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CAMBODIA LAND TITLING URBAN BASELINE SURVEY REPORT

A CDRI Publication

December 2007

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Cambodia's Leading Independent Development Policy Research Institute

in collaboration with the

Ministry of Land Management, Urban Planning, and Construction (MLMUPC)

Phnom Penh, Cambodia

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Acronyms

Aclea	Association of Cambodian Local Economic Development Agencies
ADB	Asian Development Bank
APSARA	Autorité pour la Protection du Site et L'Aménagement de la Région d'Angkor (Authority for the Protection and Management of Angkor and the Region of Siem Reap)
BSP	Baseline Survey Project
CDRI	Cambodia Development Resource Institute
CSES	Cambodia Socio-Economic Survey
DK	Democratic Kampuchea
FDI	Foreign Direct Investment
ha	hectare
HCA	High Capacity Area
HPI	High Potential Impact
JICA	Japan International Cooperation Agency
LAMDP	Land Administration, Management, and Distribution Programme
LCAs	Low Capacity Areas
LMAP	Land Management and Administration Project
LPI	Low Potential Impact
MFI	Micro-Finance Institution
MLMUPC	Ministry of Land Management, Urban Planning, and Construction
MSMEs	Micro, Small and Medium Enterprises
MT	Metric Ton
NGO	Non-Governmental Organization
NPRS	National Poverty Reduction Strategy, 2003-05
PAD	Project Appraisal Document
RGC	Royal Government of Cambodia
SES	Socio-Economic Survey
SMEs	Small and Medium Enterprises

Cambodian Words

<i>Chamcar</i>	<i>ចំការ</i>	Land that is used for growing crops other than rice.
<i>Khum</i>	<i>ឃុំ</i>	Commune
<i>Krom Samaki</i>	<i>ក្រុមសាមគ្គី</i>	'Solidarity groups' formed during the 1980s as a form of collective farming.
<i>Moeun</i>	<i>ម៉ឺន</i>	10,000
<i>Riels</i>	<i>រៀល</i>	Unit of Cambodian Currency (4,000 riels/US\$)
<i>Sangkat</i>	<i>សង្កាត់</i>	an administrative territorial subdivision equivalent to a commune.

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Executive Summary

1. Introduction

The Ministry of Land Management, Urban Construction and Planning (MLMUPC) is implementing a land management and administration project (LMAP) with support from international donors in order to strengthen land tenure security and land administration systems in Cambodia. Among other activities, LMAP is undertaking a systematic land-titling programme in which 1 million titles will be issued during the first phase (2003–07). During this phase, LMAP is issuing land titles in the urban and peri-urban areas of Phnom Penh municipality and Siem Reap district, as well as other urban areas in the country.

The Cambodia Development Resource Institute (CDRI), in collaboration with the MLMUPC, collected baseline survey data in and around Phnom Penh, Siem Reap and Serei Saophoan (i.e., Banteay Meanchey) from October to December 2005. CDRI conducted 2706 household interviews in areas representing a mix of property characteristics and land use patterns, as well as dynamics (e.g., transactions, documentation, conflicts). The primary objective of the urban baseline survey, as with an earlier rural survey (CDRI 2004), is to generate data that will provide a basis for a systematic comparative evaluation of the economic and social impact of the land-titling programme after three years.

The expected benefits of land titles in urban areas include increased investment in residential and commercial property, improved access to formal credit, more efficient markets that allocate land to more economically productive uses, fewer conflicts and better land administration services, including the use of the official registry to facilitate land transactions. Other expected benefits include increased government revenue from taxes on land transactions. Government planners and others also expect more secure land tenure through land titles to play an important role in reducing poverty in both rural and urban areas. Land titles are therefore expected to strengthen the institutional framework of urban development and thus contribute to sustainable macro-economic growth.

The economic impact¹ of land titles in the three urban areas must also be considered in the wider context of the rapid growth and longer term development plans of each, as outlined in the master plans for Phnom Penh and Siem Reap, because the areas vary in economic, social and geographic characteristics. However, the rapid growth of the real estate and housing markets, the expanding business sector, including small and medium enterprises (SMEs) and foreign direct investment (FDI), along with the expanding credit markets for consumer loans, home mortgages and commercial investments, suggest high consumer and business confidence in all three urban areas in the short-medium term. As a result, LMAP's systematic land-titling may be very timely in strengthening the institutional framework that supports economic growth in these urban areas.

The potential social impact of land titles must also be considered in the context of the wide disparities in wealth between upper and lower income groups, primarily with respect to equity, gender and poverty reduction. For example, upper income households could benefit more than others from the titles because the higher value of their property may make them eligible for larger loans from institutional lenders, while lower income households may not be

¹ The use of the term “impact” in this instance refers to the degree to which land titles may or may not affect measurable change in selected indicators. An “impact” can be either positive or negative in nature, although the sense of the word as used throughout this report is generally positive.

able to obtain credit because they may not meet other loan requirements. As for the distribution of benefits according to the sex of household head, female-headed households should be able to obtain more loans that can be used for housing improvements and business start-ups and expansion. Women's security of tenure may also be strengthened in cases of divorce or the death of a husband, although tenure rights represented by land titles must be upheld by the local authorities and courts in cases of conflict. In terms of poverty reduction, the urban poor may benefit from secure tenure in cases where they are eligible for land titles. There are, however, concerns that the poor could end up losing land by selling it for short-term gain in response to rapidly increasing land values. In cases where the poor reside in areas for which they may not be eligible for land titles, alternative approaches need to be developed to regularise or otherwise provide secure land tenure for them.

The assumptions and predictions of government planners and donor advisers about the expected benefits from land titling are primarily based on property rights theories that link investment incentives to secure land tenure, as well as scattered empirical evidence from research in countries where such programmes have been implemented. The basic argument is that people are more likely to invest resources in productive activities when they are confident that they, or their heirs, will enjoy the benefits of such investments in the future. (Brandao and Feder 1996; Barzel 1997). Another set of arguments supporting improved tenure security in the form of land titles links property ownership to the creation of potential wealth and affluence. De Soto (2000), for example, has argued that the poor in developing countries actually possess substantial assets, albeit in forms of "dead capital" that cannot easily be used for investment. This argument suggests that governments should provide property ownership in the form of legal titles that the poor can use as collateral for credit for investments, leading to significant reductions in poverty and improved well-being.

Formal land titles, however, are not the only governance mechanism that provides security of land tenure. Researchers have identified a number of other land tenure mechanisms in urban areas around the world, including customary tenure and a wide range of non-formal tenure categories with different interlocking forms of legitimacy (Payne 2000; Mulamir and Payne 2001). As a result, there may be no absolute standard by which security of land tenure can be assessed. The use of formal titles to govern land tenure must be understood as part of a market approach to urban development that takes place within a broad arena of formal institutions, including credit institutions, regulated real estate markets and official land management and registry systems.

In addition to land titles, land use classification, long-term planning (e.g., master plans) and enforceable zoning regulations are also essential for promoting better urban land management and efficient development. Land classification that clarifies private and public lands² will help reduce conflicts and promote good governance. For example, private encroachments on public space, such as informal settlements, pose a variety of difficult governance issues, including opportunities for informal tax collection by public officials. Long-term planning by city officials and private investors is also facilitated by enforceable zoning regulations. For example, residential, commercial and industrial activities all require a variety of services involving different technologies, and certain private activities impose costs (i.e., externalities) on the public that can be minimised with better planning and zoning. Private investors must also be able to make accurate predictions about land use and values over time. The potential impact of land titles on investments may be reduced in the absence of publicly available master plans and enforceable zoning regulations.

The methodology used in the urban baseline survey employs a simple model to make predictions about likely impacts when location and household factors are combined. For

² State land in Cambodia is classified as either Private State Land or Public State Land. Private state land can be converted to private use, such as an economic concession. Public state land is land that serves a public purpose, and generally cannot be converted to private use without a specific decree.

example, high potential impact (HPI) households—based on annual per capita consumption quintiles in each urban area survey—will benefit most in high capacity areas (HCAs) situated along main roads and streets characterised by better access to utilities and services. Conversely, low potential impact (LPI) households will benefit least in low capacity areas (LCAs) situated off the main streets with less access to utilities and services. The degree to which HPI households in LCAs and LPI households in HCAs benefit from land titles will depend on where and at what rate urban infrastructure and access to utilities and services improve. This again suggests that overall land-titling impacts may be undermined by the absence of strategic development master plans and enforceable zoning regulations. It also suggests that land-titling effects can be enhanced by strong enforcement of property rights in the face of encroachment.

This model structures the research according to a series of testable hypotheses using quasi-experimental methods that compare household survey data from the current baseline survey (T0) with data that will be collected at a later point in time (T0 + x). The research focuses on several key indicators of land titling impacts, including housing improvements and business investments (e.g., start-ups, expansions, employment) access to and the use of formal credit, land use, land values and transactions, the use of the official registry to facilitate land transactions and conflict reduction and resolution. While potentially robust, this approach faces several constraints involving “tracing problems” (i.e., residents who leave a particular area after titles have been issued) and “time-lapse problems” (i.e., short-term impacts may vary from medium and longer terms impacts). “Measurement problems” may also arise when the gap between the time of the baseline survey and the issuance of titles becomes so large that intervening variables distort or cloud the impact of land titles on key indicators.

2. Findings and Observations

The direction and rate of growth in the three urban areas varies according to geographic, demographic, economic and institutional circumstances. Phnom Penh’s economy is structured by manufacturing (garments) and services (schools, financial institutions, tourism), as well as transportation as it positions itself strategically with regard to regional and sub-regional highway and rail transport corridors. The high rate of natural population growth and migration are driving the city to expand in all directions except eastward across the Mekong River.³ Five planned satellite cities and new transport infrastructure will likely steer the direction and set the pace of land market development in impacted areas for the foreseeable future. Elsewhere, land use patterns and infrastructure development may unfold in a haphazard way according to private sector interests in the absence of a master plan with clear zoning regulations.

Siem Reap’s economy is largely driven by rapidly expanding tourism and, to a much lesser degree, transport. Siem Reap’s high rate of population growth from immigration will increase demand for residential housing, while increasing numbers of domestic and international tourists will place more demand on accommodation, services and infrastructure. Siem Reap is likely to expand primarily to the east and south-east, because growth possibilities west and north of the city are constrained by Apsara Authority polices governing land use in the Angkor Heritage Zones 1 and 2. For this reason, Siem Reap may currently have a stronger land use planning and enforceable zoning mechanisms than Phnom Penh.

Serei Saophoan is located in the north-west of the country at the convergence of National Route 5 connecting to Battambang and Phnom Penh and National Route 6 connecting to Siem Reap to the east and Poipet to the west on the Thailand-Cambodia border. This strategic location suggests that Serei Saophoan will likely develop into an important transportation and commercial hub in the medium- to long-term. The surrounding area is fertile farmland in

³ Phnom Penh is also expanding upward as more multi-floor buildings (residential and commercial) are being constructed in response to increasing land values and rental prices.

which agriculture is becoming increasingly mechanised, and as a result, Serei Saophoan could eventually emerge as an important agro-processing zone. Its commercial and residential areas are structured according to a more or less rectangular grid with wide, albeit largely unpaved, roads and streets that should facilitate the development of urban infrastructure and services in the future. It is likely that the city's commercial sector will initially expand in three directions along the major national routes, while residential areas will develop off the major highways.

