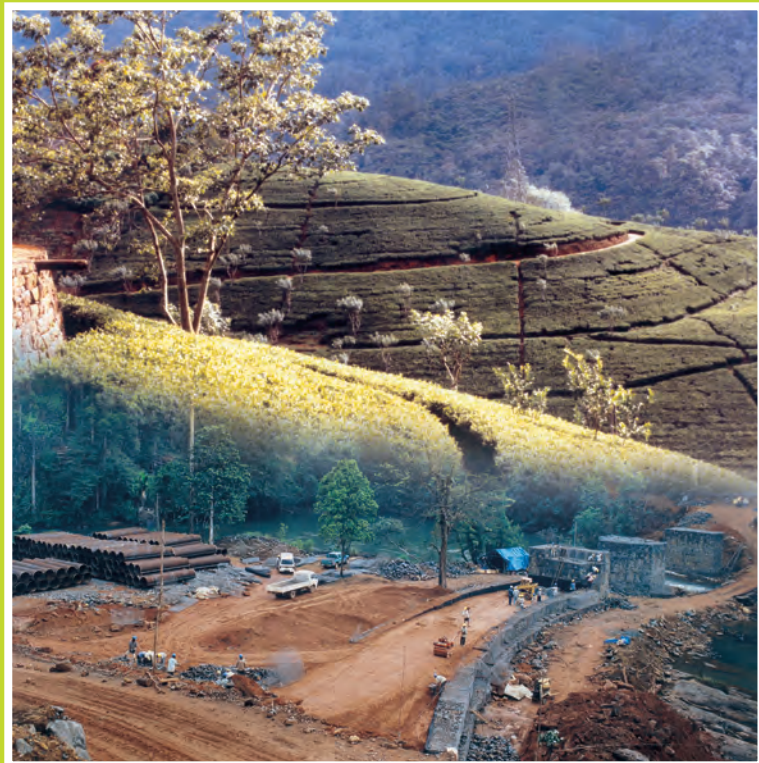


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Rural Land Sector in Sri Lanka: Major Characteristics, Determinants and Implications for Land Policy



Parakrama A. Samaratunga
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Abstract

The problems in the rural land sector of Sri Lanka are generally attributed to the failures in the regulatory framework, institutional set-up, markets, property rights system and poverty. This study reviews the contemporary issues related to the land sector with special emphasis on identifying the major determinants of commonly observed problems. The first objective is to identify common characteristics and their causes in the rural land sector. The second objective of this study has been set as answering the basic question whether the state land policies and institutional changes have led to efficient land use and the well being of the land users of Sri Lanka. It attempts to explore deeply the micro environment related to rural land sector within a general macro setting. The study involves an extensive literature survey in which characteristics of the sector and the possible causes are identified. Relationships between these observable phenomena and the possible root causes are tested econometrically for their empirical validity, based on the data gathered in a household level field survey of 700 households in seven districts.

Non-viable holdings, low land transactions, low productivity, encroachment of state lands, environmental degradation and distress sales are the commonly observed problems in the rural land sector of Sri Lanka. Poverty was the causal factor of the majority of the observed phenomena and hence, releasing the poverty barriers at the ground level was identified as a key policy issue. However, it is important to note that poverty is not only a cause of land related problems but also an effect of them in many instances. Secure ownership rights to land were not an important determinant of agricultural productivity of land, encroachment, viable size of land holdings or environmental degradation, contrary to popular belief. It was only significant in the case of land sales but was not important in rental transactions. Land operators were more concerned about the user rights and hence conferring secure ownership titles to land is not seen as a key policy priority. Facilitation of rental transactions, especially share tenancy contracts, by removing restrictions on such contracts and enabling easy access to input and other markets appear to be more appropriate policy options. Availability of non-farm employment opportunities at the village level in order to absorb the farm labour moving out of agriculture is critical for effective transfer of lands to efficient producers in the rental markets. Hence, promoting small and medium scale enterprises, particularly agro-based enterprises with the needed infrastructural facilities is a prerequisite.

Maintaining the dominance of the state sector in land ownership and distribution without being adjusted and revised adequately over time was identified as the major causal factor of land use inefficiency. Hence, it is urgent to enforce and implement a land policy and a land use policy simultaneously to address the economic, social, cultural and political issues relating to land and to meet the present day requirements as well. Even though the 'market' may be allowed to supersede the state in the allocation of land, the state will have to play the leading role in deciding the use of land for ensuring sustainability.

සාරාංශය

ශ්‍රී ලංකාවේ ග්‍රාමීය ඉඩම් අංශයේ පවතින ප්‍රශ්නවලට සාමාන්‍යයෙන් හේතු වූයේ පාලනාත්මක ක්‍රියාමාර්ගවල, ආයතනික ව්‍යුහය, වෙළඳපොළ, දේපළ හිමිකම් ක්‍රමය යනාදියෙහි පැවති දුර්වලතා මෙන්ම දිලිඳුභාවයයි. මෙම අධ්‍යයනය මගින් පොදුවේ නිරීක්ෂණය කරන ලද ප්‍රශ්නගත කරුණු සම්බන්ධයෙන් අදාළ වන්නාවූ ප්‍රධාන නිර්ණායක හඳුනාගැනීමෙහි ලා විශේෂ අවධානයක් යොමු කෙරෙමින් ඉඩම් අංශයට අදාළ වන තත්කාලීන ප්‍රශ්න සමාලෝචනය කෙරේ. මෙහි පළමු අරමුණ වන්නේ පොදුවේ දක්නට ලැබෙන ගති ලක්ෂණ හා ග්‍රාමීය අංශය තුළ ඒවාට තුඩුදුන් හේතූන් හඳුනාගැනීමයි. මෙම අධ්‍යයනයේ දෙවැනි අරමුණ වන්නේ රාජ්‍ය ඉඩම් ප්‍රතිපත්ති හා ආයතනික වෙනස්කම් කායනීක්ෂම ලෙස ඉඩම් භාවිතා කිරීමෙහිලා මෙන්ම මෙරට ඉඩම් භාවිතා කරන්නන්ගේ ද ශ්‍රී ලංකාවේ ඉඩම් අංශයට අදාළ පවත්නා සුක්ෂ්ම පාරිසරික තත්ත්වයන් ගැඹුරු ලෙස අධ්‍යයනය කිරීම පිණිස එයින් ප්‍රයත්නයක් දැරයි. ග්‍රාමීය ඉඩම් අංශයෙහි ගති ලක්ෂණ හා ඊට හේතු පාදක වූ කරුණු හඳුනාගන්නා ප්‍රඵල තොරතුරු සම්ප්‍රදානයක් ද ඊට අන්තර්ගත වේ. දිස්ත්‍රික්ක හතක් තුළ පවුල් 700ක් පිළිබඳව පවුල් මට්ටමින් සිදුකරන ලද සෞඛ්‍ය සමීක්ෂණයක් තුළින් රැස්කරගන්නා ලද දත්ත පදනම් කරගෙන මෙහි නිරීක්ෂණාත්මක සංසිද්ධීන් සහ ඒවාට පාදක වූ හේතූමුලයන් අතර පවත්නා සම්බන්ධතාවයන් පරීක්ෂා කොට ඇත්තේ ඒවායේ ප්‍රත්‍යක්ෂ වලංගුභාවය උදෙසාය.

ඔරොත්තු නොදෙන ඉඩම් හිමිකාරත්වය, අවිධිමත් ඉඩම් ගනුදෙනු අඩු ඵලදායිතාව, රජයේ ඉඩම් බලෙන් අල්ලා ගැනීම, පරිසරයට හානි පැමිණවීම, ආපදාවන්හිදී ඉඩම් විකිණීම යන කරුණු ශ්‍රී ලංකාවේ ග්‍රාමීය ඉඩම් අංශයෙහි පොදුවේ දක්නට ලැබෙන ගැටලුය. නිරීක්ෂණයට භාජනය වූ මෙහි සංසිද්ධීන් බොහොමයක් තුළ සාමාන්‍යයෙන් විද්‍යාමාන වූ සාධකය “දරිද්‍රතාවය” වන අතර දිලිඳුබව තුරන් කිරීමට ඇති බාධක බිම් මට්ටමින් පිටුපැසීම, මූලික ප්‍රතිපත්තීන් හා බැඳී ඇති ප්‍රශ්නගත කරුණක් බව හඳුනාගෙන ඇත. කෙසේ නමුත් ඉඩම් පිළිබඳ ප්‍රශ්නවලට එකම හේතුව දිලිඳුකම නොවන අතර බොහෝ අවස්ථාවල එකී ප්‍රශ්නවල ප්‍රතිඵලයක් වශයෙන් ඇතිවූ එකකි. පොදු මතය නොවුනද, ඉඩම්වල කෘෂිකාර්මික ඵලදායිතාව, අනවසරයෙන් ඉඩම් අල්ලා ගැනීම, දැරිය නොහැකි විශාලත්වයෙන් යුත් ඉඩම් අයිතිය හෝ පරිසරයට හානි පැමිණවීම යන කරුණු සලකා බලන කල ඉඩම් අයිතියට ඇති හිමිකම් සුරක්ෂිත කිරීම වැදගත් නිර්ණායකයක් නොවීය.

ඉඩම් පිළිබඳ කටයුතු කරන්නන් ඒවා භාවිතාකරන්නන්ගේ අයිතිවාසිකම් පිළිබඳව වඩාත් සැලකිල්ලක් දැක්වූ අතර මෙම කාරණය හේතුවකටගෙන සුරක්ෂිත ආකාරයේ අයිතිය පිළිබඳ හිමිකම් ඔවුන්ට පවරා දීම ප්‍රධාන ප්‍රතිපත්තිමය ප්‍රමුඛතාවක් ලෙස නොදක්නා ලදී. හවුල් කුලී බදු ගිවිසුම් සම්බන්ධයෙන් පවත්නා සීමාකාරකයන් ඉවත් කිරීම මගින් කුලී බදු ගනුදෙනු විශේෂයෙන්ම හවුල් කුලී බදු ගිවිසුම් සඳහා පහසුකම් සැපයීම මෙන්ම ආදාන සහ වෙනත් වෙළඳපොළ සඳහා පහසු ප්‍රවේශයකට ඉඩකඩ සලසාදීම යන දෑ වඩාත් උචිත ප්‍රතිපත්තිමය විකල්ප සේ පෙනේ. කුලී බදු වෙළඳපොළ සම්බන්ධයෙන් ගත්කල එහි කායනීක්ෂම නිෂ්පාදකයින් හට ඵලදායී අයුරින් ඉඩම් පවරාදීමේ දී කෘෂිකර්මයෙන් කෙමෙන් කෙමෙන් ඇත්වන ගොවිපල ශ්‍රමය ඊට ආකර්ෂණය කරගැනීමේ කටයුත්තේ දී ගොවිපල නොවන රැකියා අවස්ථාවන් තීරණාත්මක සාධකයක් බවට පත්ව තිබේ. එබැවින් කුඩා හා මධ්‍යම පරිමාණයේ ව්‍යවසායයන් විශේෂයෙන්ම කෘෂිකාර්මික පදනමකින් යුත් ව්‍යවසායයන්ට අවශ්‍ය යටිතල පහසුකම් වැඩිදියුණු කිරීම ප්‍රඵ අවශ්‍යතාවයකි.

කාලයට අනුරූප අයුරින් ඉඩම් අයිතියේ එකාධිකාරී බව රජය වෙතම පවරාගැනීම සහ කාලානුරූපව ඒවා බෙදාදීම පිළිබඳව ප්‍රමාණවත් අයුරින් සංශෝධන ඇති නොකිරීම යන කරුණු ඉඩම් භාවිතයේ අකාර්යක්ෂමතාවට තුඩුදුන් මූලික පොදු සත්‍යයක් වශයෙන් හඳුනාගෙන තිබේ. එබැවින් ඉඩම් සම්බන්ධයෙන් ආර්ථික, සමාජයීය, සංස්කෘතික හා දේපළාලනමය වශයෙන් පවත්නා ප්‍රශ්නගත කරුණු විසඳීම පිණිස මෙන්ම වත්මන් අවශ්‍යතාවයන්ට උචිත ඉඩම් ප්‍රතිපත්තියක් මෙන්ම ඉඩම් භාවිතා කිරීම පිළිබඳ ප්‍රතිපත්තියක් එකවිටම වාගේ බලාත්මක කොට ක්‍රියාත්මක කිරීම හදිසි අවශ්‍යතාවයක්ව තිබේ. ඉඩම් බෙදීමේ කාර්යයේදී “වෙළඳපොළ”ට රජය අභිබවා යාමට ඉඩදී ඇති නමුදු ඉඩම්වල තිරසාර පැවැත්ම උදෙසා ඒවා භාවිතා කිරීම සම්බන්ධයෙන් ප්‍රධාන කාර්ය භාරයක් රජය විසින් ඉටුකරනු ලැබිය යුතුය.