Given such variations in the characteristics and dynamics of each urban area, it is likely that land-titling impacts will vary across the peri-urban and urban sectors of each as well as across different households. Generally speaking, the recent trends in the key indicators of such impacts suggest that land titles are likely to have multi-dimensional impacts, many of which may be indirect, and will therefore help strengthen the institutional framework of Cambodia's current growth. The degree to which such benefits are equitably distributed, however, will depend on how LMAP prioritises potentially conflicting or competing objectives that may sidetrack poverty reduction objectives. For example, the distribution of benefits will depend on where the various provinces and municipalities decide to target and sequence land-titling efforts, and the degree to which the focus is on optimising either the economic or social impact of land titles. The economically and socially optimal impacts of land titles therefore may not be the same across all households.

2.1. Housing and Home Improvements

More secure tenure in the form of land titles is expected to stimulate investment in housing and home improvements and to facilitate more efficient markets that allocate land assets to their most economically productive use. Lower consumption quintile households may make modest housing improvements according to available resources, capacity to borrow and location relative to transport and services. Such activities can be measured according to the quality of building materials used and the extent of improvements. Upper consumption quintile households, on the other hand, may have already made home improvements, although they may add or improve other buildings on their plots. Rather than make such improvements, these households might purchase additional land for productive or speculative purposes. They may also invest in housing complexes that would increase the overall supply of housing. The actual distribution of such housing would depend on the price of individual units and rental markets. This is a matter of particular importance for the poor because access to good affordable housing represents a key component of poverty reduction efforts in urban areas. For this reason, it will also be important to monitor housing rental prices, particularly in Phnom Penh and Siem Reap.

2.2. Land Use

Land titles may have an indirect impact on land use patterns to the extent they facilitate more efficient transactions that provide greater returns on investments. As well, the nature and direction of land use changes in and around the three urban areas will be highly dependent on the long-term development strategies of each, which will in turn require transparent land use planning and enforceable zoning mechanisms. In Phnom Penh, it is possible that in the three surveyed urban districts, a shift in land use will occur as residential property is converted to commercial and/or rental property, while in the peri-urban areas changes in land use may involve a shift from residential and agricultural uses to commercial (including industrial) uses. In the urbanising areas of Siem Reap, land use impacts will be directed eastward along National Route 6 and, to a lesser extent, along the road connecting Siem Reap to the Tonle Sap Lake, as agricultural land is converted to commercial and residential uses, while land use change in other peri-urban areas will be constrained by Apsara Authority zoning regulations in cultural heritage sites. In Serei Saophoan, land use is likely to change rapidly in all directions, especially to the west, east and south of the city as transport infrastructure is improved and regional trade increases.

2.3. Land Transactions

Land transactions will be the primary mode of land acquisition, and hence land redistribution, in all three urban areas. As a result, the share of land acquired through state allocation is likely to decline, perhaps sharply, unless social land concession mechanisms are established in one or all of the areas. Such shifts will not be the direct result of land titles *per se*, but rather the result of expanding land markets for productive and speculative investment. Land titling, however, will surely facilitate the process by reducing the transaction costs associated with transfers, thus making contractual exchange between buyer and seller more efficient. As a result, land titles will serve as a key institutional mechanism through which land assets are mobilised for medium- and large-scale development projects according to the each city's long-term master plan. This is particularly the case in and around Phnom Penh, where several large commercial and transport projects are already under way or being planned, as well as in Siem Reap, where a hotel zone (Cite d'Angkor) is planned on the north side of National Route 6, across from Psar Leu.

The degree to which land transactions will be recorded in the official registry is another matter. The survey data show that people in all three urban areas continue to rely primarily on documents that may be officially endorsed but are not legal in terms of validating ownership. There is some evidence that people continue to use such methods to validate land transactions at the village or commune level even after the issuance of the LMAP titles. This is a matter of fundamental importance because one of the key reasons for undertaking systematic land-titling has been to facilitate land transfers through the official registry. It is also important to observe that transactions that take place outside the official registry will contribute to continued conflicts over land and represent a major source of lost revenue for the government.

The limited number of cases of conflict reported in the urban survey will not be useful for measuring the extent to which land titles help reduce conflicts. In the follow-up survey, interviewers will need to ask households specifically about their perceptions concerning the role land titles may or may not have played in reducing conflicts. It will be especially important to inquire about the role that land titles have played in resolving conflicts that subsequently arise after they have been issued. Another important line of inquiry will concern the role of local authorities and the courts in enforcing land titles in cases of conflict.

2.4. Access to Commercial Credit

With respect to increased access to commercial credit, the research hypotheses predict that the volume of commercial loans will increase as households use land titles as collateral for bank credit. Two of the most visible areas of potential impact are likely to be the housing and real estate sector, as discussed above, and the business sector. Although it appears that people continue to use own resources for business start-ups, there is some anecdotal evidence of a recent increase in the number of loans for business operations and expansion. The indirect employment impact of land titles may be significant if they help stimulate increased investment in business start-ups and expansions.

There is also evidence of increased borrowing for real estate, including speculation, and housing investments. The issuance of land titles is expected to sustain, if not accelerate, these trends in the near to medium term. As a result, the number of loans is expected to increase along with the average amount of each loan. The use of the loans is likely to shift as well, as more people increase borrowing from commercial banks. Although these trends may be fairly consistent across all quintile groups, upper consumption quintile households may benefit more than lower quintile households from land titles because the higher value of their land will make them eligible for larger loans.

2.5. Small and Medium Enterprises

The survey data suggest that SMEs are a potentially important source of employment in all three urban areas. The employment impact of land titles may be significant if titles help stimulate increased SME investment and business expansions by promoting a sense of more secure tenure and providing access to more affordable credit.

According to recent discussions with banking officials, the number of loan applications and approvals has increased significantly over the past year, especially for business expansions, including SMEs. Investors are still reluctant to borrow from commercial banks for business start-ups because they are not willing to take loans when they are unsure of the returns on the investment. As a result, business start-ups continue to rely primarily on own sources and savings plus family and friends. Once the business is up and running and owners see a steady and predictable flow of returns, they appear more willing to obtain a loan from commercial banks in order to expand.

Such shifts in attitudes concerning commercial banks appear to be a relatively recent phenomenon. As the business climate in Cambodia improves and investors develop more trust in the banking sector, it is likely that the trend toward increased demand for credit for a variety of purposes will continue. Because commercial banks require “hard” land titles to secure such loans, it is quite likely that land titles will contribute to increased consumer and business borrowing. Such an increase, however, could not be solely attributable to land titles; rather, it would represent the merging of several key variables to form a virtuous cycle of development and growth. These variables would include increased tenure security in the form of land titles, business experience and skill (i.e., entrepreneurship), political stability and security, banks that want to lend and know how to do so and people’s institutional trust in banks. The development of land and credit markets, as well as the business sector, all seem to rely on many of the same factors regarding trust in institutions. Once these factors are well in place, land and credit markets may function more efficiently, thus enabling entrepreneurs to predict returns on investments with greater accuracy and reliability.

2.6. Gender

The research hypotheses predict that land titles will have a wide range of impacts on gender-related concerns pertaining to land. Many indicators identified in the rural baseline survey, such as landholdings and access to affordable credit, are also applicable to assessing the impact of land titling on gender in urban and peri-urban areas. Other indicators include investments in housing and business start-ups and expansion. It is expected that female-headed households will obtain an increased number of loans that are invested in housing and business improvements. The rate at which female-headed households obtain loans may, however, depend on a variety of circumstances, including household assets such as land.

The research hypotheses also predict that women’s tenure security will be strengthened. One way to assess this will be to examine the outcome of cases involving the death of a husband or divorce and evaluate the extent to which the spouse’s or widow’s land rights have been upheld by the courts or other conflict resolution mechanisms. Another way to assess this is to examine cases involving female-headed households. While a household survey may enable researchers to count the number of such cases, qualitative approaches are also required to understand better the social and legal dynamics of such cases.

2.7. Observations on Methodology

The data collected in Phnom Penh municipality, Siem Reap and Serei Saophoan conform largely to expected trends and patterns and therefore appear reliable. Only in a few instances, such as the surprisingly low number of reported land-related conflicts and apparent inconsistencies concerning housing construction (e.g., roofing materials), did the data show questionable or puzzling results. More rigorous efforts concerning land and building valuation

techniques and procedures should also be employed in the follow-up survey. MLMUPC personnel familiar with land valuation techniques should be more involved in helping to train field enumerators and to oversee quality control regarding valuation in the field. Most importantly, the follow-up survey should incorporate qualitative research tools into the overall methodology in order to provide more texture to the household survey data, because many of the important nuances concerning the social and economic impacts of land titles cannot be fully captured using quantitative research methods that rely solely on household surveys.

3. Policy Implications and Research

During the course of the baseline survey project, several issues emerged as important areas requiring more focused follow-up. These include issues associated with targeting land tenure interventions in support of the government's poverty reduction objectives, land use planning and zoning and facilitating land transactions through the official registry. This discussion concludes with recommendations for further research in matters pertaining to the urban poor and gender equity in land tenure security.

3.1. Poverty Reduction

More secure tenure in the form of land titles is expected to stimulate more investments in housing and home improvements as well as to facilitate more efficient markets that allocate land assets to their most economically productive use. Because housing is one of the central issues associated with the urban poor, important questions arise concerning the degree to which land titles will stimulate improved housing for the poor. In cases where the poor reside on land that they rightfully occupy and for which they are eligible to receive title, the research hypothesis predicts that these households will over time begin either to invest own resources or to use titles to borrow to improve their housing. However, there are serious concerns that the poor could sell their land in response to rapidly increasing land values. If this is the case, then alternative modes of providing secure land tenure may need to be developed in accordance with the poverty reduction objectives of the land-titling programme. For example, informal communities could initially be granted communal land titles along with and in support of community upgrading efforts. Individual titles could be issued later, at which time households could sell land according to their ownership rights.

In cases where the poor do not have a rightful claim to the land they occupy, they are vulnerable to eviction as the state develops infrastructure and land values increase. Alternative modes of land occupancy—such as social land concessions—are, however, a more viable and sustainable solution than forced evictions. For example, in cases where the poor occupy state land, they could be granted temporary occupancy rights over a specific period while alternative arrangements are planned and developed. Although land titles may indeed play an important role for the poor who own land, for other poor more innovative interventions may be required in order to provide secure tenure leading to housing and home improvements as well as other benefits.

3.2. Land Use Planning and Zoning

The sequential relationship between land use planning, zoning and titling is important in terms of optimising the benefits from land titles in urban areas. The private and social benefits of land titling are optimised in urban areas where land use master plans and enforceable zoning regulations are in place prior to the titling exercises. The land-titling efforts in all three urban areas have begun before there has been clear boundary demarcation between state public, state private and private land. While the land-titling programme represents an important and integral step in this process, special efforts must be made in certain circumstances to avoid issuing titles in specific areas. For example, in some areas where land

has been transacted in an unplanned and haphazard way, there may be insufficient space available for infrastructure or services.

In Phnom Penh, and to a lesser extent Siem Reap and Serei Saophoan, however, the private sector has been largely determining land use patterns in the absence of master plans and zoning regulations. This represents potential inefficiencies associated with distortions in the distribution of public utilities and services that serve private interests rather than the public interest. As a result, it is possible that the issuance of land titles may exacerbate problems associated with the current mix of land uses in any given area. Without government zoning regulations and enforcement, the uncertainties associated with uncontrolled mixed land uses could (1) drive up transaction costs associated with competition over public resources among private individuals, (2) impede incentives for productive investments, particularly for small investors, and (3) undermine the development of efficient land markets.

A master plan that outlines Phnom Penh municipality's development objectives through 2020 as well as zoning and land use planning was drafted in 2003 but has yet to be approved. In the meantime, many public lands and buildings have been sold illegally, and there are few structures and little land remaining for developing infrastructure and utilities. Moreover, a great deal of land occupied for commercial purposes has not been productively used but is held for speculation. The environment and aesthetics of the city are being undermined by an excessive concentration of commercial activities in small areas, as well as illegal construction. It is important that the master plan for Phnom Penh be approved and made public as soon as possible.

Such haphazard growth and development contribute to poorly functioning land markets and undermine good governance because they encourage speculation by government staff or those with access to insider information. For example, if speculators acquire all the land in a given area, the result will be the need eventually to adjust land ownership and boundaries to accommodate necessary infrastructure. Such adjustments will be costly and time consuming, and will very likely generate conflict. Therefore, prior to titling, land use in underdeveloped areas should be demarcated in accordance with zoning regulations and urban development plans.

The major exception to this set of observations concerns the Apsara Authority in Siem Reap, which is mandated to preserve and maintain the Angkor Heritage Park. Land use within the Apsara jurisdiction, especially Zones 1 and 2, is strictly enforced. While Apsara is not always as transparent as it should be, its approach to strictly enforcing zoning regulations in the Siem Reap area should serve as a model of land use planning and zoning enforcement in other urban and peri-urban areas, especially in Phnom Penh. Given the rapid population growth and urban expansion, this is one of the most urgent priorities facing the government.

3.3. Land Transfers and the Official Registry

As in rural areas, in all three urban survey areas, there is a strong preference for using "official but not legal" means of facilitating land transactions. This suggests that if—as expected—land sales continue to increase in urban areas after the issuance of titles, people may still continue to document transactions locally in a manner that involves government officials but is not legal. There is some anecdotal evidence of this occurring already in areas where titles have been issued as well as documented evidence in areas such as Prey Nob in Sihanoukville (ADI, 2007). This is a matter of fundamental importance because one of the key reasons for undertaking systematic land titling has been to facilitate land transfers through the official registry. It is also important to observe that transactions that take place outside the official registry will contribute to continued conflicts over land and represent a major source of lost revenue for the government.

In terms of land transactions and land conflict resolution, the data show a clear preference for managing land matters at the village and commune levels. With particular respect to land

transactions, this suggests that a long-term objective for land administration and local governance would be to locate cadastral authority and related functions (e.g., land sales tax collection) at the commune level. There would also need to be objective incentives to encourage people to handle land transactions through the official registry. For example, failure to pay tax should invalidate the legality of a land sale. The land sales tax could also be lowered to encourage better compliance. In cases involving land conflicts, clear jurisdiction and lines of appeal are required to empower local authorities and the courts to resolve cases objectively according to the law.

3.4. Research Priorities

Two areas of particular concern require specifically targeted research. One area is land tenure security in informal urban settlements throughout the country. This research would consider issues pertaining to tenure security and property ownership in so-called illegal settlements as well as slum communities where the poor rightfully occupy the land on which they reside. The first component of such research could include a comprehensive social assessment, including conflicts and their resolution, of slum communities that could be eligible for regularising tenure and upgrading prior to the eventual issuance of individual land titles. This research could help inform efforts to provide people with alternative modes of secure tenure in support of poverty reduction objectives. A second component of the research could include reference to issues pertaining to evictions and resettlement, including the potential impact of land titling in relocated settlements.

A second area of research is land tenure security for women. This research would look specifically at how land titles have improved or strengthened women's land tenure security and the well-being of female-headed households. In both cases, qualitative research methods would need to be employed because many related issues may be sensitive and complex, and would therefore not be easily captured with a quantitative survey. Indeed, many of the issues pertaining to gender equity in land tenure rights and security are primarily social and cultural in nature and require innovative research methodologies.

Chapter 1.

Introduction

The Ministry of Land Management, Urban Construction, and Planning (MLMUPC) is implementing a land management and administration project (LMAP) with support from international donors in order to strengthen land tenure security and land administration systems. Among other activities, LMAP is implementing a systematic land-titling programme that will issue 1 million titles during the first phase (2003–07). During this time, LMAP will issue land titles in the Phnom Penh municipality and Siem Reap town, including both peri-urban and urban areas, as well as other urban areas.

In 2004, the Cambodia Development Resource Institute (CDRI), in collaboration with the MLMUPC, completed a baseline survey for the rural land-titling project covering 1232 rural households in five provinces, as well as 99 households in Sihanoukville city centre (Ballard and So 2004). Given that a significant share of land-titling resources are being devoted to Phnom Penh and other urban areas in Cambodia, the MLMUPC then extended the Baseline Survey Project (BSP) to include urban areas in and around Phnom Penh, Siem Reap and Serei Saophoan (Banteay Meanchey). During the two months from October to December 2005, CDRI conducted 2706 household interviews in and around these cities in areas representing a mix of land use patterns and dynamics, as well as property characteristics.

The expected benefits of land titles in urban areas include increased investments in residential and commercial property, improved access to formal credit, more efficient land markets, fewer conflicts and better land administration services, including the use of the official registry to facilitate land transactions. Other expected benefits include increased government revenue from taxes on land sales and, eventually, property taxes on formally registered land. Government planners and others also expect secure land tenure in the form of land titles to play an important role in reducing poverty in both rural and urban areas. As a result, land titles may play a significant role in strengthening the institutional framework governing the urban development of these and other urbanising areas in Cambodia and thus contribute to sustainable macro-economic growth.

The expected economic impacts of land titles in the urban and peri-urban areas of Phnom Penh, Siem Reap and Serei Saophoan must be considered in the wider context of the rapid growth and longer term development plans outlined in the master plans for each area. Although each area varies according to economic, social and geographic characteristics, the rapid growth of the real estate and housing markets, the expanding business sector, including small and medium enterprises (SMEs) and foreign direct investment (FDI), along with the expanding credit markets for consumer loans, home mortgages and commercial investments, suggest that consumer and business confidence is high in all three urban areas in the short to medium term. As a result, the introduction of the LMAP systematic land-titling appears to be timely in strengthening the institutional framework that supports urban economic growth.

The potential social impacts of land titles must also be considered in the context of the wide disparities in wealth between upper and lower income groups, primarily with respect to equity, gender and poverty reduction. For example, upper income households tend to own property that is of higher value than the property owned by lower income households. This suggests that upper income groups may benefit more from land titles because the higher value of their property may make them eligible for larger loans from commercial lenders, while lower income households may not be able to obtain loans because they may not meet other

formal requirements. It is expected that female-headed households will be able to obtain more loans that can be used for housing improvements and business start-ups and expansion. Women's tenure security may also be strengthened, for example in cases involving divorce or the death of a husband, although tenure rights represented by LMAP land titles must be upheld by the local authorities and courts in cases of conflict. In terms of poverty reduction, the urban poor may benefit from secure tenure in cases where they are eligible for land titles. In other cases, more innovative approaches to providing secure tenure for the urban poor may need to be developed.

The primary objective of the urban baseline survey project, as with the earlier rural baseline survey project, is to generate data that will provide a basis for a systematic comparative evaluation of the economic and social impacts of the land-titling programme after three years. The purpose of this report is to provide an overview of the international literature and research hypotheses guiding the design of the urban survey methodology and framework, as well as to present some of the key findings from the baseline survey. The degree to which trends and patterns appear to conform to theoretical predictions or empirical evidence from other studies will also be discussed. The discussions concerning Phnom Penh and Siem Reap will be framed in the context of the master plans guiding urban development in the two cities through 2020. The discussion will also include an assessment of the reliability of the data collected as well as the research methodology, when relevant. Finally, key issues or problems pertaining to the design and implementation of the land-titling programme are identified and recommendations made where appropriate.

The report is structured as follows. Section 2 reviews the international literature concerning urban land issues, with a particular emphasis on urban land titling. Section 3 discusses the research hypotheses that predict the expected land-titling impacts and structure the survey instrument for residential households and small commercial businesses. Section 4 outlines the field research methodology, including sampling, survey instruments and fieldwork organisation. Sections five to seven then discuss the main findings in Phnom Penh, Siem Reap and Serei Saophoan, respectively. Section 8 concludes by summarising the key observations and makes several recommendations concerning policy and implementation, as well as for additional research.

Chapter 2.

Literature Review

The assumptions and predictions that government planners and donor advisers make about the expected benefits from any land-titling programme are primarily based on property rights theory that links investment incentives to secure tenure, as well as some empirical evidence from research in countries where titling programmes have been implemented. The basic argument is that people are more likely to invest resources in productive enterprises when they are confident that they, or their heirs, will enjoy the benefits of such investments in the future. For example, Brandao and Feder's (1996) assertion that "secure individual (or corporate) property rights are critical in establishing a structure of economic incentives for investment in land-based activities" applies to both urban and rural areas.

Another set of arguments supporting improved tenure security in the form of land titles links property ownership to the creation of potential wealth and affluence. De Soto (2000) has argued that the poor in developing countries actually possess substantial assets, albeit in forms of "dead capital" that cannot easily be used for investment. This argument suggests that governments should provide property ownership in the form of titles that are enforceable by law so the poor can use them as collateral with which to secure credit for investments in housing and productive enterprises, thus leading to significant reductions in poverty and improved well-being. Such views have attracted widespread support from some governments and international development agencies, including the World Bank. For example, Deninger (2003) asserts that "provision of secure tenure to land improves the welfare of the poor, particularly by enhancing the asset base of those whose land rights are often neglected, and, creates incentives needed for investment, paramount to sustainable economic growth".

Payne *et al.* (2007: 5) observed, however, that "reviews of de Soto's analysis and proposals in the professional media have generally been critical". Some researchers have warned against applying single policy options globally, irrespective of prevailing local circumstances that vary and are complex. Other critiques include specific cautions about over estimating the potential impacts on access to formal credit as well as a general lack of convincing empirical evidence concerning the actual impact of land titling. Another important critique of strictly economic approaches to and rationales for land titling is that such arguments disregard or ignore the important fact that property rights and land tenure also entail political and social relationships between individuals and groups. Such relationships make issues associated with the exercise of political power important areas for consideration and analysis.

Another set of critiques concerns the fact that formal land titles are not the only governance mechanism that provides security of land tenure. Researchers have identified a number of other land tenure mechanisms in cities around the world, including customary tenure and a wide range of non-formal tenure categories with different interlocking forms of legitimacy (Payne 2000; Mulamir and Payne 2001). As a result, there may be no absolute standards by which security of land tenure can be assessed. The use of formal land titles to govern land tenure must be understood as part of a market approach to development that takes place within a wider arena of formal institutions, including credit institutions, regulated real estate markets and official land registry systems (Payne *et al.*, 2007).