தொகுப்பு

இலங்கையின் கிராமிய காணித்துறையிலுள்ள பிரச்சினைகள் ஒழுங்குபடுத்தல் கட்டுக்கோப்பிலும், நிறுவனக் கட்டமைப்பிலும், சந்தைப்படுத்தல், சொத்துரிமை, வறுமை ஆகியவற்றிலுள்ள குறைபாடுகளாலும் பொதுவாக ஏற்படுவதாகக் கூறப்படுகின்றது. இந்த ஆய்வு காணித்துறையிலுள்ள சமகால விடயங்களை, அவற்றில் மிகவும் முக்கியமானவையாகக் கருதப்படுவற்றை மீளாய்வு செய்கின்றது. முதலாவது குறிக்கோள் கிராமிய காணித்துறையிலுள்ள பொதுவான குணவியல்புகளையும் அவற்றின் காரணங்களையும் கண்டறிவதாகும். இந்த ஆய்வின் இரண்டாவது குறிக்கோள் அரசு காணிக் கொள்கைகளும் நிறுவன ரீதியான மாற்றங்களும் இலங்கையிலுள்ள காணி உபயோகிப்பவர்களின் வினைத்திறமையுடனான காணி உபயோகத்திற்கும் அவர்களுடைய நலனுக்கும் வழிவகுத்துள்ளனவா என்பவற்றிற்கு பதில் அளிக்கக் கூடியனவாக அமைக்கப்பட்டுள்ளன. அது ஓர் பொது பாரிய கட்டமைப்பிற்குள் கிராமிய கட்டமைப்புத் துறையுடன் சம்பந்தப்பட்ட நுண் சூழலை ஆழமாக ஆராய முயல்கின்றது. இந்த ஆய்வு இத்துறையின் குணவியல்புகளும் சாத்தியமான காரணங்களும் கண்டறியப்படும் விரிவான இலக்கிய அளவையைச் சம்பந்தப்படுத்துகின்றது. இந்த அவதானிக்கக்கூடிய புலன் குறித்த செய்திகளும் சாத்தியமான மூலகாரணங்களும் ஏழு மாவட்டங்களிலுள்ள 700 குடிமனைமட்ட வெளிக்கள அளவையில் சேகரிக்கப்பட்ட தரவு மீது சேகரிக்கப்பட்ட தரவு அடிப்படை மீது அவற்றின் அனுபவத்தினால் அறியப்படும் செல்லுபடியாந்தன்மைக்காக பொருளியல் ரீதியாக பரிசோதிக்கப்படுகின்றன.

இலங்கையின் கிராமிய காணித்துறையில் ஒப்பேற முடியாத கொண்டிருப்புகளும், குறைந்த காணிக் கொடுக்கல் வாங்கல்களும் குறைந்த உற்பத்திவளமும் அரசு காணிகளின் அத்துமீறல்கையும், சூழல் தரக்குறைப்பும் விற்பனைகளும் பொதுவாக அவதானிக்கப்பட்ட பிரச்சினைகளாகும். அவதானிக்கப்பட்ட நிகழ்ச்சிகளில் பெரும்பான்மையான நிகழ்ச்சிகளில் வறுமையே காரணக் காரணியாகவிருந்தது. எனவே அடிமட்டத்தில் வறுமைத் தடைகளை விடுவித்தல் ஓர் முக்கியமான கொள்கைவிடயமாகவிருந்தது. எனினும் வறுமையானது காணி சம்பந்தப்பட்ட பிரச்சினைக்கு மட்டுமான ஓர் காரணியாகவிருப்பது மட்டுமன்றி பல விடயங்களில் அது அவற்றின் மீது ஓர் விளைவையும் கொண்டுள்ளது. காணிக்கான பாதுகாப்பான சொத்துவ உரிமைகள் கமத்தொழில் உற்பத்திவளத்தினதும் அத்துமீறலினதும் காணிக் கொண்டிருப்புகளின் அளவினதும் அல்லது சூழல் தரக்குறைவினதும் பொதுமக்களிடையே வழங்குகின்ற நம்பிக்கைக்கு முரணாக ஓர் முக்கியமான தீர்வுப் பொருளன்று அது காணி விற்பனைகளின் விடயத்தில் மட்டுமே முக்கியமானதாகவிருந்தது. ஆனால் வாடகைக் கொடுக்கல் வாங்கலில் அது முக்கியமானதாகவிருக்கவில்லை. காணி இயக்குபவர்கள் உபயோகிப்பவர்களின் உரிமை பற்றி கூடுதலான அக்கறை செலுத்துகின்றனர். எனவே காணிக்கான சொத்துவ உரித்துறுதிகளை கையளித்தல் ஓர் முக்கியமான கொள்கை முன்னுரிமையாகக் காணப்படவில்லை. வாடகைக் கொடுக்கல் வாங்கல்களின் வசதியளித்தல் விசேடமாக பங்கு வாடகை ஒப்பந்தங்களை அவ்வொப்பந்தங்கள் மீதான மட்டுப்பாடுகளை அகற்றி உள்ளீட்டிற்கும் பிற சந்தைகளுக்கும் சுலபமான அணுகுகையை பெறுவதை இயலச் செய்வது கூடுதலான பொருத்தமான கொள்கை விருப்பத் தெரிவுகளாகத் தோற்றுக்கின்றன. விவசாயத்திலிருந்து விலகிச் செல்லும் கமத்தொழிலாளர்களை உள்ளெடுப்பதன் பொருட்டு கிராமிய மட்டத்தில் கமம் அல்லாத வேலைவாய்ப்பு சந்தர்ப்பங்களின் கிடைக்கு நிலைவாடகைச் சந்தைகளிலுள்ள வினைத்திறமையுடைய உற்பத்தியாளர்களுக்கு பயனுள்ள முறையில் காணிகளைக் கைமாற்றம் செய்வது முக்கியமானதாகும். எனவே, சிறிய மற்றும் நடுத்தர அளவிலான

தொழில் முயற்சிகளை ஊக்குவித்தல், குறிப்பாக விவசாயத்துடன் சம்பந்தப்பட்ட கைத்தொழில்களை உரிய கட்டமைப்பு வசதிகளுடன் ஏற்படுத்துவது ஒரு முதற் தேவையாகவுள்ளது.

காலப்போக்கில் போதிய அளவில் சீராக்கித் திருத்தப்படாமல் காணிச் சொத்துவத்திலும் விநியோகத்திலும் அரசதுறையின் மேலாதிக்கத்தைப் பேணி வைத்திருத்தல் காணி உபயோகத்தின் விளைத்திறமையின்மையின் பெரிய காரணக்காரணியாகக் கண்டறியப்பட்டுள்ளது. எனவே காணி தொடர்பிலான பொருளாதார, சமூக, கலாசார, அரசியல் விடயங்களைக் கவனத்திற்கு எடுப்பதற்கும் தற்போதைய தேவைப்பாடுகளை எதிர்நோக்குவதற்கும் ஒரே சமயத்தில் ஓர் காணிக் கொள்கையையும் காணி உபயோகக் கொள்கையையும் வினைமுறைப்படுத்துவதும் நடைமுறைப்படுத்தலும் அத்தியாவசியமானதாகும். காணியை குறித்தொதுக்குவதில் 'சந்தையானது' அரசை மேலுறுவதற்கு அனுமதிக்கப்படலாமென்ற போதிலும் நிலைபேற்றை உறுதிப்படுத்துவதன் பொருட்டு காணி உபயோகத்தைப் பற்றித் தீர்மானிப்பதில் அரசு முன்னணிப் பாகமொன்றை வகிக்கவேண்டியுள்ளது.

1. Introduction and Objectives

Land is considered the most fundamental natural resource utilized by mankind and due to the very same reason its use and the demand for it has become increasingly complicated with the evolution of human civilization. Land has been an important means of generating livelihood, investing, accumulating wealth and transferring it from generation to generation especially for the poor in developing countries. Land is an asset with multiple uses but its value as a capital asset cannot be overstated, especially in the light of its productive as well as sentimental value to humans. In many of the developing countries, land provides the foundation for economic activity and the functioning of market as well as non-market institutions (Deninger, 2003). Land is the key element of the household wealth of the lower income groups and in many cases their social and economic status and overall performance is determined by the way the land rights are assigned to them. Access to land is highly correlated with poverty throughout South Asia (Faruqee and Carey, 1997) and in Sri Lanka, improving access to land is considered as a pro-poor development strategy in the context of its importance in securing household welfare, aggregate economic growth and sustainable reduction of poverty. Land still plays a major role as a means of deriving livelihood and accumulation of wealth of the low income groups of the country and nearly 50 per cent of the poor depend on land for their livelihood (Sri Lanka Integrated Survey 1999-2000).

Inequity, poverty and inefficient land use observed at all social strata in Sri Lanka are primarily attributed to lack of a coherent land policy and failure to adopt sustainable land management practices. Land use, property rights related to land and allocation of land have been largely affected by the inconsistent policy environment of the country and a number of conflicting issues have arisen as a result. "Until recently many decisions on land use matters in Sri Lanka were taken on an ad-hoc basis using the local knowledge and the intuition of the officers concerned. As a result inevitable mistakes were made and inappropriate uses were applied to the land" (Mapa *et al.*, 2002). Therefore, the objective of this study has been set as answering the basic question whether the state land policies and institutional changes have led to efficient land use and the well-being of the land users of Sri Lanka. This study lays emphasis on the semi-urban and rural land sector. This allows us to explore deeply the micro environment related to land sector within a general macro setting. Section 2 includes a general overview of the land sector of the country with special reference to the land use, allocation and the policy framework. Sections 3 and 4 examine the rural land sector of the country. Firstly, it presents a detailed review of literature identifying key observable phenomena that reflect the efficiency of land use and equitable distribution. Building testable hypotheses on the relationships between such phenomena and their causal factors follows. Secondly, quantitative tests of these hypotheses on data from a sample survey which lead to the identification of the causal factors of the observed phenomena are presented. Section 5 offers the conclusions and policy implications mainly based on the empirical analysis.

2. Overview of the Land Sector of Sri Lanka

2.1 Land Availability

Sri Lanka is 65,610 sq. km in extent with a coastal line of about 1700 km. Out of the total land mass of the island only 50 per cent is arable due to unsuitable terrain, inland water bodies and forest conservations. Expanding population has exerted much pressure on the land limiting its per capita availability to 0.29ha at present. With the projected population of 25 million by year 2030 this is expected to reduce to 0.22 ha. Per capita arable land availability which is 0.15 ha (Mapa *et al.*, 2002) at present can be expected to decline at a much faster rate with the urbanization and conversion of agricultural land to non-agricultural uses.

Increasing population seems to have exerted pressure in both rural and urban areas but the population is largely unevenly distributed between these two sectors. Yet 77 per cent of the country's population reside in the rural areas mostly depending on land for their living. However, a large number is continuously moving in and around urban areas in search of off-farm employment and the current rate of urban expansion has not been able to cope up with this unplanned migration. Progressively diminishing incentives from agriculture observed during recent years coupled with the scarcity of land for farming have resulted in this situation. This has led to the expansion of urban and semi-urban areas at a very high rate at the expense of rapid conversion of agricultural land to other uses (Urban Development Authority, 1998). Land scarcity in both rural and urban areas has resulted in ever-increasing land prices rendering land out of the hands of the poor. Availability of land has become a serious social and economic concern today due to its implications on both economic efficiency and equity. Hence, in order to attain sustained economic growth, it is crucial to prioritize the needs and allocate land accordingly. It is often argued that the issue of land availability in Sri Lanka is more of an issue of land policy than the land market. The majority of land of the country is directly or indirectly controlled by the government while only less than 20 per cent is held by the private sector (Mapa *et al.*, 2002; Gamage, 2000). Wijetunge (1990) states that all the land reform programmes implemented by successive governments have paid scant attention to the redistribution aspect and apart from regularization of encroachments no serious attempt was made to tackle the problem of landlessness.

Although a free land market may result in efficient allocation of land, its merits in securing equity and environmental sustainability are questionable. However, World Bank and some civil society groups insist that the land market should be liberalized (World Bank 2003). Moreover, inadequacy and unequal distribution of land surfacing at all levels have become serious problems today since they limit the access to land and other assets and economic opportunities for a large part of the population. It is well accepted by all parties that more land should be opened up for agriculture and other purposes to bring about the development of the country. Much of the land under state control is alienated under different conditions or else is held as reservations. Land use policy planning division under the Ministry of Land is maintaining a data bank on the unutilized state land and collection of data at the field level has been quite challenging. Much of the unutilized lands are held by the Land Reform Commission and now under the control of Divisional Secretaries or State Plantation companies. A substantial extent of such

lands has been already encroached by the surrounding dwellers. During the recent years 100,000 highland plots were identified all over the country by the Land Ministry to be distributed to landless people and this programme is still in progress (Ministry of Lands, personal communication). These lands can be used for the benefit of a significant proportion of the population of the country provided the distributional reforms are properly planned and targeted to realize the maximum benefits out of it.

2.2 Land Use

The present land use pattern in Sri Lanka is a legacy of the land policy of the colonial past where export based commercial plantation agriculture was superimposed on a traditional subsistence farming system (Mapa *et al.*, 2002). Apart from the state interventions from time to time land use of the country has been greatly affected by the market operations, traditional forces as well as the social factors. The increase in population, urban expansion and rural-urban migration, variations in demand for agricultural goods, development projects including large irrigation schemes, industrial and village development and infrastructural projects have led to considerable changes in the land use pattern during the recent past.

Sri Lanka can be broadly divided into three sectors depending on the use of land namely rural, urban/suburban and plantation sectors. The properties of rural and urban segments conform to standard definitions, with the plantation sector exhibiting a mixture of both rural and urban characteristics. In the rural areas agricultural land use is more prominent and use of common property is widespread. In contrast to this, in urban areas non-agricultural land use is more prominent with little common property. In the urban areas user rights and ownership rights are more formal and fairly well functioning land markets can be seen compared to the rural areas. The plantation sector is mainly characterized by rural land use pattern and the urban property rights system (Institute of Policy Studies, 2004).

Based on the mean annual rainfall land is classified into three agro-climatic zones as the Wet Zone (> 2500 mm), Intermediate Zone (2500-1700 mm) and Dry Zone (< 1750 mm). The Dry Zone covers 63.6 per cent of the land area. Wet Zone covers 23.2 per cent and the remaining 13.2 per cent is covered by the Intermediate Zone. A marked difference in the land use can be seen between the Wet Zone and the Dry Zone due to the climatic variation, uneven population distribution, infrastructure and other facilities. The Wet Zone with highly dense population experiences heavy fragmentation of lands and a large number of land disputes resulting from clouded titles. Also, the lands are largely privately owned. The Dry Zone is comparatively sparsely populated and the villages are basically centred around the irrigation systems. In the Intermediate Zone population density is more or less moderate.

Nearly one third of the land area of the country is used for agricultural purposes and another one third is used for forestry and wild life conservation. The balance is used for other purposes including human settlement, urban development and infrastructure (Table 2.1).

Table 2.1
Land Use of Different Sectors in Sri Lanka, 2000

Land use category	Land area (ha)	As a percentage
Built up lands	30370	0.65
Non-agricultural lands	21470	0.46
Homesteads	786743	16.7
Tea	199622	4.24
Rubber	199661	4.24
Coconut	301701	6.41
Mixed and other Perennial crops	43265	0.92
Paddy	530536	11.28
Sparsely use cropland	812656	17.27
Other cropland	51529	1.09
Dense forest	689662	14.66
Open forest	198738	4.22
Forest plantation	73447	1.56
Scrub land	363592	7.73
Grass land	65550	1.39
Mangroves	3532	0.08
Marsh	14013	0.29
Water	161330	3.43
Barren land	34650	0.74
Archaeological reservation	1560	0.03
Wildlife reservation	94510	2.01
Forest reservation	26678	0.57
Total	4704810*	

Source: Land Use Policy Planning Division, 2000.

(*Land use in the 7 provinces excluding North and Eastern provinces)

Forest cover of Sri Lanka seems to be less than the world average of 30 per cent, but slightly above the average for South Asia. The forest cover which stood at 90 per cent during the early 1900s has declined remarkably over time due to the clearing of land for agricultural, commercial and industrial purposes. According to the Forest Department dense forest cover which stood at 27 per cent of the total land area of the country in 1982 has reduced to 24 per cent in 1992. Also, the natural forest cover which was 31 per cent in 1992 has reduced up to 28.3 per cent in 1999. The natural forest area largely covers districts in the Dry Zone such as Ampara, Polonnaruwa, Anuradhapura, Trincomalee, Vavuniya, Mullativu, Monaragala and Kurunegala and much of these lands are scrub jungles or sparsely spread forest lands. Also the largest loss in the forest cover was observed in this area during the past 3 decades. The Wet Zone with relatively stable forest cover mainly comprises small and fragmented forests. It covers only a minor extent of the natural forest lands and this situation has led to an array of environmental problems. By 2002, 1,943,000 ha of land were under forest cover with 661,000 ha of land reforested under different reforestation programmes.

The area under agricultural uses has increased slightly over the years but 44 per cent of the potential agricultural land, that is nearly 20 per cent of the total land area, is sparsely used. Paddy accounts for 27 per cent and plantation crops (Tea, Rubber and Coconut) occupy 40 per cent of the agricultural land. Land under agricultural uses, particularly paddy lands in the Wet Zone and marginal tea, rubber and coconut lands is being continuously converted to non-agricultural uses over the recent past. This could be attributed to the increased demand for land by both local and foreign investors, low productivity of privately owned small agricultural holdings and high replanting cost of plantations. However, net extent under paddy in the Dry Zone has increased remarkably owing to the establishment of settlement schemes with irrigation facilities. Also, increasing demand and prices for rubber in the world market has been able to control the conversion of rubber lands into other uses to some extent. Further, this has led to an increase in the area under rubber, especially in the non-traditional rubber growing areas during the recent years (Central Bank, 2004). Similarly, the area under coconut also seems to be increasing due to the establishment of new plantations and increased number of scattered trees in the home gardens (Silva, 2001). Other crops are cultivated in a relatively minor scale, basically outside the Wet Zone.

Urbanization is taking place at a rapid pace and according to the Urban Development Authority (UDA) (1998), urban and sub-urban expansion has taken place at the rate of 512 per cent between 1983-1994 period. Urban share which was 1.5 per cent of the total land area in 1981 has increased up 12.7 per cent in 2004 accommodating 23 per cent of the country's population. The Presidential Task Force report of 1998 has estimated the urban population to increase to (40 per cent by the year 2015 and) 65 per cent by year 2030. Total area under homesteads has increased in par with the urbanization process while the average size of a homestead has reduced due to high population pressure (Government of Sri Lanka, 2002). According to UDA (1998), the largest land use under the Colombo Metropolitan Region (CMR) was identified as the homesteads. Yet the average size of a homestead has reduced to 12- 15 perches in the CMR during the recent years.

Present rate of urban expansion has not been able to meet the demand and this gap has given way to a number of serious problems according to the Urban Development Authority. Non-utilization and under-utilization of prime urban land, conversion of residences into commercial establishments, urban sprawl and 'ribbon' development along major highways, utilization of the low lying areas and environmentally sensitive wetlands for commercial, industrial and residential uses, unplanned fragmentation, unauthorized filling of marshy lands, difficulties in discharging storm water and difficulties in sewage and water disposal are the resultant problems of the highly unplanned urban land use.

Nearly 80 per cent of the country's land is under state control of different forms as alienations under land distribution programmes, lands vested with state institutions (Urban Development Authority, Education Ministry, Health Ministry, etc.) and plantation companies and protected land (under Wildlife Conservation and Forest Department). A significant extent of state land has been encroached by different user groups and the ownership of much of these land parcels have been regularized from time to time. According to the Land Commissioner's Department, by year 2003 nearly 500,000 allotments have been regularized under the programme on regularization of encroachments. Unutilized land constitutes a considerable

extent of state land and according to the Land Use Policy Planning Division much of this land is found in the North and East and also in Districts such as Polonnaruwa, Monaragala, Anuradhapura, Badulla and Puttalam.

One of the serious problems regarding the use of land today is the mismatch between the present land use and the sustainable land use. Even though the need to strike a balance between production and protection has already been identified by the scientists, environmentalists and many other stake-holder groups, the greater part of environmentally sensitive areas are in different land uses. The National Physical Planning Department (2005) has already identified an extent of 1, 107,849 hectares as fragile mainly in the districts of Nuwara Eliya, Kandy, Matale, Badulla and Ratnapura. Fragile areas cover 17 per cent of the total land area accommodating 25 per cent of the total population of the country. The Land use of the area is primarily agricultural and residential with 76 per cent of the total rural population. As shown in Table 2.2 nearly 75 per cent of the fragile land is under different uses causing a number of environmental and economic problems such as loss of bio-diversity, increased land degradation, slow ground water recharge, sedimentation of reservoirs, threats to archaeological reserves and places of scenic beauty and damage to infrastructure.

Table 2.2
Land Uses in Fragile Area

Land use category	km ²	Percentage
Crop land		
Major plantation crops	2924.02	25.95
Paddy	684.41	6.18
Other plantations	328.98	2.97
Forest areas	2097.73	18.94
Scrubland	1294.70	11.69
Chena	919.91	8.30
Grass land	64.11	0.58
	8313.86	

Source: Fragile area, Proposed Conservation Strategy (Draft) 2005.

2.3 Land Policy Framework

Since the establishment of the British colonial rule successive governments have implemented various policies to manage the land resource of the country even though the effectiveness of such policies in catering to the needs of the country is questionable. During the British rule land policies were not in favour of the majority of the indigenous population and the most important landmark of their land policy was the Crown Lands (Encroachment) Ordinance of 1840. It effectively converted over 90 per cent of the total extent of land in the country into crown property (Madduma Bandara, 1990) and most

of such lands in the up-country were later sold to the European elites paving the way to the establishment of plantation agriculture and a system of land tenure unknown to the natives (Jayawardana, 1990). Then the Waste Lands Ordinance which was also biased heavily against the peasantry was enacted in 1897 to prevent the encroachment of crown waste lands by the peasants. In 1927 the first Land Commission was established by the colonial government mainly to improve the welfare of peasants (Madduma Bandara, 1990; Goonawardene and Hatten, 1990). The recommendations of the Commission led to the enactment of the Land Development Ordinance in 1935 which set the future course of land development of Sri Lanka (Goonawardene and Hatten, 1990; Jayawardana, 1990; Madduma Bandara, 1990; Abeysinghe, 1979). It marked the beginning of an era of rapid land settlement and starting from mid-1930s it continued up to the implementation of the Accelerated Mahaweli Development Project in mid-1980s. Table 2.3 shows the number of beneficiaries under different land alienation programmes and the extents of land distributed under each programme by the year 2003.

Table 2.3
Land Distributed under the Land Development Ordinance by 2003

Programme	No. of allotments	%	Land (ha) distributed	%
Highland settlement	9959	0.83	15023	1.80
Major settlement	100117	8.34	168835	20.20
Village expansion	515078	42.91	301468	36.07
Middle class	13385	1.11	63265	7.57
Youth settlement	6245	0.52	7881	0.94
Land grant	63574	5.30	18977	2.27
Regularization of encroachments	492143	40.99	260283	31.14
Total	1200501		835732	

Source: Land Commissioner's Department.

By the end of 2004, 1,161,555 permits¹ had been issued for the alienated lands by the Land Commissioner's Department while 51,976 were issued by the Mahaweli Development Authority. Issuing grants for the lands alienated under LDO commenced in 1982 and by the end of 2004, 318,038 Swarnabhoomi² (1982-1994) and 676,266 Jayabhoomi³ (1995-2004) grants had been issued by Land Commissioner's Department while 45,166 Jayabhoomi grants were issued under Mahaweli.

¹ Permit is an intermediate tenorial document offered to the recipient of land that gives him necessary authority to occupy and develop the land.

² Swarnabhoomi grants are prepared with a Survey map.

³ Jayabhoomi grants are prepared without a Survey map.

Grant is a permanent document which confers a tenure close to that of a freehold title subject to several conditions that transfers require prior permission, prohibition of fragmentation and sub-division, inheritance restrictions, etc.

The government enacted two tenure reform programmes, Paddy Lands Acts of 1953 and 1958 to ensure tenure security and to regulate the rent paid by tenants to the landlords. Even though these were implemented with the objective of increasing productivity through increased tenure security they turned out to be more detrimental than beneficial to the landlord-tenant relationship leading ultimately to the eviction of a large number of tenants. Between 1958 and 1972 about 43,000 tenants were reported to have been evicted (Gamage, 2000) and only 18 per cent ended in a final restoration. Agrarian Services Act of 1979 also aimed at securing tenure rights of tenant cultivators of paddy and improving the productivity of such lands. It is considered as a more realistic approach in solving the problem of the paddy sector. This policy was also considered to be in complete conformity with open economic policies and the macro economic needs to affect higher flexibilities in basic resources governing food production, employment and income creation (Alwis and Wanigarathna, 2001). Agrarian Development Act No. 46 of 2000 has identified the necessity of setting a national policy to safeguard the rights of tenant cultivators. It also tries to ensure maximum utilization of agricultural land by imposing restrictions on conversion of agricultural land into non-agricultural uses.

Two land reform Acts were also passed in 1972 and in 1976 in which the private ownership of land was subjected to a ceiling and large extents of plantations were nationalized and vested with two state companies, Janatha Estate Development Board (JEDB) and State Plantations Corporation (SPC). Apparently, there were several motives behind these two reforms including egalitarianism, employment creation, reducing pressure on the balance of payments and increasing output by improving, intensifying and diversifying the use of existing land. Recently, under the privatization programme the plantation estates managed by the state were handed over to the private sector. Other lands are released by the Land Commissioner's Department under the Land Grants (Special) Provisions Act of 1979 for various purposes. By year 2004, 75,177 grants had been issued under the Land Grant (Special) Provisions Act and it was also found that a significant extent of LRC lands had been encroached. At present the Land Reform Commission (LRC) has imposed a land ceiling of 25 acres of paddy land, 50 acres of highland and both together to add up 50 acres, but no effective enforcement of the ceiling is noticeable. So far approximately 981,160 acres of land have been acquired under the Land Reform Commissions and of them about 10 per cent has been granted to the low income groups officially. According to Alwis and Wanigaratne (2001), under this programme small blocks of 0.25 acre to 1 acre were distributed among the landless where landlessness was the most acute and also as a populist measure. Nevertheless, the distribution of small parcels of land to a large number of the landless proved counter-productive over the years.