This observation suggests, then, that with the right set of enabling institutions in place, secure tenure in the form of land titles may indeed contribute to the development of economically efficient land markets as commercialised land rights are, over time, purchased by people who

are willing and able to pay the highest price. Kim (2004: 278), for example, has observed that when bids are based on estimates of how much profit can be derived from owning land, “the highest bidder is the one who can most efficiently capitalize on the asset”. Other types of property investments that people and/or firms may make in urban areas include new home construction and housing improvements, new start-ups or expansions of SMEs and larger scale commercial or industrial production.

Such investments can generate increased demand for financial resources, which in turn may stimulate the development of a more efficient financial services sector. In this way, land titles are expected to increase people’s access to formal credit institutions. This could be especially important in terms of poverty reduction because land titles may enable poorer community members to access lower cost loans for productive purposes. Payne (2000), however, has argued that the real issue regarding credit for the poor is not so much collateral, but rather the banking sector’s reluctance to provide small loans to poor borrowers. In Thailand, the potential impact of land titles on access to credit also did not appear to be as clear in urban as in rural areas. In terms of credit supply, Onchan and Aungsumalin (2002) found that the establishment of commercial banks was mostly influenced by government policies rather than the land-titling project. These observations suggest that increases in demand for credit may not necessarily result in corresponding supply increases solely due to the issuance of land titles, at least in the short term. Payne *et al.* (2007), for example, have since concluded that titling has not, at least in the short-term, generated any significant improvement in access to formal credit.

Land-titling programmes are also a key component of efforts to govern urban land markets more efficiently so that scarce land resources are eventually allocated to their most economically productive use. Land markets that are characterised by poor information, unpredictable registration and transfer procedures and various types of conflicts, as in Cambodia, are economically inefficient because of the high transaction costs associated with the negotiation and enforcement of property rights and contractual exchange. Secure and predictable property rights reduce procedural uncertainties and provide more accurate information about actual land values relative to use. If this is indeed the case, land titles should help investors make more accurate assessments of the costs and eventual returns on investment in sectors such as housing and real estate.

Land markets that are characterised by various types of conflicts and ineffective governance are also socially inefficient. This includes cases where people lose their land without fair and adequate compensation and are forced to migrate in search of income opportunities. Another set of potential social costs concerns the distribution of land ownership and access to housing. Over time, more efficient land markets may result in a greater concentration of land in the hands of fewer households. The social costs associated with such a distribution may be somewhat offset by fair and adequate compensation along with viable employment opportunities for those who are selling or otherwise losing their tenure rights.

At the same time, there is some evidence that land titles can have a significant impact on the market value of land. For example, residential plots in Jakarta with clear title sold for 45 percent more than comparable plots without clear title (Dowall and Leaf 1989). In Davao, land values increased by 58 percent after titling (Simon).⁴ The type of tenure documentation also has influenced the sale value of land in Ho Chi Minh City’s emerging real estate market (Kim 2004). Such impacts on the value of land may have important implications for the poor as lower income households could be squeezed out of the land markets as land values increase. In terms of housing, increasing costs associated with land values could be passed on to tenants, again squeezing out lower income households and perhaps eventually forcing at least some into unauthorised settlements.

⁴ The reference to Dowall and Leaf (1989) and Simon is in Payne *et al.* 2007: 37–38. There is no year provided for Simon.

As in rural areas, the relationship between land titling and land values will have an important bearing on land use patterns in urban and peri-urban areas. In rural areas, for example, the general progression of increasing land values is from less productive (extensive) to more productive intensive farming and cropping systems, while in urban areas the progression may range from residential to commercial and industrial uses. In peri-urban areas, the progression may run from various agricultural uses to residential, commercial or industrial uses, or some mix. In all three areas, increasing land values associated with more economically productive land use will spark more competitive land markets. Just as land values in rural areas may vary according to location and productivity, land values in urban areas will vary according to location and the quality of infrastructure and the availability of public utilities and services. The variation in land values in peri-urban and urban areas, however, may be even more exaggerated, in part due to higher population densities and a more diverse range of land uses, thus stimulating a demand for more efficient and effective land management and administration systems.

In addition to land titles, land use classification, long-term planning and enforceable zoning regulations are also essential for promoting better urban land management and efficient development. Land classification that clarifies private and public lands may also reduce conflicts and promote good governance. For example, private encroachments on public space, such as roadside markets, often pose a variety of safety issues, while providing opportunities for informal tax collection by public officials. Long-term planning by city officials and private investors is also facilitated by enforceable zoning regulations. For example, residential, commercial and industrial activities all produce different amounts and kinds of wastes that require different technologies and management in order to preserve and promote public sanitation and health.⁵ Private investors also need to be able to make accurate predictions about land values over time. In this sense, the potential impact of land titles on investments may be undermined by the absence of publicly available master plans and enforceable zoning regulations.

As for urban land administration, an improved and transparent land registry system may promote the development of more efficient land markets by reducing informal transaction costs associated with the contractual exchange of land and directing land transactions toward more economically productive uses. A more efficient and transparent official registry could also, in the long run, contribute to the general state revenues through efficient land tax and user fee systems. Burns (2006),⁶ for example, has provided evidence that the land-titling programme in Thailand has generated significant tax revenue for the government, revenue flows that continued even during and after the 1997 property market crash. In some cases, though, land titling in urban areas has failed to have this effect, largely because of people's reluctance to pay taxes when it was not clear what services they would receive in exchange. Another concern is the impact that such taxes might have on the newly titled poor whose incomes remain "low and irregular" (Payne *et al.*, 2007: 49).

2.1 Gender and Land Titling

Payne *et al.* (2007: 19–20) observes that gender is increasingly recognised as "an important variable in assessing the social impacts of tenure policy and therefore titling programs". However, there are "relatively few studies that analyse the impact of land titling processes on gender equity, although this is one of the main social objectives put forward to justify titling programmes". As with other impact indicators, the evidence concerning the role of land titling in promoting gender equity is decidedly mixed. While there are several encouraging reports from around the world, there are also many indications that there is still a long way to go before there is gender equity in terms of land tenure rights. In addition to legal and procedural

⁵ Other examples would include variations in water and electricity requirements.

⁶ The reference to Burns (2006) is in Payne *et al.* 2007: 49.

factors, cultural factors are “an even more entrenched barrier which will take years, and possibly even generations to change”. Payne concludes that “land rights cannot be isolated from the legal framework and cultural environment”.

The literature that links gender and land issues in Cambodia is uneven. Although many land studies refer to gender issues in general, there has not yet been any study that specifically addresses gender and land. For example, in the recent World Bank report on equity, the section concerning gender inequality observes that “other aspects of rapid economic and social change have resulted in the emergence of new forms of gender inequality” and that “inequalities exist in access to income generating opportunities and control of household assets ...” (WB, 2007:142). The section on land, including land titles, does not discuss gender, however, while in the section on gender, land-related matters are not discussed. In a sense, the linking of land and gender seems to have fallen through the cracks, and the references to land titling impacts are gender neutral.

Research elsewhere refers to gender and land in the context of poverty. Of particular importance are issues pertaining to land tenure security when there are conflicts within households or families concerning inheritance and divorce. A recent CDRI study (FitzGerald, 2007: 120) observed that “women’s control over land and other financial assets is constrained by gender relations that grant men authority as heads of households ... Women in the study were also vulnerable to losing their land rights due to lack of formal titles”. For example, it has long been a matter of concern that land certificates and other paper used to document land tenure were routinely listed in the name of a male head of household in the cases of married couples. As a result, women’s land tenure security has been weak and subject to conflict, making them highly vulnerable to disenfranchisement. The CDRI study also observed, “Women are vulnerable to losing their land rights, as in the case of death or divorce where the husband’s family repossesses land and other assets, or when they default on loans or experience shocks”.

In cases of female heads of household, many have been without certificates or other documents because of the high costs of obtaining them, particularly for certificates. It should be added that such problems concern male-headed households as well, although they are especially important for female-headed households. The CDRI study referred to above also observed that female-headed households “are more likely to lose assets, including land, less able to access credit and employment”.

CDRI’s rural land titling baseline survey report (Ballard and So 2004: 20–21) also identified a wide range of indicators with which to assess the gender impact of land titles. The study observed that “land titles may have a significant and positive effect on women, especially those who are single heads of households, to the extent they help protect vulnerable people from losing their land due to grabbing or other forms of expropriation”. To this should be added issues pertaining to inheritance and the degree to which women contribute to decisions concerning the household economy, including assets such as land. The report went on to say:

Land titles would also have an important impact on women to the extent that they enable people to secure loans with which to invest in agricultural production or other income generating activities (e.g., small businesses) ... Some women, however, may wish to invest in other income generating activities in addition to farming, or switch out of agriculture altogether. In this sense, then, land titles may enable more single women to gain access to larger amounts of credit at more favourable terms, though this would not necessarily imply an increase in agricultural investments. At the same time, land titles may enable other women to sell their land more easily for a better price, while switching to non-farm [employment] opportunities. Though this might show up as an increase in landlessness among single women, it may not necessarily represent a negative outcome if viable employment alternatives are available.

In many respects, similar observations may also hold for Phnom Penh and other urban areas, including Siem Reap and Serei Saophoan.

2.2 Land Titling in Urban Cambodia

A limited but growing body of literature concerning land-titling impacts in Cambodia is now emerging, largely spurred by various reports for LMAP and its donors. Ballard and So (2004) discuss the expected benefits of land titles in the rural sector while presenting key baseline data that will be used in an eventual impact assessment. Deutsch (2006) assessed beneficiary attitudes toward land titles in general and found that people value this initiative a great deal for the stronger sense of tenure security. Markussen's (2007) brief spot check on land-titling impacts reaffirmed key issues raised in earlier reports and highlighted several emerging issues (e.g., non-use of official registry in land transactions) that will be addressed in the follow-up study to CDRI's rural and urban baseline surveys. The potential benefits of land-titling are also discussed extensively in the World Bank's *Poverty Assessment* (2006) and *Equity and Development Report* (2007). However, except for several references in the 2006 beneficiary assessment, these reports largely concern rural land titling and do not specifically address the potential impacts of land-titling in urban Cambodia.⁷

The literature that addresses urban land tenure and land-titling matters largely concerns informal communities in Phnom Penh municipality. For example, URC (2002) examines the record on evictions and relocation in Phnom Penh since 1990, and observes that the "greatest benefit settlers have noted from relocation is the attainment of land security and tenure", although individual titles may be some years away. Payne *et al.* (2004) looked specifically at different land tenure arrangements and concluded that the potential negative impacts of individual land titles in informal communities probably outweigh the potential benefits. The proposed alternatives to individual titles include short-term communal land rights and communal leasing, as well as planned relocation under certain circumstances. The issues pertaining to land tenure in informal communities are discussed in more detail in Section 5A.4.

Aside from the work concerning informal communities, there has not been much literature concerning local experience to guide the development of an urban baseline survey. This urban baseline survey report represents an initial effort systematically to identify and discuss the expected benefits of urban land-titling and discuss ways to approach research design, implementation and analysis.