Registration of Title Act No. 21 of 1998 is another important legislation enacted recently with the objective of providing titles to land parcels to enable the owners to get the optimum use of land. Expected major benefits from the registration of titles include the certainty of ownership, security of tenure, reduction of land disputes, stimulation of land market, security for credit, management of state lands and facilitation of reforms. The World Bank also suggested a "Land Ownership Bill" to give freehold titles to the allottees of the alienated state lands arguing that a free land market will allocate the land more efficiently (Institute of Policy Studies, 2004). However, this led to much controversy as some others argue that it would have more negative impacts making the poor landless even poorer. However, after in-

depth micro level studies on this issue by several stake-holder groups, emphasis is directed towards issuing freehold titles to high lands particularly lands alienated under village expansion schemes which cover the largest proportion of the distributed lands (Institute of Policy Studies, 2004). The Land Commissioner's Department has already taken initiatives in this direction by submitting a cabinet paper. Yet many groups oppose conferring titles to irrigated land on the grounds of adverse impacts on the poor.

Apart from these landmark legislative measures a number of policies (Appendix 1) have been brought to effect from time to time by successive governments on the use and distribution of land. Yet there are conflicting issues and disputes related to land attributed to the absence of a suitable institutional framework to execute the provisions available under legislation. According to the Ministry of Lands, 62 per cent of the murders committed in Sri Lanka in the year 2000 were related to land disputes. Further, a large number of institutions share the responsibility of managing and administering land use and distribution in the country which has led to overlapping of authority and contradictory decisions and policies. At present nearly 39 operational laws and 60 institutions seem to be involved in the administration of land. Lack of coordination among these different agencies, lack of transparency, lack of technical expertise to handle the issues efficiently, lack of accessibility, high transaction costs and inadequate public awareness are the major deficiencies of the present administrative system (Institute of Policy Studies, 2004). On the argument that the existing land legislation is not effective in satisfactorily addressing the land related problems of Sri Lanka, the groundwork for formulating a new land policy and a new land use policy for the country has already been undertaken by the relevant authorities.

2.4 Land Market

Allocation of land among different users in Sri Lanka takes place through state initiatives as well as land market operations. Further, more land is also allocated through informal mechanisms in the absence of a well developed land market, particularly in rural areas. State allocation of land has taken different forms ranging from Dry Zone colonization schemes, Village expansion schemes, Middle class schemes, Regularization of encroachments, Marginal land schemes, Highland settlement schemes, Rainfed farming settlement schemes, Land Grants (Special Provision) and Youth settlement schemes. Various restrictions imposed on these lands have limited land transfers among uses as well as users. Under the current drive towards open economic policies, emphasis is increasingly being placed on the market mechanism. However, imperfections prevailing in land market itself as well as in supporting markets, especially the capital markets, seem to have adverse impacts on allocative efficiency and equitable distribution of land. Table 2.4 shows the degree of prevalence of different means of land allocation in Sri Lanka in the rural and urban sectors.

Allocation of land in the urban sector mainly takes place through the formal markets while the state too intervenes in allocating land among users and especially on uses. In the rural sector of the country a mix of the three means can be seen. However, the role of the market is relatively less prominent. Restrictions imposed on the alienated state lands and encroached lands have led to the development of an informal, in fact illegal, system of land allocation. There is substantial evidence on the operation of informal land markets and illegal land transfers in many parts of the country and Jogarathnam (2001), drawing from

Table 2.4
Degree of Prevalence of Different Means of Allocation of Land

		Market	Regulatory	Traditional / Informal
Rural	Among uses	↓	↔	↔
	Among users	-	↑	↑
Urban	Among uses	↑	↔	-
	Among users	↑	↓	-

Source: State of the Economy 2004, Institute of Policy Studies.

Legend	
↑	High prevalence
↓	Low prevalence
↔	Moderate prevalence
--	Non-existent

various empirical studies, has clearly shown the incidence of such transfers including mortgages, leases and even outright sales. Economic and social implications of such arrangements may vary with the locality particularly with the agro-climatic zone. For example, in the irrigated lands with high potential for agricultural production in the Dry Zone settlements, informal arrangements are key to factor mobility. In the Wet Zone under the rain-fed system with intensive cultivation practices the implications may be different.

2.4.1 Property rights and tenure security

Land is considered as the basic asset of the poor and in theory secure property rights to land are identified as the key to the realization of economic and non-economic benefits through greater investment, increased access to credit markets, increased transferability and transactions, decreased risk and fear of expropriation and sustainable management of resources. According to the World Bank (2003) for those wanting to remain in agriculture in Sri Lanka small holdings, lack of secure tenure rights and legal restrictions on acquiring or leasing-in land reduce incentives for productivity enhancing activities. However, no strong empirical evidence is found in Sri Lanka in support of a close link between the property rights and the accrued benefits. In fact Wanigaratna (1995) in a study on settlement projects concluded that there is no clear relationship between higher concentration of land rights and the benefits in the settlements of Sri Lanka.

In Sri Lanka no marked development in property rights could be seen during the recent past. Like in most of the South Asian countries, in Sri Lanka also there is a considerable array of customary rights (including water rotation rights, access to water channels, grazing rights, etc.) enjoyed by the peasants for years. Further, the state has drawn up policies and enacted laws from time to time to ensure tenure security. Property rights (both the user rights and ownership rights) seem to be important in the case of land and these can be broadly categorized into formal and informal rights. Table 2.5 summarizes the private land rights prevailing in the country.

Table 2.5
Characteristics of Various Private Land Rights

Land right	Characteristics	
	Ownership right	User rights
Formal	Inherited or purchased or government transfers with title deeds – mainly urban and plantation	Largely legal time bound agreements such as lease holdings – mainly urban
	Surveyed and mapped	Long term lease of land such as in colonization schemes – mainly rural
Informal	Traditionally inherited, largely unsurveyed and without legal documents – mainly rural	Traditional land sharing, theoretically legally binding such as Ande, Thattumaru and Kattimaru – totally rural
Other 'rights'	Access to common property – both rural and urban Illegal use of public land – squatting on urban public land; encroached forests for agricultural purposes; informal 'sharing' of common property land such as for free grazing	

Source: State of the Economy Report 2004, Institute of Policy Studies.

In the urban sector and the plantation sector, formal ownership rights and user rights are key to the optimal use of land since the level of investment, access to inputs and technology are to be largely determined by secure property rights. Informal property rights also play some minimal role in these sectors. In the rural sector of the country informal rights which are mostly traditional are dominant over the legally bound formal property rights. Hence a number of informal arrangements such as Ande⁴, Thattumaru⁵, Kattimaru⁶ are taking place with the stipulated conditions varying from one locality to another.

2.4.2 Land rental market

Land rental market is generally accepted as a flexible and versatile means of transferring land to more efficient producers improving overall productivity of land. Rental markets are also seen to provide an agricultural ladder whereby landless households lacking capital can start as renters or share tenants and build up knowledge and savings, and eventually getting access to land (Deninger, 2003).

⁴ Tenant cultivator is responsible for all the work and gets a share of the crop for his efforts while landlord is virtually an absentee landlord exercising little supervision over the cultivation.

⁵ Form of rotational cultivation whereby the ownership of a particular land is taken in turn to prevent the physical subdivision of a unit of land so as to maintain an economic unit of cultivation.

⁶ Sub-divided plots of a land are cultivated rotationally by the co-owners/joint owners and all owners occupy some portion of the land simultaneously.

Majority of the operators in the smallholdings sector of the country are micro holders or the landless. According to the Agricultural Census (1982) 11 per cent of farm operators are landless, with another 38.5 per cent owning home gardens only. The situation has not changed much over the past two decades and according to Census of Agriculture 2002 there are 3.3 million holdings in the smallholding sector which are less than 20 acres in extent. The corresponding number reported in the year 1982 was 1.8 million holdings. Out of the 3.3 million smallholdings in the agricultural sector nearly 45 per cent are less than 40 perches (1/4 acre) and they mainly produce for their subsistence. Majority of them are not in control of enough land to enable them to produce a marketable surplus. Since nearly 50 per cent of cultivators are not owners of the lands they farm and the majority of the lands are non-viable holdings there is much scope for the development of the land rental markets in Sri Lanka.

State intervention in the rental markets has not been very effective during the past and they had mostly been detrimental to the landlord-tenant relationship. Hence the current wave of thinking is biased towards the market mechanism especially in the case of renting land. In the rural areas of the country there seems to be a fairly dynamic rural land market and considerable rental transactions are taking place (Dharmaratna *et al.*, 2005). Traditionally people are involved in share rental contracts and still many seems to be willing to stick to such contracts. Fixed rental contracts such as long term leases are comparatively lesser in number but seem to be increasing at a high rate. Tenants involved in fixed rental contracts seem to have more capacity in terms of investment compared to the share tenants who mostly lack the ability to cultivate on their own. It was clear that having had the capacity to invest, tenants are more likely to get involved in fixed rental contracts than in share contracts. Tenants are attracted by the monetary benefits as well as non-monetary benefits such as tenure security and social recognition offered by the fixed contracts (Dharmaratna *et al.*, 2005).

2.4.3 Land sales market

In the urban and plantation sectors of the country a fairly developed land sales market can be seen unlike in the rural areas. Absence of ownership rights to the lands where the small farmers operate is preventing many of them from actively participating in the land sales market. Imperfections in other markets significantly affect the land sales market as well, compared to the rental market. All these are believed to have limited the access of the poor to land, worsening the inequity. Non-availability of off-farm employment opportunities especially in the rural agricultural communities further aggravates the situation.

In many rural areas land sales markets are thin and the prices fluctuate considerably over time. High transaction costs resulting from organizational and institutional failures have led to segmentation of the land sales markets thus preventing efficient allocation of land among the users. Restrictions on the land sales market imposed by the state have driven up the land prices further restricting the access to land by the poor. Particularly the restrictions imposed on the alienated state lands by the LDO and the State Land Ordinance (SLO) have prevented these allottees from participating in the land market even when they are not successful in farming. This is argued to be a major drawback on achieving efficiency even though it is imposed in the interest of equity. ".....lands are subjected to various restrictions including leasing,

sale, mortgaging, inheritance and minimum size, which in turn have adversely affected farmers and the agricultural sector in several ways" (World Bank, 2003). Land granted by the State under various forms of "protected tenure" results in restrictions on their use and transfers. Neither of the grants is accepted as collaterals by commercial banks (Gamage, 2000). The land ownership ceiling enforced by the Land Reform Commission in 1972 is also shown to have similar impact as it limited the supply of land. It is argued that land reforms ignored the existence of a proletariat or landless peasantry in the country (Moor, 1989). Further, out of the land acquired under the land reform mostly marginal lands were redistributed (nearly 10 per cent) and majority of the lands (eg; more than 60 per cent of the tea land) was vested with state agencies for management (Gamage, 2000) eventually limiting the access to productive lands by the poor.

Administrative intervention however has not proved to be an effective mechanism compared to the free market operations in land sales. Generally the rich and wealthier classes benefit from such interventions over the poor with no bargaining power. The poor with no competitive ability are frequently left with unfavourable terms of contracts ultimately resulting in unprofitable or inefficient operations. Lack of bargaining power of the poor in the formal markets, may push them to sell their lands in the informal land market often as distress sales making themselves poorer. However, the high social value attached to land minimizes such practices in Sri Lanka and there is also pressure from the new generations to prevent parents from getting involved in such transactions (Institute of Policy Studies, 2004). According to Alwis and Wanigaratne (2001) well intended legal and administrative moves have, by and large, not prevented the formation of an informal land market, informal sub-division and accumulation of land in the settlement areas. However, informal arrangements are said to have led to creation of larger operational holdings, higher investment, greater use of technology, more commercialization of production and increased displacement of inefficient cultivators (Jogarathnam, 2001).

Land sales market distortions have contributed to another critical issue of fragmentation of land resulting in non-economic operational holdings. Lack of affordability and escalating land prices have kept the majority of the low income earners away from larger viable holdings. Imperfections in the sales market are also probably having negative implications on the productivity since landlords may attempt to transfer their marginal lands to the poor. Scarcity in land availability, macro-economic distortions especially high interest rate and inflation, and imperfections in other markets appear to have largely prevented active involvement of the poor in the land sales market and thereby getting access to the land. Even though current thinking is more skewed towards market mechanisms, under these circumstances land sales market has not proved a reliable mechanism so far to transfer the land to most efficient users.

3. Major Characteristics of the Rural Land Sector and their Determinants

Discussion in the previous chapter pointed out that the efficient use and equitable distribution of the land are affected by a range of factors varying from market forces to state intervention. This chapter attempts to give theoretical explanations to the behaviour of the rural land sector of the country and formulate hypotheses amenable to empirical testing.