2.3 Methodology

A review of the literature also reveals a variety of methodological challenges concerning social and economic impact assessments of land-titling projects. Payne *et al.* (2007) identify two major areas of concern in this regard. First, the identification and measurement of various factors require "an ability to measure individual variables, which are themselves difficult to quantify". A second set of problems concerns "time-lapse issues" because short-term impacts may vary from medium- and longer-term impacts, and "tracing problems" concerning residents who leave a particular area after titling programmes have been implemented. Moreover, many anticipated impacts, such as changes in land use patterns, involve complex interactions of many variables that must somehow be sorted out (Ballard and So 2004). Many of these same challenges are evident in the research hypotheses that guided this baseline survey, as discussed in the following section.

⁷ Both reports use econometric tools to analyse data from the 2004 Cambodia Socio-Economic Survey (CSES) to make strong assertions concerning the significant impact of land titles in the rural sector in terms of raising crop yields, land values and household consumption. They argue that the main reason is that "well-defined property rights improve the appropriability of returns" (WB 2006: 86).

Chapter 3.

Research Hypotheses

This section discusses the research hypotheses that predict the expected land-titling impacts that will be used to guide the subsequent follow-up impact assessment. This discussion draws on the literature discussed above as well as data and observations from the earlier survey in downtown Mittakpheap (Sangkat 2) in Sihanoukville, where 99 residences and small businesses were surveyed in early 2004. The hypotheses discussed below identify the main indicators for assessment and helped structure the survey used for residential households and SMEs used in the urban baseline survey.

The research theory predicts that land-titling impacts will be significant in urban areas characterised by increasing residential, commercial and industrial investments and active or emerging land markets. Key indicators concerning investments include the number of new housing and home improvements, new business start-ups and expansions, changes in land use patterns and demand for credit. Key indicators concerning land markets include the frequency of land transactions, use of the official registry, frequency and type of land disputes and land values relative to plot and building characteristics. The most active urban land markets are likely initially to be located along main roads with good access to public utilities and services.

At the household level, the research theory predicts that land-titling impacts are also dependent on the diversity and level of income sources and capital assets, as well as the size and location of land or other property. These factors influence the household's access to investment credit and capacity to withstand or cope with shocks and emergencies. Holding other factors constant, high potential impact households with more income, capital assets and favourably situated landholdings will tend to benefit more than low potential impact households with less income, fewer assets and less favourably situated landholdings. Unlike rural areas, this hypothesis predicts that female-headed households may also benefit comparably with male-headed households, although this may depend on location and access to credit.

A simple model can, therefore, be constructed with which to make predictions about likely impacts when location and household factors are combined. For example, HPI households⁸ will benefit most in high capacity areas situated along main streets characterised by better access to utilities and services. Conversely, LPI households will benefit least in low capacity areas situated off the main roads, with less access to utilities and services. In between are HPI households in LCAs and LPI households in HCAs. The degree of impact in these two categories may depend on where and at what rate urban infrastructure and access to utilities and services improve. This in turn suggests that overall land-titling impacts may be undermined by the absence of strategic development master plans and enforceable zoning regulations. It also suggests that land-titling effects can be enhanced by strong enforcement of property rights in the face of encroachment.

These observations generate a series of testable hypotheses that structure the research methodology. As in the rural baseline survey, these hypotheses can be tested using quasi-experimental methods that compare household data from the current baseline survey project

⁸ Households in all three urban survey areas were divided into quintiles according to annual per capita consumption. Section 4.4 explains the reasons for this approach.

(T_0) with data that will be collected at a later point ($T_0 + x$) in both project and non-project areas.⁹ The analytical framework that emerges from a consideration of HPI and LPI households within urban HCAs and LCAs provides a robust tool with which to assess the potential economic and social impacts of land titles as predicted by theory and empirical research elsewhere.

Certain economic impacts of the land-titling programme are expected to be observed in both urban and peri-urban areas in and around Phnom Penh, Siem Reap and Serei Saophoan. In the peri-urban areas, land-titling may affect the scope and scale of agricultural investments and land improvements. In both the peri-urban and urban areas, land titles may stimulate housing improvements and business investments. Such effects may vary according to factors such as land size and use, physical infrastructure and social services. Land-titling is also expected to affect both the credit and land markets, including the supply and demand for conflict resolution, and the use of the official registry to facilitate and record land transactions.

3.1. Residential Land and Property

The research theory predicts an overall increase in new home construction and housing improvements following the issuance of land titles. For example, a World Bank housing policy paper of 1993 suggests that tenure security and property rights are important factors influencing housing demand and that insecure tenure leads to under-investment in housing and reduced housing quality.¹⁰ Key indicators include land prices in residential areas, rental prices, improvements in housing conditions and an increase in the number of available housing units.

The research theory predicts, at first glance, that there will be a greater share of new housing and housing improvements among middle and upper income groups with plots located on paved main streets, while there will be fewer such improvements among the lowest quintiles. One might also expect that the expenditures for housing improvements among the upper quintiles would be, on average, higher than such expenditures among lower quintiles.

Household survey data from Sangkat 2 in Sihanoukville, however, do not fully support such predictions. First of all, there were a total of 29 housing improvements reported by the survey group for the three years prior to the survey. Of these, only 20 percent occurred on paved roads, while an equal number occurred on roads with limited access. Most improvements occurred on one-way access roads. Second, the number of housing improvements was fairly evenly distributed across each income quintile, with the middle quintile on one-way access roads being the most active group. Third, the average value of housing improvement expenditures was less among the upper quintile households (USD352) than the lowest quintile households (USD752), while the middle three quintiles reported average expenditures between the two.

One possible explanation for this pattern is that there may not be much scope for further improvements in the high-value houses, other than fencing, furnishings and appliances. There may be much more scope for improvements and expansion in lower value homes, particularly those owned by middle or upper income households. For example, those houses that also serve as shops on the ground floor and are located on main streets probably cannot be improved in terms of building materials because they are constrained by being adjacent to other buildings. Some people, though, may be able to build vertically by adding additional floors. Smaller houses located on side streets and made of thatch or wood could be upgraded more easily with better materials and better fencing.

⁹ The experimental nature of the urban baseline survey follows the same basic framework used in the rural phase of the baseline survey. See Ballard and So (2004).

¹⁰ Referenced in Payne (2000).

It is also important to bear in mind that certain improvements, such as furnishings and appliances, may be more the result of increased income than of land titles. The key indicators concerning home improvements and housing investments should be the use of better building materials and expansions of floors and rooms, as well as any construction of new buildings and better fencing.

3.2. Commercial Investments and Property

The research theory predicts an increase in the scope and scale of new business start-ups and expansions. The key indicators for investment would be some change in the number and types of businesses, as well as changes in the amount of reported business investments. People may also be motivated to make structural or cosmetic improvements in the location where the business is located. As a result, the purpose of certain business-related borrowing and expenditures will be relevant. New business start-ups could involve people entering business for the first time, or those switching from one business to another. Business expansions could include hiring more labour, adding more floor space or adding new service units, depending on the nature of the business.

The research theory predicts that increased investments in a variety of activities will be observed across all income groups. Among lower income groups we may observe such increases in small trade, transportation and light manufacturing. Among the upper income groups, we may see increases in guesthouses, restaurants and other services in terms of new business start-ups, expansions or improvements, as well as trade and manufacturing. As noted above, such increases may not correlate with increases in formal credit.

There is some indication of a linkage between land ownership and business operation. For example, Kang (2005) found that 75 percent of 648 micro, small and medium enterprises MSMEs¹¹ owned the land upon which their business was located. Of the landowners, about 91 percent (444 enterprises) had land titles. However, of the landowning businesses with land titles, 73 percent were located outside the provincial towns, thus indicating that only 27 percent of those titled landowning businesses were located in town. Landownership among MSMEs may be more of a rural than an urban phenomenon. What is not clear, though, is whether people obtained land titles after starting up their businesses in order better to secure their investment once it was made, or made the investment after having a title because they felt their land tenure was more secure.

A similar set of questions also arises concerning the data from Sangkat 2 in Sihanoukville. Of the 132 residential parcels, 37 (about 28 percent) were titled. Since many parcels featured dual uses (i.e., residence and business), we can assume that about 25 percent of the MSMEs involved titled land, which is fairly close to Kang's MSME findings. Again, it is not clear which way the causal arrow runs between land titles and business investments.

For business start-ups, Kang also found that investors used own sources and savings in 84.6 percent of the cases, and that such sources were the main source of financing (50 percent or more) for at least 75.3 percent of business start-ups. After that, investors used credit from external sources, including family and friends, as well as various forms of supplier and customer credit, to finance business start-ups. Investors rarely used credit from banks or NGOs. This pattern closely resembles the pattern found in the smaller survey in Sangkat 2 in Sihanoukville concerning 90 "sources of capital" used to finance business start-ups. There, over 93 percent of the sources (84 in total) involved own sources, including the household's own savings and income, income from land sales and informal loans from family networks. Some respondents may not have included a specific amount for a business investment because the use of one's own resources may not be perceived as a discrete business-related activity,

¹¹ Enterprises were divided into three size categories: micro (one to two workers), small (three to five workers) and medium (10 to 100 workers).

but rather as part of the family's ongoing cash flow cycles (income and expenditures over time). This aspect of household resources accounts for at least some of the discrepancies between the number of reported SMEs, reported investments and investment sources.

In the MSME survey, Kang concluded that a well-developed banking system is not necessarily required for starting up new businesses, despite the conventional wisdom of traditional development economics. The security of contracts associated with borrowing from formal institutions is offset by high levels of personal trust associated with informal borrowing. This being said, there is general agreement that better access to formal credit could and should play a larger role in financing capital investments. For example, Kang observed that 52 percent of 137 enterprises that sought a bank loan were refused. Of this number, 60 percent were refused because of a lack of collateral. This may help explain, at least in part, why so many people rely on other sources of capital for financing business start-ups, including those who do not apply for loans because they assume they would be denied.

Seventy percent of the 648 enterprises surveyed ranked a lack of capital as the biggest constraint on business expansion, regardless of location, size or type of enterprise. The lack of capital seems to be associated with an "insufficient accumulation of profit". Kang views the development of a sound banking system and legal security of contracts as a key component for solving investment problems associated with a lack of capital. Therefore, an increase in the demand for capital that is stimulated by land titles that can be used for collateral may also have the positive effect of stimulating an increase in the supply of capital.

3.3. Credit

Any discussion concerning investments for housing or business development, as well as for agriculture, raises questions about how such investments may be financed. The research theory predicts that people in both peri-urban and urban project areas will use land titles as collateral to obtain credit from formal lending institutions. If so, we should then observe changes in borrowing behaviour as people either (a) shift away from informal institutions toward more formal institutions or (b) diversify their credit portfolio by borrowing from formal institutions in addition to informal sources (Ballard and So 2004).

We should also observe a shift in the number, size and intended use of loans as people obtain larger loans for productive investments more frequently. Because the amount of a loan may depend on collateral assets and resources for managing repayment, the research theory predicts that households with more capital, income and land may be able to obtain larger loans than those with fewer such assets. This set of hypotheses assumes that formal credit markets perform reasonably efficiently in a particular area (i.e., transaction costs are low).¹²

There are in fact clear indications that the formal credit sector is growing in both urban and rural areas. For example, Aceda has increased from 14 branches with offices in 34 districts in 2000 to 15 branches in 104 districts in 2004, including 25 district offices in the Phnom Penh-Kandal branch. Also, in 2004 Canadia Bank was granted more than USD10 million worth of assistance to expand mortgage operations and increase lending to small businesses, primarily in urban areas. In 2005, ANZ Royal opened operations in both Phnom Penh and Siem Reap that include active lending for businesses engaged in real estate and housing development. Micro-finance institutions (MFIs) are also expanding their operations throughout the country, including urban areas (e.g., Siem Reap, Serei Saophoan).