From the literature surveyed, five major theoretically plausible root causes of the inefficient use and inequitable distribution of land were identified. Further, seven phenomena which are presumably the results of these causes and at the same time commonly observable at the ground level particularly in the South Asian region, were also identified. Each of these is separately elaborated below.

i. Failure in property rights system related to land

Numerous studies have documented that the secure individual land rights is the key to the efficient use of land (Deninger, 2003; Deninger and Feder, 2001; Smith, 2004). Secure property rights are considered important to increase agricultural output through incentives for investment, access to formal credit, effort and the ability to transfer land at low cost to more efficient producers (World Bank, 1999) as well as more sustainable management of resources. Smith (2004) found a firm association between tenure security and fixed investment. Secure and well defined land rights are fundamental for the households' asset ownership, productive development, factor market functioning and independence from discretionary interference by bureaucrats (Deninger, 2003). Generally in countries with defective tenure systems higher importance is attached to land ownership and larger lands mark higher social prestige. Deninger (2003) also states that without secure land rights, landowners are less willing to rent out their land, which may impede their ability and willingness to engage in non-agricultural employment or rural-urban migration. A coherent system of property rights that guarantees security of tenure to cultivators, facilitates access to land by the poor and encourages investment to increase sustainability and productivity can be of overriding policy importance (Deninger and Feder, 2001). Hence **failure in property rights system** related to land could be treated as seriously affecting the land use efficiency as well as distributional equity.

ii. Market failure

High transferability of land rights is expected to improve resource allocation and thereby overall efficiency of land use. In the current context, market based transfers of land seem to play a key role in this regard and at the same time non-market transfers are also taking place to a substantial extent especially in the rural areas in many of the developing countries. Studies carried out by the World Bank (Deninger, 2003; Mearns, 1999; Faruqee and Carey, 1997; World Bank, 1999) throughout the South Asian region highlight that the imperfections in the land and other related markets such as capital and insurance markets have impeded peoples' active participation in the land market. Land related transaction costs are onerous for all, but are often prohibitive for the poor (Mearns, 1999).

Administrative restrictions on land sales have often been costly to enforce and ineffective in preventing inequitable outcomes. Hence, a freely operating land market is likely to be more conducive to efficiency and equity since it facilitates the transfer of land to most capable producers. This also reduces scope for corruption and other undesirable side effects of inefficient administrative intervention. However, according to the World Bank (1999) poorly designed land market interventions and regulations continue to hamper the development of the land market of many parts of the world. A few studies done in Sri Lanka have also stressed the importance of a well-functioning land market in improving the efficiency aspect. It is stated that the present relative stagnation of agriculture can be ascribed to non-functioning or malfunctioning

land markets (Jogarathnam, 2001). Hence, **failure in land market operations** is a key to allocative inefficiencies and persistent inequity in the land sector.

iii. Failure in the institutional set up of the regulatory framework

Shortcomings in the administrative set-up related to land is likely to affect allocation and use of the land particularly in developing countries. When institutions are inaccessible, having unclear mandates, and are not willing to respond to demand, transaction cost of land exchange increases and this is more detrimental to the poor who seek to get their rights legalized. Failure of the institutions administering land rights to respond to these demands can lead to land grabbing, conflict and resource dissipation that in extreme circumstances, can undermine the societies' productive and economic potential. Institutions administering property rights to land need to be flexible enough over time in response to changing requirements and hence decentralized institutions are more accountable and effective (Deninger, 2003). It is also noted that higher transaction costs are preventing best allocation of land affecting both land sales and rental markets. This has also led to segmented land sales market preventing transactions between the different social classes (Deninger and Feder, 2001). This also has resulted in higher costs in physically demarcating land plots and also a considerable number of land disputes. This is socially, culturally and economically undesirable and even in Sri Lanka a large number of conflicts and court cases are reported in relation to land. According to Deninger and Feder (2001) in developing countries numerous problems related to land have resulted from inefficiencies in regulatory framework than market interventions. Also, different institutional arrangements are said to emerge in response to the many inefficiencies and distortions associated with the access to land (Jogarathnam, 2001) and apart from the state driven institutions a large number of institutions have emerged at the community or local level. Unorganized and malfunctioning administrative system in the land sector of many of the developing countries has been a cost to the actual participants of the land. According to Alwis and Wanigaratne (2001) failures in the administrative set-up has led to a high degree of informal subdivision of land and the establishment of an informal land market through disguised leases, mortgages, sales and complex tenure arrangements in settlement schemes of Sri Lanka. Hence, **failure in the institutional framework** is identified as an important determinant of the efficient use and distribution of land.

iv. Policy failure in the regulatory framework

Deninger (2003) observed that land reforms have been very successful in Asian countries (Japan, Republic of Korea, Taiwan, China) and African countries (Kenya, Zimbabwe) while some Asian countries, Latin America and South Africa have failed in such efforts. This can be attributed mainly to the lack of steady political will in many instances. Even though the policies were mainly aiming at poverty alleviation and economic development, due to short term political interests and poor designing which neglect the needs of beneficiaries, their impact has been limited in most of the cases. General argument is that the developing countries often lack the capacity needed to manage the land and bring it to its best use. Also, undesirable externalities are not prevented through the regulatory framework. Moreover, the restrictions on land allocation and use are often not enforceable, not supported by legislation and not transparent. Restrictions on the transferability of land is said to be pushing such transactions into informality. According to

Gamage (2000), 55 per cent of the agricultural lands in Sri Lanka operated by the small holders are government owned and affected by lack of transfer rights. Poorly designed land market interventions and other policies limit access to land by the landless and the poor by hampering the non-farm economic development and discouraging renting out by landlords (Deninger, 2003). Smith (2004) proposes land tenure reform as an effective tool in anti-poverty policy agenda in Zambia. However, he shows that even the reforms presented as neutral economic tools can be manipulated to deepen inequalities. Therefore, **policy failure in the regulatory framework** seems to be strongly determining the use as well as the distribution of land.

v. Poverty

The incidence of poverty is highly correlated with lack of access to land although the direction of causality in this relationship is not clear. Poverty is presumably associated with low levels on farm investment even in the presence of ownership rights. In risky environments where small land owners do not have access to credit markets, distress sales of land by the poor can occur with consequent negative equity impacts (Deninger, 2003). The relative bargaining power of diverse agents strongly influences the extent to which individuals are able to enjoy effective command over land and other resources and the rural poor and other socially excluded groups have relatively less bargaining power vis-a-vis other agents (Leach *et al.*, 1998). Incidence of chronic poverty among landless farmers is still much higher than among average landed operators (Mearns, 1999). Brink (2003) in his study in Sub Saharan Africa has pointed out that in countries like Kenya and Zimbabwe the experience in many of the resettlement programmes is such that once poor people are given good land they are able to lift themselves out of poverty permanently. He has also noted that countries like Guatemala, Colombia, Brazil and South Africa with their highly unequal land ownership and high public investment on large scale farming have been the least successful in reducing rural poverty.

Seven most commonly observed phenomena resulting from the above causes of inefficiency and inequity, which are relevant in the Sri Lankan context were also identified in this review of evidence as follows:

i. Low productivity

Low productivity is argued to be a result of the inefficiencies in the market system and policy framework related to land but there are evidences in support of as well as against it. According to Smith (2004) major empirical studies in the 1990s failed to agree upon an economic model that predicts increased productivity from increased security via greater demand for fixed investment, greater credit supply and demand and transfer of land to most efficient users. He has further shown that even in circumstances where tenure security is associated with increased fixed investment, it does not cause increased productivity in turn. However, in his study conducted in Zambia he proves that higher tenure security leads to higher productivity. It is also argued that lack of formal titles is the major reason for the inefficiency in share contracts observed in the Asian countries. Poor property rights to land are assumed to offer fewer incentives to the operators making them economically unstable and therefore disinterested in farming activities. However, Faruquee and Carey (1997) suggest that in South Asia, despite the significant regional variation within the subcontinent, strong evidence linking land rights to production and investment is scarce. Moreover,

operational differences arising from tenure status is small such that even tenants who lack security of tenure operate their lands efficiently since they are bound by the communal informal land rights.

Land reforms as well as the institutional set-up related to land also seem to be affecting the land productivity. Faruqee and Carey (1997) suggest that in countries like India, Pakistan and China egalitarian land distribution programmes are associated with high productivity. It is argued that land titling programmes have strong effects on land specific investments by reducing uncertainty. Lack of a coherent policy on land and land use, restrictions on the transfers on the alienated state lands which prevent transfer of land to more efficient producers and limited access to formal credit are treated as organizational failures leading to low productivity. Low productivity takes place as a result of low investment, low input use, poor technology and lack of measures to upgrade land quality making the operator even poorer.

ii. Low land transactions

In developing countries, market for land sales is often segmented preventing land sales across different social groups especially limiting the participation of the poor in land market activities. It is also observed that the transaction costs related to land are independent of the sizes of land plots. Lack of market information, collateral and well established property rights are likely to prevent the poor from participating in the distorted land markets thus discouraging formal small land transactions, frequently resulting in informal transactions. Rental transactions seem to be relatively common in Sri Lanka but the state interventions and the tenure reforms taken to regulate rental markets have often been ineffective (Gamage, 2000; Alwis and Wanigaratne, 2001).

High demand for non-agricultural land uses and imperfections in the credit market have placed the land prices above the capitalized value of agricultural profits limiting acquisition of land by the poor (Deninger and Feder, 2001). This has jacked up the land rentals beyond the reach of the average tenant cultivators. Literature points out that high transaction cost, longer time periods for resolving land disputes, lack of transparency and flexibility and several other weaknesses attached to the state institutions have also been preventing optimal level of transactions from taking place. Mearns (1999) in his study on land in rural India pointed out that due to high transaction cost and high social value of land exceeding the direct economic value, the land sales market in India is sticky. However, he suggests that by and large markets in rural India have operated in favour of small and marginal farmers than against them. He has also noted active lease markets in operation in agriculturally progressive areas and semi-arid areas of India even where leasing is legally prohibited.

As such, low transactions prevent the lands from being transferred to the most efficient users. Even though this may have marginal impact on the large land owners with other income earning possibilities, its implications on the poor with no other alternative sources of income will be considerable.

iii. Distress sales

Distress sales have played a significant role traditionally in the change of ownership and concentration of land in the hands of the rich. This has greater inequality and inefficiency implications. The poor who lack other assets or collateral often find distress sales an easy mechanism of coping up with the economic shocks resulting from agricultural crisis situations. Particularly when the transaction cost is high and the poor lack secure property rights they find themselves less competitive in the open market and tend to sell off their lands at lower than market prices. In risky environments where small land owners do not have access to credit markets, distress sales of land by the poor can occur, with consequent negative efficiency and equity impacts (Deninger, 2003).

Distress sales are well known in many of the South Asian countries like Bangladesh and India (World Bank, 1999, 1997) even though it has not been studied in detail in Sri Lanka. Situations leading to distress sales are different from country to country. For example in Bangladesh, it is mainly done for non-agricultural purposes or personal spending while in India it is mainly to support productive investment. However, distress sales of land end up with the poor losing the only asset or collateral they have and their basis for agricultural production and hence becoming poorer.

iv. Non-viable holdings

In the case of Sri Lanka one can easily argue that the non-viable holdings are a result of both the malfunctioning of land markets as well as the weaknesses in the regulatory framework. Faruquee and Carey (1997) argue that an active free land market is essential in facilitating size adjustments. Lack of an active free market characterized by distorted land prices and asymmetric information flow is likely to limit the low income groups, from actively participating in land transactions. On the other hand, lack of firm policies, effective regulations and penalties on land fragmentation and land use has concentrated lands in the hands of few dominant groups of people. In rural areas officials of the land related institutions are often criticized on the point that they are biased towards the powerful and wealthier. Also, regardless of the size of the lands the transaction costs are high and unbearable to the poor. This situation seems to have prevented the poor without any assets, savings or collateral, from actively participating in the land market. Hence, the poor who are interested in farming are eventually left with non-economical plots of land. They have no option but to subdivide the small plots of land among heirs in each generation and this has become a serious problem even in the state distributed lands in the settlements (Institute of Policy Studies, 2004). These small land owners without much option will go for non-profit maximizing portfolios in order to diversify their risk, but will use little or no technology and will be less efficient in the long run.

v. Environmental degradation

South Asian agriculture is experiencing a series of environmental problems and there is little evidence on the role of land rights on them (Faruquee and Carey, 1997). However it is believed that tenure security is more of an incentive to investment and effort put on land, especially in the case of upgrading the quality of land. Current allocation system is not always passing the land to most efficient producers who would

invest in improving land quality and this results in land degradation in the long run. It is also believed that without secure property rights operators are only interested in short run profits and therefore neglect the sustainability of the land use. Myopic operators often degrade the land in short term contracts. On the other hand, the poor may not have resources to invest in land quality augmenting activities and this will lead to productivity losses making them poorer in the long run. Lack of strict enforcement of land use regulations, inefficiencies of the agencies at the ground level, or in other words lack of genuine effort on conserving the environment at the national level are considered as the failures in the regulatory framework that lead to the degradation of land in Sri Lanka.

vi. Encroachment of state land

One way in which the rural poor and other socially excluded groups compensate for their lack of access to and control over privately owned arable land is through access to common and public land (Mearns, 1999). The degree of dependence on commons tends to be inversely related to land endowment of the operator while the people without secure property rights are assumed to be the major encroachers. However, there is evidence to the effect that not only the poor and landless but also those non-poor groups with stronger ability to influence institutions related to land are involved in encroaching state land in Sri Lanka (Institute of Policy Studies, 2004). Hence, the tendency towards encroachment seems not totally determined by one's land endowment but also by other factors as well. Population pressure, increasing landlessness and second generation problems have led to encroachments of state lands throughout the island, and especially so in lands adjoining the major settlement schemes in the Dry Zone of Sri Lanka (Jogarathnam, 2001). In the absence of alternative employment opportunities, marginal land is continually encroached by squatters who do not have an incentive or resources to manage it in a sustainable way (Dent and Goonewardene, 1993). Today, even the fourth generation of settlement families is residing in the original settlement areas and the successive governments have failed to effectively address their needs. Hence, numerous problems have surfaced in the settlement areas such as landlessness, non-economical holdings, inheritance problems, boundary conflicts and economic vulnerability due to lack of avenues for income generation (Institute of Policy Studies, 2004). However, loop holes in laws, regulations and the administrative set-up governing the land, continuous regularization of encroachments and lack of strict penalties appear in one way promoting encroachment of commons by different groups.