In Sangkat 2 the survey group as a whole obtained a total of 41 loans in either cash or gold during the six months prior to the survey. Female-headed households obtained about 25 percent of the loans, which was roughly in keeping with the distribution of female-headed households in the general survey population. Over half (21) of the loans were obtained by the two lower income quintiles. Thirteen of these loans were for food shortages or health. Five,

¹² See Ballard (2004) for more discussion of this set of hypotheses.

however, involved business activities in the lowest income quintile. About 25 percent of the loans (10) were obtained by the two upper income quintiles, including five for business activities and five for home repairs or construction. Overall, about 30 percent of the loans were for business-related activities. Another six loans, about 15 percent, were for housing and home construction, while 15 loans, about 38 percent, were for food or medical reasons.

As in the rural areas, there appeared to be more borrowing in the informal sector in Sangkat 2, where 29 (about 70 percent) of the loans were obtained. Eighteen of these loans, about 62 percent, were obtained by the two lowest quintile groups. The two upper quintile groups obtained 11 loans in the formal sector, including eight from Aceda and three from MFIs. The remaining eight loans were taken by the middle quintile (including five from the informal and three from the formal sector). The upper two quintiles also took six loans from the informal sector. This suggests that upper income groups tend to have a wider range of options in access to credit.

The seven Aceda loans all required some form of collateral: two involved receipts for land certificate applications, three involved certificates, one involved an “other asset”, and two required some form of group asset. One MFI loan involved a land certificate for collateral. None of the remaining loans, including those in the informal sector, involved collateral. This helps explain the preference for, or at least the level of, borrowing in the informal sector, especially among those in the lower quintiles. On the other hand, it also suggests that some form of land documentation is essential in order to obtain a loan from the formal sector.

Although the research theory predicts that overall formal sector borrowing across all income groups will increase as a result of land titles, the distribution of benefits from such borrowing is difficult to predict. Upper income groups may not borrow much more often than now. One reason is that many of them already have certificates for at least some of their plots, so the LMAP titles will not change their documentation status all that much. Another reason is that they have other assets and more income with which to invest. However, they may borrow larger amounts depending on the use of the loan. This may depend more on their confidence in the medium- to long-term business and investment climate.

On the other hand, at least some households in lower income groups may use their titles as collateral to begin borrowing from the formal sector. Lower quintile households may borrow smaller amounts than the upper quintiles for such activities as small-scale business investments or housing improvements. One reason they may take smaller loans is that they have less income with which to repay. At the same time, lower income households may also continue to borrow from the informal sector for managing problems such as health care and food shortages.

3.4. Land Markets

The research theory predicts that over time titled property will be transferred through land markets to more economically productive uses. We should therefore expect to see shifts in peri-urban and urban land use patterns, including investments in residential and commercial property and other improvements (e.g., better fencing). In both the peri-urban and urban sectors, we should also see the expansion and growth of better functioning real estate markets.

3.4.1 Land Prices

As land use shifts in the direction of more economically productive uses, land prices (sales and rentals) of residential and commercial property will increase. We expect that land prices will increase at a faster rate where land is situated along main roads with public utilities and services. The rate of price increases, however, should be higher in project areas than in control areas, because prices for documented land tend to be higher than for undocumented land. This being said, in countries such as Cambodia, it is also important to distinguish among the different types of paper used to document land ownership.

In Sangkat 2 in Sihanoukville, the distribution of residential land shows a similar pattern to that of the rural households: the three upper quintile groups tend to own more plots than the lower two quintiles. Moreover, their plots tend to be larger and generally have a higher value per square metre, except for the second quintile, which has the highest value per square metre. As a result, the average value of the plots owned by each household tends to increase according to income quintile. The difference between the lowest and highest income groups is quite striking: USD5948 per plot vs. USD35,286 per plot (see Table 3.1). Such differences can be explained in part by the location and value of the respondents' houses. There is a clear contrast between the value of the lowest and highest quintile houses: USD4087 vs. USD15,905. One-third of the upper quintile houses are located on a paved road, while 40 percent of the lowest quintile houses are located on roads with only bicycle or motorcycle access.

Table 3.1: Sihanoukville Landholding Value Summary

Annual Income (x 10,000 riels)	HH	Plots	Tot.Area (SqM)	Tot.Value (\$)	Plots/HH	Area/Plot	\$/SqM	\$/Plot
165–380	19	21	7,609	124,900	1.10	362.33	16.41	5,948
391–584	20	25	8,109	392,000	1.25	324.36	48.34	15,680
600–919.5	20	32	14,581	572,179	1.60	455.65	39.24	17,881
920–1620	20	25	12,064	460,600	1.25	482.56	38.17	18,424
1770–7200	18	29	24,096	1,023,300	1.61	830.89	42.46	35,286
Total	97	132	66,459	2,572,979	1.36	503.47	38.71	19,492

Source: CDRI Baseline Survey, 2004

3.4.2 Transactions

Land transactions include both sales and purchases by the households in the survey population. One would expect that land markets located near commercial and administrative centres and/or along main roads would have a greater frequency and volume of land transactions of greater value than markets located further away from commercial and administrative centres and/or paved roads. This prediction assumes that macro-economic and political conditions remain stable.¹³ However, this expectation may not hold in cases where speculators are buying and selling land in peri-urban or other areas slated for development.

In Sangkat 2, the survey group had purchased 89 residential land parcels and 12 other parcels since 1989. Most of these transactions took place prior to 1997. There had been 19 reported land sales among the survey group since 1989, about one sale for every five households. Thirteen of these transactions took place prior to 1997, and the remaining six took place in 1997 or since. The most recent reported sales were two in 2000, one in 2001 and three in 2000. Of the 19 sales, 12 involved residential land, one involved rice land, four involved *chamkar* land, and two involved other types. The upper two income quintile groups accounted for 10 of the land sales, while the lower two quintiles accounted for only two. The upper three quintiles have more land and therefore more economic flexibility than the two lower income quintiles.

As noted in the above discussion concerning rural land transactions, people buy and sell land with or without titles. The number and frequency of transactions within the survey group probably will depend more on land use and values, which are more a function of the business and investment climate and the availability of land for sale. Many households own only their one residential plot, many of which double as a place of employment or trade. As long as

¹³ Chan and Acharya (2002) have observed that the volume of land transactions seems to mirror macro-economic growth patterns.

people can sustain their livelihoods, they are not likely to sell their only land. People are also motivated to retain at least some land in order to pass it on to their children. On the other hand, households with multiple plots, particularly those among the upper income quintiles, may be more likely to sell land for investment purposes, as already observed.

According to the data from Sangkat 2, there may be more land purchases than sales among the survey group, particularly among those households with higher incomes looking to invest savings in urban real estate and/or rural farmland. The pattern of land transactions may involve fewer sales to people from outside the survey areas and more purchases of land both in and outside of the areas by the survey groups.

3.5. Land Administration

The research theory predicts an increase in the percentage of transactions that are facilitated through the official registry system, particularly in more active markets where land values are increasing. The key indicator would be an increase in the percentage of land sales and inheritances that are recorded and facilitated through the official registry. However, this may depend on several factors. First, the fees and other costs associated with official transfers must be reasonable. Of particular concern is the fact that some buyers may still wish to avoid paying the four percent land transaction tax. Second, the degree of confidence that buyers have in the security of the LMAP titles depends in part on the ability and willingness of local authorities, including the courts, to enforce objectively the tenure rights represented by the titles. Third, the degree to which people intend to use the titles as collateral for loans may depend on their confidence in the overall business environment and political stability. Finally, people must understand the rules and procedures governing the use of the official registry, which in turn depends on the quality of information available.

The degree to which people use the official system may also vary according to the capacity of the household to pay related fees and taxes. Households with more income and wealth may be more inclined to use the official registry than less well-off households. These predictions assume that (1) transaction costs associated with official registration will be lower than they are now; (2) people will have more confidence in the security of tenure than they do now; and (3) people will have sufficient knowledge of the procedures and the capacity to access the system. Again, the degree to which all households use the official registry for land transactions will ultimately depend on the government's ability and willingness to enforce these and other kinds of procedural requirements.

3.5.1 Land Conflicts/Dispute Resolution

The research theory predicts that secure land titles will, over time, reduce the volume and frequency of land disputes by clarifying ownership, parcel boundaries and transaction procedures. The experience in Cambodia (So *et al.*, 2002), however, suggests that clarifying boundaries and ownership may initially stimulate new conflicts or arouse dormant disputes. This may very well be the case in urban areas where the growth of the real estate market is being spurred by rapidly increasing land values. In such a situation, one would expect the scope and scale of conflicts to escalate in areas where land values are rising. In the short to medium term, we expect the volume of disputes, particularly regarding boundaries and inter-family transfers, to increase. However, the number of disputes should decline with the passage of time once the LMAP titles are issued. It will be very important to monitor how local authorities and the courts manage dispute resolution involving LMAP titles. If tenure security in the form of land titles is objectively upheld and enforced by the authorities, this will represent a great step forward for the rule of law.

The rural land-titling baseline survey conducted in 2004 may provide some guidance on this question. The survey found 60 land conflict cases during the two years prior to the survey. Some 38.3 percent of the cases involved boundary conflicts with neighbours, followed by

conflicts with relatives (32.0 percent) and with other villagers (21.6 percent). About 10 percent involved encroachment on the part of authorities or powerful people. The report observed that most land disputes are local in nature and that the scope and scale of conflicts are highly situational. It also noted that the low number of conflicts found in the survey may also be due to the fact that LMAP titling has tended to take place in stable areas where customary rights seem to be working well, and that many such conflicts have long been resolved.

3.6. Gender

The research hypotheses predict that land titles will have a wide range of impacts on gender-related matters pertaining to land. Many of the same indicators identified in the rural baseline survey, such as landholdings and capital assets, are also applicable to assessing the impact of land-titling on gender equity. Other indicators include access to affordable credit and investments in housing and business start-ups and expansion. It is expected that female-headed households will obtain an increased number of loans that are invested in housing and business improvements. However, the rate at which female-headed households obtain loans may depend on a variety of circumstances, including household well-being.

It is also important to note that the degree to which female-headed households benefit from land titles is likely to vary according to the amount of assets they control. For example, the rural baseline survey of 907 households in 2004 found that female-headed households on average had smaller landholdings than male-headed households (1.17 ha vs. 1.75 ha) and fewer plots per household (3.78 vs. 4.44) that were smaller in size (0.30 ha vs. 0.39). Moreover, female-headed households consistently have fewer other assets, including livestock, durable assets, non-farm fixed assets and non-machine farm assets. Female-headed households also had fewer adult workers than male-headed households (3.4 vs. 4.4).