Encroachment seems to be discouraging people in the participation in both land sales and rental markets aggravating ill-functioning of such markets. The major problem lies with the encroachment and misuse of marginal lands by the farmers neglecting sustainability aspects. These lands provide lesser incentives for investment and hence offer the producers lesser incomes in return.

vii. Landlessness

Small peasants and the landless require a means to move up the economic ladder and land is essential to this mobility (Faruqee and Carey, 1997). A well functioning market for both land sales and rental transactions often play a key role in this process since it facilitates transfer of lands to more efficient users and making it possible for the less efficient to move out of agriculture to non-farm activities. However, the land market is often imperfect and the poor with no bargaining power generally lose in such markets

due to lack of competitiveness. When operators/tenants are insecure, especially when they are subject to expropriation, they find it difficult to move up the agricultural ladder and get access to land.

Failure in regulatory framework, both the policy environment and institutions, relating to land seem to have affected the access to land by the poor. In the case of Sri Lanka it is argued that government land distribution programmes are not properly targeted. As a result it was not only the landless but also a considerable number of absentee landlords who found access to land in the project areas. Earlier tenure reforms have had little impact on the poor tenants. However, land rental market of Sri Lanka appears to be a promising avenue for the agrarian poor to move up the agricultural ladder in the absence of state intervention.

4. Formulation of Hypothesis and Empirical Testing

Following the discussion in the previous chapter, Table 4.1 shows the key factors identified to be associated with the inefficient use and inequitable land distribution under 3 categories: market failure (C1), regulatory failure (C2), and poverty (C3). Each of the categories C1 and C2 has two relationships as A and B while C3 has one relationship, as “as stated” under the “Problem” column. However, in practice these factors are not only the causes of observable phenomena “as stated” but also the effects of them sometimes, as specified under the “Reversed” column of the Table (C1AR and C3R). The observable phenomena discussed in last chapter are set against their possible root causes of inefficiency and inequity (Table 4.2). This provides the hypothesized conceptual models for explaining the observed phenomena which are tested below for their empirical validity.

Table 4.1
Factors Associated with Inefficiency in Use and Inequity in Distribution of Rural and Semi-Urban Land

Problem	Code for direction of causality	
	As stated	Reversed
Market failure causes inefficiency and/or inequity	C1A	C1AR
Poor property rights causes inefficiency and/or inequity	C1B	-
Organizational failure within the regulatory framework causes inefficiency and/or inequity	C2A	-
Policy failure within the regulatory framework causes inefficiency and/or inequity	C2B	-
Poverty causes inefficiency and/or inequity	C3	C3R

4.1 Quantitative Analysis

The root causes are not directly measurable on the ground hence proxies or variables best explaining them were identified. The relationship of these variables representing root causes with each observable phenomenon identified in Table 4.2 is mapped in the Table 4.3.

Table 4.2
Observable Problems Relating to Inefficient Land Use and Skewed
Distribution with their Root Causes

Observable phenomena	Root causes causing	
	Inefficiency	Inequity
1. Non-viable holdings	C1A, C2A, C2B, C3, C3R	C1A, C2A, C2B, C3R
2. Distress sales	C1A	C1A, C3, C3R
3. Encroachment of common land	C1B, C2B, C3, C1AR	C3, C3R
4. Environmental degradation	C1A, C1B, C2A, C2B, C3, C3R	C1B, C2B
5. Low land transactions	C1A, C2A, C2B, C1AR, C3R	C1A, C1B, C2A, C2B, C3R
6. Land scarcity for the landless		C1A, C2B, C3, C3R
7. Low productivity	C1A, C1B, C2A, C2B, C3, C3R	

Table 4.3
Observable Phenomena Vs their Explanatory Variables

Observable Phenomena	Causality	Observable Phenomena	Causality
Non viable size of holdings		Environmental degradation	
Information on land transactions	C1A	Land ownership status	C1B
Demand for land	C1A	Size of the holding	C3
Number of persons involved in a transaction	C1A	Unit Income from agriculture	C3
Support of officials	C2A	Share at tenancy	C3/ C3R
Transaction cost	C2A	Government penalties	C2B
Government penalties	C2B		
Social Status of the family	C3	Landlessness	
Access to credit	C3	Land ownership status	C1
Monthly income	C3	Asset ownership	C3
Unit Income from agriculture	C3/C3R	Share at tenancy	C3/ C3R
		Risk/ Vulnerability	C3
Distress sales		Unit Income from agriculture	C3
Information on land transactions	C1A	Social status of the family	C3
Land ownership status	C1B	Access to credit	C3
Support of officials	C2A	Government programmes	C2B
Monthly income	C3		
Social Status of the family	C3	Low land transactions*	
Size of the holding	C3	Land ownership status	C1B
Indebtness	C3	No. involved in a land transaction	C1A
		Information on land transactions ⁵	C1A
Encroachment of common land		Control of land market by different groups	C1A
Land ownership status	C1B	Support of officials	C2A
Size of the holding	C3	Transaction cost	C2A
Monthly income	C3	Cost involved in settling land disputes	C2A
Asset ownership	C3	Size of the holdings	C3
Involvement in share tenancy	C3	Asset ownership	C3
Risk/ vulnerability	C3	Social status of the family	C3
Government penalties	C2B		
		Low productivity	
		Land ownership status	C1B
		Cost involved in settling land disputes	C2A
		Size of the holdings	C3
		Asset ownership	C3
		Measures taken to upgrade the land quality	C3

4.1.1 Data and the sample survey

Data on observable phenomena and the variables representing their possible causes were collected in a sample survey. A draft questionnaire was designed to capture the information on those identified variables, pre-tested in the field and improved to yield the final questions used in the sample survey. Field Survey (October 2004) covered seven districts and 700 households. Districts (Table 4.4) were purposively selected to include the three agro-climatic zones Dry Zone, Wet Zone and Intermediate Zone and also the three elevations Up-country, Mid-country and Low-country. From each district two divisional secretary divisions (DSD) and from each of those DSDs two Grama Niladhari divisions (GND) were also drawn purposively to cover different land use patterns and inheritance patterns. In the Wet Zone districts a sub-urban village and a traditional village were included while from the Dry Zone and Intermediate Zone districts a traditional village (*purana*) and a settlement village were included. Out of a sampling frame comprising 200-300 households (GN's household list) 50 were randomly drawn from each village to form a sample of 700.

Table 4.4
Districts, Divisional Secretary's Divisions, and Grama Sevaka Divisions

District	Divisional Secretary's Division	Grama Sevaka Division
Galle	Baddegama	Mabotuwana 189
	Kadawathsathara	Ukwatta (East) 108
Kurunegala	Galgamuwa	Mahagalkadawala 82
	Polpithigama	Dagama 370
Anuradhapura	Kebithigollewa	Kanugahawewa 28
	Kekirawa	Kumbukwewa 635
Polonnaruwa	Elahera	Atharagallewa 2
	Thamankaduwa	Palugasdamana 2 Ela 174
Kandy	Thumpane – Hatharaliyadda	Weliwita Pahalagama
		Sangarajapura 1352
Nuwara Eliya	Yatinuwara	Kiribathkumbura (west) 130
	Nuwara Eliya	535A
Ampara	Walapane Nildandahinna	Kalaganwatta 519
	Adalachchanei	Deegawapiya 1
	Maha Oya	Tempitiya 145

4.1.2 Data collection

Data were collected in personal interviews on the important household characteristics, land endowment, land use and management issues, land markets, inheritance and agricultural practices. However recall bias may not be avoided in the case of production data since the study was carried out in a period following a long drought. Grama Sevaka Niladhari of each GN division was interviewed as well to obtain the information on the situation of the village in general.

4.1.3 The model

The identified variables under each observable phenomenon against their root causes were tested using a series of binomial logistic regressions. The parameters were estimated using the maximum likelihood method.

Standard Binomial Logit Model

$$L_i = \ln (P_i/1-P_i) = \beta_1 + \beta_2 X_i + \dots + \beta_n X_m + U_i$$

Where, L_i = logit or log of the odds ratio, which is liner in X_i as well as in parameters

P_i ranges from zero and one, $P_i = 1, L_i = \ln(1/0)$

$P_i = 0, L_i = \ln(0/1)$

X_1, \dots, X_m = explanatory variables/ regressors

β_1, \dots, β_n = parameters

U_i = Stochastic error

Statistical significance of the coefficients was measured using likelihood ratio (LR) statistics. Given the null hypothesis LR statistics follow the Chi square (X^2) distribution with degrees of freedom equaled the number of explanatory variables. (at $\alpha = 0.05, 0.01$ and 0.1 levels)

Binomial logit models were chosen since the regression models are nonlinear in parameters and the regressands are categorical variables with two possible outcomes (the probability of the event lying between 0 and 1). The parameters were estimated using the maximum likelihood method. Each of the six observable phenomena except distress sales were taken as the dichotomous dependent variables for each model and all possible variables were fitted against them. There were very few observations on distress sales such that a statistical analysis is not very appropriate. It was observed that the distress sales are unexpectedly low even in the very rural areas of the country (Institute of Policy Studies, 2004).

Dependent Variables

(1) Non- viable holding

$P_i = 1$ when Size of the holding is below the viable land size of 1 acre (scenario 1) and 2 acre (scenario 2)

$P_i = 0$ when size of the holding is above the viable holding size

(2) Encroachment of common land

$P_i = 1$ when the household has encroached any state land

$P_i = 0$ when the household has not encroached any state land

(3) Environmental degradation

$P_i = 1$ when no measures have been taken to conserve environment

$P_i = 0$ when measures have been taken to prevent environment degradation

(4) Low Land transactions

$P_i = 1$ when a household has not been involved in land transactions for the past 5 years

$P_i = 0$ when household has been involved in land transactions for the past 5 years

(5) Landless

$P_i = 1$ household has no legal ownership/ clear titles to land

$P_i = 0$ household has clear titles

(6) Low productivity

$P_i = 1$ when income from agriculture is below the average income level

$P_i = 0$ when income is above the average level

4.2 Discussion on the Logit Results**4.2.1 Non-viable holdings**

Determining a clear cut boundary for the “optimal size” was quite problematic since it is dependent on a number of factors; technology, investment capacity, managerial capabilities and a host of other attributes. Optimal size varies significantly with the crop or land use owing to the biological and physical factors.

Irrigation and other infrastructural facilities such as marketing, road network as well as the use of technology largely determine the economic viability of a farm. Some empirical studies on this area have pointed out that an unirrigated plot of land of 5 acres may not be as viable as a 0.5 acre plot of land with irrigation. A study done in Pathadumbara division of Kandy district in 1957 has shown that the optimum size of holdings, given the technology then available, was as small as 0.40 to 0.5 acres (Jogarathnam, 2001). Moreover, investment capacity and managerial capabilities are also important in deciding the extent an operator can hold productively.

There are not much systematic research or ex-ante studies found on optimal holding size in Sri Lanka. Wanigaratne and Samad (1980) state that “...in terms of land alienated to people between 1972 and mid 1977 the unit of alienation ranged from 0.25 acres to 2 acres with a concentration in the 0.5-1 acre range”. Fields (1986) also has shown that farm holdings of less than 2 acres cannot be considered as economically viable, unless farm earnings are supplemented with off-farm employment (Jogarathnam, 2001). Owing to the non-availability of information on the optimal size of holdings under highland crops only the paddy extent was dealt with in this study. Two scenarios: 1 acre and 2 acre holdings were taken into consideration.

Table 4.5
Determinants of Non-viable (paddy) Holdings – Logit Results

Variables	Causality	< 1 acre	< 2 acre
Social status of the family	C3, C1A	0.6953**	
Information on transactions	C1A		
(1) Always		1.2393**	2.7948***
Demand for land	CIA		
(1) Medium		0.3644*	0.8320***
(2) High			-0.6034**
Support of officials	C2A	-1.7571***	-2.0623***
Unit income from agriculture	C3	2.2301E-05***	0.918E-05**
Log Likelihood ratio		-328.123	-275.591
* Significant at 10% ** Significant at 5% *** Significant at 1%			

There is a positive relationship between social status and ownership of non-viable holdings (Table 4.5) implying that “the socially influential” operate smaller holdings compared to the ordinary village men. This category consists of individuals who exercise some power in the village society or hold employment in off-farm activities with social recognition and they may be less concerned about agriculture and the efficiency of managing their lands. It is also possible that they own large holdings but do not want to operate them fully. In the sample nearly 94 per cent of the paddy cultivators were involved in off-farm employment and every household belonging to the socially powerful category was engaged in off-farm activities.

Availability of information on land transactions is positively related to the non-optimal size of holdings. Apparently more informed farmers operate small non-viable holdings and those who get information on land very often are small holders. The poor, landless or near landless might be looking for opportunities particularly on rental markets. Large land holders do not necessarily have access to market information or may not be interested on land transactions. In the sample nearly 80 per cent of the more informed paddy farmers were operating plots smaller than 1 acre while 95 per cent were operating less than 2 acres. Larger land operators may not always be the large land owners especially in the case of paddy. They often share, lease or mortgage the land they operate. Land markets, being imperfect especially in rural areas, may have resulted in asymmetric information flows among different groups. Poor groups apparently have more access to information contrary to the theoretical expectations. On the other hand, regardless of the size of the land people may not be much interested in transactions. Treating land as more of a social asset than an economic asset is common in rural as well as urban societies and land owners prefer to keep their land to themselves irrespective of the level of productivity. Consequently, lands are not transferred to efficient users most of the time. Out of the paddy land owners of more than 1 acre only less than 1 per cent have rented out their land. Nearly 40 per cent of them have rented in land and 80 per cent of them are under share tenure arrangements.

As perceived by the paddy land owners non-viable small holdings are not in high demand but in moderate demand. This is plausible since for mechanization purposes and other operations larger lands are preferred, especially in paddy cultivation. In Sri Lanka demand for paddy lands depends not only on productivity but also on other social and cultural factors. According to the paddy land owners, location of the land and the infrastructure including irrigation, access to roads significantly affect the demand for land. In the study sample 50 per cent of the paddy lands below 1 acre were in low demand while 40 per cent of the lands were in moderate demand. However, 10 per cent of the small holdings were in high demand according to the land owners.

Support from the officials in the institutions dealing with land has a negative relationship with non-viable holdings. People getting more support are less likely to operate small holdings. In the situations where larger land operators are also the owners of the land, they get assistance from the officials comparatively easily than the smaller holders. Out of the larger paddy land operators (> 2 acres) nearly 90 per cent had the support from the officials while 30 per cent of the small holders did not have such support.

Unit income from agriculture has shown a quantitatively small but significantly positive relationship with the occurrence of non-viable holdings. Crop production is basically a biological function in which the optimal combination of all the factors of production would yield the optimal level of production. Lack of investment capacity seems to be the major problem with the large holdings since they need more investment. Even though more than 50 per cent of the paddy holdings are more than 2 acres (Table 4.6) they are not managed efficiently. Most were cultivating paddy for subsistence and there were only a few commercial farms.

Table 4.6
Number of Paddy Holdings by Districts

District	Holdings less than 1acre	Holdings of 1-2 acres	Holdings more than 2 acres	Total paddy holdings
Kandy	9	12	7	28
Nuwara Eliya	3	1	2	6
Galle	12	9	3	24
Ampara	8	12	48	68
Kurunegala	17	21	21	59
Anuradhapura	4	12	29	45
Polonnaruwa	1	13	52	66
Total	54	80	162	296

In the fitted model failures in the land market (C1A) and the issues related to poverty (C3) are the major factors determining whether a holding is of viable or non-viable size, in the case of paddy. In non-urban areas people seem to be more concerned about the social value of land than its productive value hence paddy extent held or operated by an individual is also determined accordingly.

4.2.2 Encroachment of common (state) lands

Variables	Causality	Coefficient
Total extent operating at present	C3	0.1928***
Involvement in share cropping	C3	-0.6360**
Asset endowment	C3R	-6.423E-07***
Risk	C3	1.2228**
Log Likelihood ratio	-344.878	

* Significant at 10%
** Significant at 5%
*** Significant at 1%

District	(as a percentage)	
	No encroached land	Having encroached lands
Kandy	100	0
Nuwara Eliya	100	0
Galle	66.7	33.3
Ampara	60.4	39.6
Kurunegala	100	0
Anuradhapura	72.5	27.5
Polonnaruwa	69.2	30.8
Total	72.8	27.2

District	No encroached lands	Having encroached lands	Total
Kandy	92	8	100
Nuwara Eliya	92	8	100
Galle	95	5	100
Ampara	63	37	100
Kurunegala	89	11	100
Anuradhapura	42	58	100
Polonnaruwa	70	30	100
	543 (77.5)	157 (22.5)	700

Total extent being operated by a farmer at present shows a positive relationship with encroachment. Encroachment is not necessarily done by the landless poor. Influential larger land operators are the major encroachers contrary to the popular belief since they relatively easily engage in illegalities due to political and other affiliations. In the sample, out of the operators with more than 2 acres of paddy land nearly 30 per cent have encroached state lands (Table 4.8) and in the total sample of 700 nearly 23 per cent (Table 4.9) have encroached state land and a considerable number of them are already regularized.

Encroachment is negatively related with sharecropping, (Table 4.7) and only about 17 per cent of the share croppers (Table 4.10) in the sample have encroached land. This may be due to the fact that their lack of power to encroach or their full time involvement in shared-in lands. However, nearly 25 per cent of the paddy tenants have encroached state lands. Relatively high levels of encroachment is prevalent among paddy tenants because they cultivate paddy mainly for their domestic consumption and other crops in the encroached lands to generate cash income.

Table 4.10
Share Cropping among Encroachers

District	(Number of households as a percentage)	
	Not rented in	Rented in land
Kandy	100	0
Nuwara Eliya	100	0
Galle	75.0	25.0
Ampara	89.1	10.9
Kurunegala	91.0	9.0
Anuradhapura	91.3	8.7
Polonnaruwa	50.0	50.0
Total	83.4	16.6

People with more other assets are less likely to encroach apparently due to having other means of earning income. People with lesser assets tend to encroach more as they have no other way of getting access to land. However, 94 per cent of the encroachers in the sample are involved in off-farm activities.

Logit estimates show a positive relationship between the encroachment and the risk experienced by the households. Poor farmers with low or no permanent income are always experiencing a high economic risk and therefore tend to encroach more. Cultivating encroached land, they may be able to earn a supplementary income to safeguard against the risk thus reducing the vulnerability at crisis situations. Out of the low income earners from agriculture (less than Rs. 5200 of average monthly household income from agriculture) nearly 68 per cent have encroached state land (Table 4.11).

Table 4.11
Encroachment of State Land among the Low Income Earners of Agriculture

District	No encroached lands	Encroached lands	Total
Kandy	36	2	38
Nuwara Eliya	63	4	67
Galle	34	0	34
Ampara	47	28	75
Kurunegala	34	3	37
Anuradhapura	24	47	71
Polonnaruwa	52	22	74
	290	106	396

According to the logit results encroachment of state land is basically related to poverty (C3). However it was observed that the encroachers are not necessarily the poor. Even though encroaching common lands has certain equity implications it is not so in terms of efficiency since most of the encroached lands are marginal and often poorly managed.

4.2.3 Environmental degradation

Table 4.12
Determinants of Environmental Degradation –Logit Results

Variables	Causality	Coefficient
Total extent operating at present	C3	-0.4684 ***
Unit income from agriculture	C3R	-6.662E-05***
Log likelihood ratio	-202.967	

* Significant at 10%
** Significant at 5%
*** Significant at 1%

Larger holdings show a negative relationship with the environmental degradation (Table 4.12). Larger operators have capital and other resources to invest in upgrading the quality of land compared to the smaller holders. Hence, conservation measures are adopted in order to minimize degradation. More than 88 per cent of the cultivators operating more than 2 acres of land have adopted some form of a land quality augmenting activity while in the lands below 2 acres, 77 per cent have adopted such practices. Among the paddy farmers more than 95 per cent of the larger land operators have adopted land quality augmenting practices.

Income from agriculture also shows a negative relationship with the environmental degradation. As income from agriculture increases more resources are allocated for conservation and quality upgrading measures. Out of the households earning above the average level monthly income of Rs. 5200/= almost 99 per cent had adopted some sort of land quality enhancing measure in their fields.

The main cause of environmental degradation, according to the results is poverty (C3). Market and regulatory failures were not significant in the model as expected. However, it was observed that the negligence of land quality is not only a result of lack of resources but also of lack of interest and ignorance of the operators.

4.2.4 Low land transactions

Results presented in Table 4.13 indicate that if more information on land market are available more land transactions would be included, particularly land sales. Nevertheless, in the case of rental transactions information does not show a significant relationship.

Knowledge on land transactions shows a negative relationship to the low transactions. When people are knowledgeable about transaction procedures they are more likely to get involved in transactions. However

in the case of rental transactions knowledge on the transactions was not a significant issue. In Sri Lanka only the long term leases involve legal procedures and documentation and in the case of share contracts no such formalities are involved. Nearly 72 per cent (Table 4.14) of the tenants are involved in share contracts and this commonness makes knowledge on share tenancy widespread and the insignificance of the knowledge on the rental transactions in the estimated model can be attributed to this.

Table 4.13
Determinants of Low Land Transactions – Logit Results

Variables	Land rentals		Land sales	
	Causality	Coefficient	Causality	Coefficient
Information on transactions (1)Always			C1A	-1.1809 *
Knowledge on land transactions			C2A	-0.9387**
Land Ownership			C1B	-2.071**
Total extent operating at present	C3	-0.3725***		
Asset endowment	C3	2.712E-07**		
Encroached land	C3	0.8783***		
Extent of land having claims	C3	-0.0021**		
Log Likelihood ratio	-382.192	-136.781		

* Significant at 10%
** Significant at 5%
*** Significant at 1%

Table 4.14
Households' Participation in Rental Market (Number of households)

District	Rent in	Share in (%)	Lease in (%)	Rent out	Share out (%)	Lease out (%)
Kandy	15	87	13	11	100	0
Nuwara Eliya	12	25	75	9	100	0
Galle	15	60	40	3	67	33
Ampara	25	48	52	10	10	90
Kurunegala	21	95	5	18	94	6
Anuradhapura	21	76	23	12	100	0
Polonnaruwa	33	91	9	18	94	6
Total	142	72	28	81	85	15

Secure land titles are also negatively related to the low transactions in the case of land sales and were not significant in the rental transactions. When an owner has secure and well defined ownership rights his participation in land sales would be undeterred. In the absence of clear titles for land people are more likely to be subject to exploitation. This would also lead to high transaction costs further reducing participation. Nevertheless in rental transactions, secure titles to land have been found unimportant (Marawila and Samarathunga, 2006). It was observed in the present study that many forms of rental transactions are taking place in the state lands which were alienated with restrictions imposed on such transactions. In

the sample 38 per cent of the households were allottees of state land and 24 per cent of them had rented out land while 15 per cent had rented out land under various tenure agreements (Table 4.15).

Table 4.15
Rental Market Participation by Allottees of State Lands
(Number of households as a percentage)

District	Shared in	Leased in	Shared out	Leased out
Kandy	0	25	25	0
Nuwara Eliya	0	15	0	0
Galle	12.5	0	12.5	0
Ampara	5.6	22.6	1.9	15.1
Kurunegala	40	0	17.9	3.6
Anuradhapura	8.5	7.3	14.6	0
Polonnaruwa	30.1	4.8	14.3	1.6
Total	15.1	9.4	11.3	3.8

Extent operated is also negatively related to low transactions in the rental markets implying that operators of larger holdings are more active in the rental market. Larger land owners who have found operating their land by themselves employing wage labourers to be inefficient, usually rent out their land. Moreover, 95 per cent of the landlords who have rented out land are involved in off-farm employments. Seventy eight per cent of the tenants had their own land with ownership rights and only 22 per cent were landless. Hence, land endowed households rent in land as well and tenants are not merely from the landless category. Size of the holding has no significant effect on the sales market implying absence of any relationship between participation in sales market and the size of holdings. In the sample less than 5 per cent of the households were involved in the land sales or purchases within the past 5 years.

Extent of land with claims but with no ownership rights is negatively related with the low rental transactions. This indicates that households having claims to land are more involved in rental transactions. Thirty three per cent of the tenants and 14 per cent of the landlords in the sample had claims on land without secure titles. However, landlords cannot enter into any fixed term contracts for their lands with claims but no ownership rights and the only possibility for them is to give these lands on share cropping arrangements.