These disparities are reflected in the mode of land acquisition. The survey showed that female-headed households had a much higher percentage of plot acquisitions from the state (70.9 percent) than did male-headed households (51.3 percent), while the percentage of plot acquisitions through inheritance was much lower for female-headed households (11.2 percent) than for male-headed households (24.6 percent). The percentage of plot acquisitions by purchase and clearing was also lower for female-headed households. These patterns suggest that female-headed households are less able to acquire additional land. The fact that they have less labour and fewer assets than male-headed households indicates a constraint on the amount of land that can be farmed, while less income implies a constraint on buying land.

The research hypotheses also predict that women's tenure security will be strengthened. One way to assess this will be to examine the outcome of cases involving the death of a husband or divorce and evaluate the extent to which the woman's land rights have been upheld. Another way to assess this would be to examine cases of conflict involving households headed by single women. While household surveys may enable surveyors to categorise and count the number of such cases, a qualitative approach will also be required to understand better the social and legal dynamics of such cases.

Chapter 4.

Methodology

This section provides a detailed account of the methodology for site selection and household sampling, as well as a brief account of the implementation strategy. Generally speaking, the selection criteria primarily concerned the diversity and dynamics of land use patterns and the expected degree of change in a particular area. In all three survey locations, one set of areas included households that presented a mix of residential and commercial uses. A second set included households in peri-urban transitional areas spanning a mix of agricultural, residential, commercial and potential industrial uses. A third set of areas where land titles were expected to be issued at a later date was intended to serve as a control. In principle, the character and composition of the control areas should resemble the two experimental urban areas (i.e., a mix of residential and commercial properties) as closely as possible.

4.1. Survey Site Selection

The provincial selection was based on a variety of factors, including strategic location and infrastructure, as well as potential development trends that will likely impact land markets and land use patterns. Phnom Penh was selected first because of its important economic role in the country and strategic location, as well as the fact that economic and infrastructure development is having profound impacts on housing and real estate markets throughout the municipality. Siem Reap town was selected because the rapid economic growth in the area due to expanding tourism is having a profound impact on land markets and land use patterns. Serei Saophoan, in Banteay Meanchey, was chosen largely because of its strategic location along National Roads 5 and 6, linking much of north-west Cambodia to the rest of the country, as well as transporting many Cambodian products to markets in Thailand. Both tourism and trade along Roads 5 and 6 are likely to increase when the highways are improved in the near future.

4.1.1 Commune Selection

The commune site selection was largely determined by LMAP work schedules. In Phnom Penh, LMAP was working in 16 communes in the six districts at the time of the survey, with plans to issue land titles soon after. Six of those 16 communes—Boeng Reang, Boeng Keng Kang 1, Tuek L'ak 1, Olympic, Chaom Chao and Khmuonh—were selected. Five others communes—Tonle Basak, Boeng Trabaek, Prek Pra, Cheung Aek and Prek Lieb—were chosen as control areas based on the assumption they would be titled last and thus provide a useful time frame for measurement. In Siem Reap, Sala Kamraeuk and Siem Reap commune were the only areas where LMAP was planning to work in the foreseeable future. Sala Kamraeuk was therefore chosen as an urban area and Siem Reap was selected as a peri-urban area. In Serei Saophoan, the three communes of Kompong Svay, Preah Ponlea and Ou Ambel were selected.¹⁴

¹⁴ At the time of the survey, LMAP had not yet begun titling in Banteay Meanchey. LMAP will begin work in the province in 2008 with support from CIDA. The question of the Serei Saophoan baseline survey is discussed in Section 7.

4.1.2 Village Selection

The objective was to achieve as much diversity within the village sample as possible, including both dynamic HCAs and less dynamic LCAs. At least two villages per commune were chosen for study. The initial selection was based on consultations with various people including LMAP and commune council staff, as well as pre-survey site visits. Final decisions were made following discussions with village chiefs and/or other community members about the feasibility of conducting surveys in the area and the likely cooperation of local officials and people.

The criteria for village selection included land market development and activity, land use, infrastructure, population density, proximity to markets and administrative locations and other economic activity. Efforts were also made to avoid surveying in adjoining villages in order to achieve geographic diversity within the commune. Finally, the site selection was also influenced by LMAP work schedules in the survey areas.

4.2. Household Sampling

Within each survey area, households were chosen by stratified random selection. First, the different types of land use were estimated for the survey area through consultation with local officials and drive-by observations. Second, the survey locations were selected according to street type (e.g., main roads, secondary streets with two-way access, tertiary streets with one-way access). Third, as in the rural survey, special efforts were made to ensure a fairly even distribution of well-being groups and to include female-headed households.

Two different approaches were then used to select households according to the information available in the village. In villages where household lists existed, including eight villages where LMAP had already worked, the baseline survey project teams counted off every n th name from the list. In villages where there was no list of households, the teams selected every n th house.

4.3. Survey Instrument and Fieldwork

CDRI employed a revised version of the survey instrument that was used in the urban survey work in Sangkat 2 in Sihanoukville during the first phase of the land-titling baseline survey, taking into account the lessons from the work there, as well as special circumstances in other urban areas (e.g., people's time constraints). The survey instrument was pre-tested twice in Phnom Penh, and the lessons incorporated into further revisions of the instrument. The same survey instrument was then used in Siem Reap and Serei Saophoan. (See Annex A.)

CDRI engaged 12 field enumerators who already had some urban survey experience in land-titling in Sihanoukville. They also had gained extensive prior experience with land-titling surveys during the rural phase of the baseline survey project. The enumerators also received three days of training and orientation, as well as two days of pre-testing the survey instrument, which involved collaboration with LMAP survey teams working in Phnom Penh. The enumerators were divided into four teams of three. Each team had an experienced leader who was responsible for reviewing the data each day to ensure quality control. The team leaders also helped to coordinate work with local officials and to schedule appointments as needed.

The data coding for SPSS¹⁵ had already been developed in conjunction with the baseline survey work in Sihanoukville. However, the data codes were modified to accommodate adjustments in the interview questionnaire. The most diligent field enumerators with prior data entry experience were selected for this phase of the data work.

¹⁵ Statistical Package for the Social Sciences.

Each enumerator was asked to give their perception of the accuracy and reliability of the information obtained in the interview. Table 4.1 shows that the enumerators' assessments of the interviews were quite consistent across all three areas. The table also shows that the quality of the urban interviews was rated somewhat higher than the rural interviews.

Table 4.1: Interview Quality Assessment (percent)

Location	Very Good	Fairly Good	Moderate	Low	Total Number
Phnom Penh	6.7	73.7	19.1	0.5	1663
Siem Reap	4.1	72.0	22.4	1.5	536
Serei Saophoan	2.2	74.6	23.1	0.2	507
Total	5.3	73.5	20.5	.6	2706
	Very Good	Good	Medium	Weak	
Rural/Sangkat 2	4.4	56.3	35.4	4.7	1232

4.4. Limitations

One of the most significant constraints was the limited amount of time that urban residents were willing and able to provide for an interview. While it was possible to interview rural residents for as long as one and a half hours, the pre-testing in Phnom Penh suggested that 45 minutes might be the maximum time that people would allow for the interview. With this in mind, the survey team designed the instrument so that the interviews could be completed in 40–45 minutes. This objective, although imminently practical, posed a serious challenge in designing an efficient instrument in which the optimal amount of reliable information could be obtained in the allotted time.¹⁶

A second important constraint concerned the reliability of information provided. For example, during the first round of pre-testing, the enumerators tried to obtain information about household income. Based on this experience, they felt that many respondents were reluctant to provide information about income and when they did so were likely to understate their income by varying degrees. The survey instrument was then redesigned to collect information about household consumption expenditures over the year prior to the survey. During the second round pre-test, the enumerators found this was easier to do in the limited amount of available time for each interview, and in their opinion also provided more reliable information.

Despite the excellent cooperation that the survey teams received from municipal and local officials, as well as most households, some households refused to grant interviews. As these tended to be wealthier households or those of ranking government officials, it must be kept in mind that there may be some selection bias, resulting in the wealthiest households being under-represented in the sample.

Another limitation was the fact that only the actual owners of the property in question were interviewed. The survey therefore more specifically dealt with the impact that titles have on owner decisions and actions, such as making home improvements or obtaining credit, and may not provide a broader perspective on the impact of titles on land use in general, especially in terms of rentals. Also, and perhaps more importantly, the survey does not capture or reflect a number of important issues that are of concern to households that either legitimately occupy land or occupy state or private land and are, as a result, subject to eviction and/or relocation. This limitation reflects a broader limitation of the LMAP in general, as it is designed to provide titles to owners and is not specifically concerned with issues of housing and access on the part of the poor in informal communities, although the titling programme may indeed impact on such issues in a profound way. There is a real need

¹⁶ One benefit of the shortened survey instrument was an increase in the number of interviews that were completed, which resulted in a larger sample than originally planned.

for a comprehensive study specifically designed to address this difficult yet important set of issues. Special efforts were made to identify and include survey areas with many low-income households in order to understand how land titles affect low-income landowners.

Finally, the timing of the LMAP fieldwork in relation to when land titles were to be issued proved difficult to arrange, because the process includes many steps, several of which are subject to delay (e.g., surveying, adjudication). The basic strategy in identifying baseline survey areas was to select places where titles were to be issued soon after the survey was completed. The narrower the gap between the survey and the issuance of the title, the less chance there is for intervening variables to distort or otherwise affect the impact analysis. For example, if titles are issued a year following the survey, the baseline measurements would be distorted. This is, in fact, the case in Serei Saophoan, where the survey was conducted prior to the LMAP programme even starting. When land titles have been issued relative to the survey dates could have important methodological implications for the follow-up survey. This will be discussed in more detail in the section on recommendations.

Chapter 5.

Phnom Penh Municipality Baseline Survey

This section provides a background overview of the current land situation in Phnom Penh. The first part discusses some of the key issues pertaining to land-titling and management, including planning and zoning, infrastructure rehabilitation and development, real estate and housing markets, informal communities and peri-urban areas. The second part presents and discusses some of the key Phnom Penh baseline survey data and concludes with a summary of the main points.

5A.0. Background and Current Land Situation

The area of Phnom Penh is approximately 375 square kilometres. The municipality is administratively divided into seven districts and includes 76 communes. Four districts make up the urban centre, covering only 28 square kilometres, while three districts make up a peri-urban area of 347 square kilometres. The population of the city in 2004 was estimated to be about 1,042,000, with a total of 205,042 households, about 5.08 persons per household. In 2004, the population density of the urban areas was estimated at about 16,688 per square kilometre, while that of the peri-urban areas was approximately 1289 persons per square kilometre. After natural increase, estimated at 3.2 percent per annum, the most significant factor for population growth is immigration from rural areas, estimated to increase the population by 2.0 percent per annum. There is also rapid growth in new construction and increasing commercial concentration. These factors are placing new demands on land, housing, infrastructure, utilities and services, with adverse effects on traffic, drainage, security, the environment and aesthetics.

Recent analysis of 2004 Cambodia Socio-Economic Survey (CSES) data shows that per capita consumption, a useful measure of well-being, varies greatly between urban and rural areas within regions, including Phnom Penh, where overall per capita consumption exceeds the national average.¹⁷ In the peri-urban areas, per capita daily consumption was approximately 6130 riels, while it was about 9633 riels in the urban areas. According to the 2004 CSES, inequality in Phnom Penh is high, as suggested by a Gini co-efficient value for real household consumption of 0.37. The World Bank's recent poverty assessment (2006) observes that inequality may actually be higher than this in urban areas, particularly Phnom Penh, because the poorest segments of the population are likely to have been under-represented in the survey sample. The assessment also observes that some of the most pressing issues facing the urban poor are employment and the high costs of services, such as electricity and water, while security of housing tenure is one of the most "overriding" threats to livelihoods and well-being. The poor, who are often crowded on marginal state public land, tend to lack access to basic services, while those who may have nominal tenure rights are vulnerable to efforts to displace them in the face of rapidly increasing land values.