Asset endowment showed a statistically significant but weak positive relationship to the low rental transactions indicating that those who have more assets get less involved in land rental transactions. This can be attributed to the fact that households owning more assets have more avenues open for them particularly in non-farm activities. However the implications are not very clear since the impact of agricultural assets alone couldn't be examined due to data limitations.

Encroachment of state land showed a highly significant positive impact on the low occurrence of rental transactions implying that households have less involvement in the rental transactions when they have encroached land. Generally, encroached lands are not rented out by the landlords unless they are regularized. Lack of secure rights limit renting out and even tenants find it risky to cultivate on such lands. On the other hand, when tenants have encroached land their tendency to rent in is also less.

It was observed that the participation of the households in land sales market was poor regardless of their occupation, wealth or any other socio-economic characteristics. In the areas studied both types of markets for land, sale and rental, are fairly freely operating without being influenced by external forces. Only 10 per cent of the households reported that the land market in the area is controlled by different interest groups. Out of the sample 80 per cent believed that they can bid openly in the land market. Apparently the major problem causing low transactions in the sales market lies in the attitude of the households towards the sales and lack of purchasing power. However, the rental market seems dynamic and rural households are participating satisfactorily.

4.2.5. Landlessness

Table 4.16
Determinants of Landlessness –Logit Results

Variables	Causality	Coefficient
Asset endowment	C3	-6.288E-07**
Social status of the family	C1A, C3	0.9518**
Unit income from agriculture	C3	-6.650E-06*
State land programmes	C2B	-1.2598***
Log Likelihood ratio	-208.048	
* Significant at 10%		
** Significant at 5%		
*** Significant at 1%		

In this study all operators without clear title to the land they operate, including tenants and people having claims on land, are considered as landless.

Results presented in Table 4.16 show that people with assets are less likely to be landless. This is obvious because land constitutes the largest portion of their assets, but what is important is that the poor with little assets are unable to participate actively in the land market perpetuating landlessness. In rural Sri Lanka both land sales and rental markets are more biased towards the rich and powerful.

Landlessness decreases with the implementation of state land programmes. Households that have benefited from land alienation programmes are less likely to sell their land out and become landless again. This is partly due to the ban on sales of these lands imposed by the government. However they seem to be involved in land rental transactions such as sharing, mortgaging or leasing out. Nearly 46 per cent of the allottees in the sample had rented out land on various tenure agreements (Table 4.16).

Landlessness is common among people with some social status compared to the ordinary village men. This is because people belonging to this category are more involved in non-farm employment. In the sample nearly 93 per cent of the households were involved in non-farm employments. On the other hand, even though these landless didn't have lands with proper titles, majority (90 per cent) of them were entitled to land to which they have claims (Table 4.17).

Table 4.17
Landless having Claims on Land

District	Having claims on land	Total landless
Kandy	12	14
Nuwara Eliya	13	18
Galle	20	21
Ampara	18	19
Kurunegala	9	11
Anuradhapura	16	16
Polonnaruwa	8	8
Total	97	107

Above results show that higher income from agriculture leads to lesser landlessness. This agrees with the line of thinking that higher income results in better savings, higher investment in agriculture and accumulation of wealth over time and thereby acquisition to land. Moreover, people who are involved in agricultural activities seem to be more interested in acquiring land compared to the people who depend more on non-farm activities.

Gaining access to land with ownership rights has been mainly affected by the failure in land market (C1A) and poverty (C3). Prevalence of landlessness among the households involved in agricultural activities is low compared to the non-farm employees. It was apparent that in general people are keen on getting access to land with secure rights. However, operators of agricultural land were satisfied with secure user rights to land they operate to a greater extent.

4.2.6. Low land productivity

Table 4.18
Determinants of Low Land Productivity -Logit Results

Variables	Causality	Coefficient
Total extent operating at present	C1A	-0.4234***
Asset endowment	C3	-3.305E-07***
Log Likelihood ratio	-216.185	
* Significant at 10%		
** Significant at 5%		
*** Significant at 1%		

Average monthly income of households from all agricultural activities was taken as the proxy for the productivity and average size of a family was considered as four. Households earning below the average (for the districts concerned) monthly agricultural income (Rs.5200/=) were considered as indicative of low land productivity. Even though income from agriculture per unit area is a better proxy for the productivity it was not used in the model due to the presence of multiple agricultural activities.

Extent operated showed a negative relationship with low land productivity (Table 4.18) implying that the larger the land operated, the lesser the incidence of low productivity will be. Even though the majority of these lands are not managed effectively total monthly income has increased with the land size.

Results indicate that higher asset endowment results in higher productivity. Operators endowed with more assets are able to invest more in terms of the inputs, use of technology, land quality enhancement activities, etc. Moreover, they cope up with the changes in the factor markets and other forms of production risks without much difficulty. The poor with fewer assets, particularly with low agricultural assets, are not able to invest substantially rendering the productivity and the income low.

In the sample 67.3 per cent of households were involved in agricultural activities and 93 per cent of them were generating income out of agriculture. However, only 20 per cent of the operators were generating an income above the monthly average. Out of the tenants 67 per cent were earning below the average and mainly producing for their subsistence. However, majority of the households have no other option but to keep lands for themselves and cultivate (Table 4.19). Hence the major problem relating to inefficiency lies in not transferring land to more efficient producers. In the sample 55 per cent of the households were not interested in moving out of farming regardless of their inefficiency in farming while 31 per cent of the households were willing to transfer the land to their relatives or others.

Table 4.19
Alternatives Available for Land Owners if the Lands are Not Productive

District	Sell the land	Rent out land	Keep the land idle and move to off -farm activities	Transfer to family members	No other alternative than farming	Total
Kandy	9	4	0	2	85	100
Nuwara Eliya	2	21	26	2	49	100
Galle	31	23	24	3	19	100
Ampara	13	45	33	4	5	100
Kurunegala	10	1	2	6	81	100
Anuradhapura	3	27	11	6	53	100
Polonnaruwa	0	5	1	1	93	100
Total	68	126	97	24	385	700

5. Conclusions and Policy Implications

There are many dimensions to the rural and agricultural land issues of Sri Lanka. They are very location specific and a wide variation could be observed across the agro-climatic regions, geographical zones as well as between the rural and urban areas so that generalization is extremely difficult. The situation prevailing in the Wet Zone which only covers one third of the land area but with two thirds of the population is completely different from the Dry Zone which holds much of the country's land mass but with a sparse population. How people handle and deal with land issues is not determined only on economic terms and social, political and physical factors also play a key role. Hence, it is impossible to resolve the problem at ground level using available economic instruments only. An integrated approach of all the above disciplines may best fit the rural agricultural land sector, particularly in the context of a developing country like Sri Lanka.

In the study an extensive literature survey was carried out to identify the three major root causes of inefficient use and inequitable distribution of land; failure in property rights system and land market, failure in regulatory framework and poverty. Then seven most commonly observed phenomena which are relevant in Sri Lankan context are also identified: Non-viable holdings, encroachment of state lands, environmental degradation, landlessness, low transactions, low productivity and distress sales. The relationship between these observable phenomena and their possible root causes were identified and tested for their empirical validity.

Poverty was found to be the major determinant or causal factor in almost all the observable phenomena. It was very clear that people hold land not only for economic rationality but for many other reasons. They hold land whether or not cultivated since it is the only valuable asset for many, especially for the disadvantaged and vulnerable groups. Nevertheless, in rural areas there is no social network to obtain credit and generally the poor lack other assets which can be used as collateral. All these lead to the conclusion that taking measures to release the poverty barriers in rural areas is a necessary condition for addressing the land related problems. Promotion of community based formal credit institutions could be one important step in improving access to credit by the poor enabling them to invest and produce efficiently. Encouraging voluntary collectivization of farmers, particularly small holders in gaining access to inputs and markets via farmer organizations and commercially organized farmer companies also seems to be a viable option. Even though there are arguments against the notion that there are close links between land and poverty, in the context of Sri Lanka eradicating rural poverty seems a far fetched objective unless the problems related to the access to land by the poor is resolved.

Private ownership to land is the norm of market economies and contrary to the current wave of thinking it was noticed that people are not much concerned about ownership rights in the use of land. Land ownership was only significant in the case of land transactions particularly in land sales and not even in the rental transactions. Freehold title is not a necessary precondition for transactions and in practice all forms of transactions are taking place informally, even in the alienated state lands where transfer of land is illegal. Moreover, impact of secure property rights on productivity, encroachment or any other issues concerned was not significant. Hence, land market liberalization or conferring formal titles are unlikely to bring about substantial benefits commensurate with the high cost it may involve in implementation. Moreover, conferring full ownership rights can permanently deprive the disadvantaged and vulnerable groups unless they are protected with adequate safeguard mechanisms. However, collective or joint ownership to land, which is also justified on the grounds of gender equity can be a good option in this regard.

Malfunctioning land market seems to be preventing effective transfer of land among uses as well as users in rural areas. This is attributed to the lack of an organized market information network and asymmetric information flow. Land sales market seems more or less stagnant in the rural areas and apparently people are less willing to sell their lands even when they are unproductive or marginally productive. Compared to sales, the land rental market is more dynamic and rural agrarian households are more involved in rental transactions. Even though welfare effect of the rental market on the rural poor, whether or not it really

contributes to the wealth accumulation or access to land, is not clear it seems to be a promising avenue for uplifting their living conditions. It encourages low land endowed operators to enter into commercial production by increasing their scale of operation. It was also observed that in Sri Lanka the rental market is not that exploitative as the popular belief suggests and it is mostly in favour of tenants than against them. Yet with the narrow land base and limited alternative economic opportunities in the rural areas, equity gains from the rental transactions seem to be high compared to the efficiency gains. Tenure arrangements are location specific and there are different social mechanisms or communal arrangements to ensure their smooth functioning at the ground level.

It was noticed that the majority of the tenants are involved in share tenancy contracts compared to the fixed rental arrangements which demand more skills, resources and managerial capabilities. Share contracting is the only option available for the low resource endowed tenants who lack skills in non-land based activities. Even though facilitating share contracting is likely to have positive impacts on the marginal farmers, it is crucial to facilitate proper functioning of other markets especially the credit markets to realize the full potential of economic and welfare benefits from it. Other preferred structural changes needed to facilitate optimal production include improved access to technology and other inputs, irrigation facilities, improved marketing and other infrastructural facilities, agricultural research and extension. Economic diversification to generate off-farm employments in rural areas will be important to absorb excess agricultural labour. This will enable marginal farmers to move out of agriculture transferring lands to more efficient producers. Promoting small and medium level enterprises in suburbs and at the village level by providing attractive incentive schemes is important in this regard. Removing the restriction on rental transactions in alienated state lands will also enhance participation of households in rental transactions with enhanced tenure security. However, intervention by the state in regulating the rental market should be minimal while maintaining its role as a facilitator and a provider of supporting services and infrastructure.

It was noted that the demand for larger lands are high irrespective of the use whereas small fragmented lands are in lesser demand. Fragmentation is becoming an increasingly important problem even in rural areas due to expanding population and demand for non-agricultural uses. Absence of state driven settlement programmes and strict regulations to prevent fragmentation has aggravated this problem during the recent years and hence it is timely to enforce and implement laws to prevent excessive fragmentation of agricultural lands. These laws can be effectively combined with the land use policy of the country to promote agriculture which will eventually help farmers to realize the full potential economic benefits out of their lands. However, for improving agricultural productivity, the supporting services and other infrastructural facilities are more important than the size of the land holdings.

Institutional arrangement related to land has largely affected the land transactions and the land endowment of households. It was observed that the socially and politically influential are at an advantage in obtaining services from land related institutions compared to the powerless poor. This is obvious in some areas, particularly in regularization of encroachment and dispute resolution. Therefore institutional reforms are of central importance in facilitating land transactions and effective management of land resource in the

current context. Further, creating public awareness on issues related to land, institutional framework and procedures involved are also important. Since there are a number of institutions with overlapping mandates at the ground level, coordination of those by an umbrella organization is timely. An efficient and transparent administrative set-up to harmonize the activities such as mapping, surveying, collection of information and allocation of land by providing adequate training and better incentives to the staff is of key importance to rationalize the current system.

Current argument is that all these problems associated with land are resulting from the weaknesses in the policy framework adopted in the country during the past few decades. Rigid policies and inefficient implementation by the state sector in land ownership and distribution was identified as a major causal factor of land use inefficiency though it was very difficult to measure the impact of each and every policy at the micro level. Even though there are certain rules, regulations and penalties imposed by the law to conserve land and regularize its use they are not practised at the ground level. Some rules and regulations are now out-dated and have not been revised according to the current needs. Hence, encroachment of state lands, improper land use and illegal land transactions are widely taking place. It is vital that land policies address economic as well as social, cultural and political issues relating to land. Furthermore, policies, regulations and penalties should be revised to meet the present day requirements. Finally, land market policies should be designed in a way that the poor gain land assets than lose them and there should be enough safety nets to protect and support the landless, particularly the vulnerable groups. It is also important that land reforms be necessarily accompanied by the structural changes at the rural level for the marginalized sectors of the society to actively participate in the land market and realize the full benefits.

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Annex

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