¹⁷ The average monthly household income in Phnom Penh in 1999 was 1,139,553 riels, or USD298.70 at the current exchange rate (NIS 1999). This was considerably higher than the national average for Cambodia, which was 403,334 riels, or USD105.72. There was also considerable variation across households. For example, the lowest decile group averaged 357,778 riels per month, about 3.1 percent of total income, while the highest decile averaged 3,708,141 riels per month, about 32.4 percent of the total.

5A.1. Zoning and Planning

The sequential relationship between zoning and titling is an important concern, because land-titling impacts are optimised in urban areas where land use master plans and enforceable zoning regulations are in place prior to the titling. In Phnom Penh, as in Siem Reap and other urban areas, however, the private sector has largely determined land use patterns in the absence of master plans and zoning regulations. This represents potential inefficiencies associated with distortions in the distribution of public utilities and services that serve larger private interests rather than the public interest. As a result, it is possible that the issuance of land titles may exacerbate problems associated with the current mix of land uses in any given area. Without government zoning interventions and enforcement, the uncertainties of poorly planned land use mixes could drive up transaction costs associated with competition over public resources between private individuals, impede incentives for productive investments, particularly for small investors, and undermine the development of efficient land markets.

A master plan that outlines the municipality's development objectives through 2020 as well as zoning and land use planning was drafted in 2003 but has yet to be approved. Participants at a seminar concerning land use in Phnom Penh (So *et al.* 2001) observed that "the absence of a proper zoning and urban development plan has encouraged civic mismanagement in the city". For example, some public land and buildings had been sold illegally, and there were few structures and little land remaining for developing infrastructure and utilities. Moreover, land occupied for commercial purposes had not been productively used but was being held for speculation. High unofficial fees for land certificates and transfers discouraged people from obtaining formal ownership of their land or houses and encouraged illegal occupations and the production of fake certificates. The environment and aesthetics of the city were also being undermined by an excessive concentration of commercial activities in small areas and by illegal construction.

Generally speaking, the planned development and growth of the city are oriented toward the west because that area is not flooded during the rainy season, when the river rises. Planners have observed that Phnom Penh still has considerable areas for growth, including much of the 347 square kilometres in the three peri-urban districts. Although the general direction of development is known, the fact that zoning and master plans for land use are either undeveloped or otherwise not available to the public suggests that the development of the city has been haphazard and driven by individual private interests at the expense of the public interest.

Such haphazard growth and development contribute to poorly functioning land markets and undermine good governance because they encourage speculation by government staff or those with access to insider information. For example, if speculators acquire much or all of the land in a given area, there may not be sufficient space remaining for public services and/or infrastructure and utilities. The result will be the eventual need to adjust private and public land ownership and boundaries to accommodate necessary infrastructure. Such adjustments will be costly and time consuming, and will very likely generate conflict. Land use in underdeveloped areas should be demarcated in accordance with zoning regulations and urban development plans prior to titling.

5A.2. Infrastructure Rehabilitation and Development

During the Khmer Rouge period, Phnom Penh was virtually abandoned and a substantial portion of the urban infrastructure, including roads, sewage and drainage systems, canals, buildings and utilities, fell into severe disrepair. While many gains were made during the 1980s in getting certain utilities and services up and running, many parts of the city could not be served due to a lack of financial and technical inputs. It was not until the early 1990s and the availability of donor assistance that efforts accelerated to rehabilitate roads, sewerage and drainage and basic utilities throughout the city. Much progress has taken place since then. For

example, the city plans to complete paving all roads in the four urban districts by 2008, at which time it will begin paving roads in the three peri-urban districts.

The draft master plan for municipal development through 2020 envisions significant infrastructure development to integrate Phnom Penh into the mainstream of regional economic development by linking it with other major cities (e.g., Ho Chi Minh City, Bangkok) as well as other lines of trade (e.g., Pan-Asian Highway). For example, in Samraong (Dangkao district), the city plans to develop a dry port for commercial transport where the Battambang and Sihanoukville rail lines meet. A by-pass ring road will connect the dry port to National Routes 1, 4 and 5, while depots along the road will serve feeder roads to shuttle goods, thus reducing large truck traffic into the city.

The city also proposes the development of five satellite cities around the main urban centre in order to relieve the pressures of rapidly increasing population and economic growth. The locations include an area along Route 1 near Chbar Ampov, another area east of the city, an area north of the city near Pong Peasy, Samraong (north-west of the city) and an area near Tuek Khmao south of the city. The areas in Pong Peasy (i.e., Camko City) and near Chbar Ampov have already secured investor interest.

These and other development plans will significantly increase the demand for land in and around the municipality. Private investors will require secure ownership of large tracts of land in order to develop the proposed new satellite cities, while the municipal government will require more land to develop infrastructure, such as the dry port in Samraong and other transportation, including roads and bridges. Land titles will play a significant role in facilitating the transfer of land into the hands of private investors and the government through commercial acquisition. Such developments help explain the growth of an increasingly active real estate market throughout the municipality.

5A.3. Real Estate and Housing Markets

Land values have been increasing despite the general absence of land titles. According to one real estate agency, during the period 2000–07, land prices increased every year except 2003–04 as a result of a high volume of transactions in response to the rapidly growing demand for residential and commercial property throughout the municipality. Property is increasingly a favoured form of investment in both Phnom Penh and Siem Reap, from which investors expect a good return. During the period 2000–03, land prices increased by 10–15 percent, but declined by five per cent during 2003–04 as a result of the political stalemate after the 2003 election. Since then, however, land prices have risen sharply, by 25–35 percent during 2005–07; in some of the more competitive and lucrative areas, prices have increased by 30–80 percent.

Land values vary with a variety of factors, including shape and size of the plot, level (i.e., drainage), location, neighbourhood (i.e., comparable property nearby), utilities and services and amenities. For example, the most desirable shape and size of a plot for villa or townhouse construction is 20 x 30 metres, which allows enough room for some garden. For townhouse construction, a plot must have at least 16 metres of road frontage and no less than 11 metres of depth. Other things being equal, land situated along a two-way paved road is valued more than land situated along an unpaved two-way or one-way street, or land that can be accessed only by bicycle or on a footpath. The type and quality of utilities and services available to the property are also important. Electricity supply, sewerage and drainage and clean drinking water are all important variables affecting the value of land.

Table 5.1: Phnom Penh Land Value Estimates (USD/sq. m.)

Zone	July–Sept 2006	March–April 2007	% increase	Comment
A	400–950	850–1500	74.1	1 st Commercial Land
B	400–600	650–900	55.0	2 nd Commercial Land
B	250–400	500–750	92.3	3 rd Commercial Land
D	290–400	550–750	88.4	Prime Residential and residential (PR/R) BKK 1, Daun Penh, Market Zone
E	150–350	230–530	52.0	PR/R: 7 Makara. ORS 1 – 3*
F	120–280	220–500	80.0	PR/R: BKK 2-3, TSP 1-2, TBS 1-2, Olympic, DPO 1-3, PDK*
G	230–280	350–550	76.5	WP, SC*
H	80–250	180–380	39.4	TTP1-2, TNT, BTB, PDT, BSL, TL1-3*
I	80–250	180–280	58.9	Tuol Kork

* BKK = Boeung Keng Kang; BSL = Boeung Salang; BTB – Boeung Trabek; DPO = Phsar Depot; ORS = Orusse; PDK = Phsar Doeumkor; PDT = Phsar Doeum Thkov; TBS – Tonle Bassac; TNT = Tumnap Tuk; TTP = Toul Tum Poug; WP = Wat Phnom
Source: Cambodia Estate Guide

Housing values vary with the area of floor space, the type of construction and quality of building materials. The age of the house, condition and furnishings also influence the value. Amenities such as protected parking also affect the value.

The booming housing market in Phnom Penh is reflected in the data on construction approvals. Table 5.2 shows that between 2000 and 2006 the overall value of construction approvals increased from USD205.4 m to USD323.3 m, an increase of 57.4 percent. During the same period, the value of villas and houses more than doubled, from USD16.4 m to USD33.1 m, and flats grew by 22.1 percent, from USD174.8 m to USD213.4 m.

Table 5.2: Construction Approvals in Phnom Penh (USD m)

	2000	2001	2002	2003	2004	2005	2006
Villas/houses	16.4	15.9	23.4	20.0	30.3	45.5	33.1
Flats	174.8	167.8	179.9	91.6	167.6	204.2	213.4
Other	14.2	12.6	16.6	87.3	65.6	109.1	76.8
Total	205.4	196.2	219.8	198.9	263.4	358.8	323.3

Another indicator of increasing land values is the increasingly vertical built environment in urban districts. A number of multi-storey housing units can be observed in Boeng Keng Kang and Tuol Kork, while multi-storey buildings in or near commercial areas are also increasingly common. In the peri-urban area, the built environment associated with urbanisation is also steadily expanding, albeit horizontally.

Prior to the LMAP land titling programme, about 25 percent of the owners of houses and land had been issued land certificates, significantly more than the national figure of 14 percent at the time.

5A.3.1. Condominium Property

There are a large number of co-owned immovable properties in Phnom Penh that entail a complex set of issues regarding registration and titling. In multi-storey buildings, some parts may be privately owned and used (e.g., ground floor shops or upper level flats), while other

parts may be commonly owned and used (e.g., stairwells, roofs). A draft circular on the registration of co-owned buildings and parcels defines a lot as a part of co-owned immovable property consisting of private parts that are attached to a certain percentage of common sections.

The parcel upon which a condominium is located will be registered as a parcel co-owned by each unit owner, while each lot in a condominium will be registered under the name of the lot owner. After registration, land titles will be issued to owners of each lot, along with information about the size, location and type of private sections and the share of common sections connected to it. According to the draft circular, the owner of a private section has the right to sell or otherwise dispose of it, while the rights governing transactions involving common sections are not entirely clear. It is, however, specified that certain rights concern common sections (e.g., new construction, joint ownership of common parts). Such provisions would also apply to parcels of land or one-story buildings where there are several owners of divided lots or units.

5A.4. Informal Settlements

In 2002, there were an estimated 472 informal settlements, consisting of 35,165 households and 175,825 people, excluding homeless households and seasonal labour migrants (URC 2002). A more recent study (Payne *et al.* 2004) found that there were more than 500 informal settlements in and around Phnom Penh, distributed on both public and private land. This study observed that “informal settlements in Phnom Penh occur when land is occupied without official approval or formal tenure status on one of three main categories of land”. These categories are (1) settlements on state private land, defined as the property of ministries; (2) settlements on state public land, defined as land belonging to public services, such as railway stations, parks, lakes, rivers, streams and forests, representing about 30 percent of the developed area of Phnom Penh; and (3) settlements on private land, which account for about 65 percent of informal settlements.

Informal settlements in Phnom Penh and other urban areas have sparked considerable controversy. The city has tried to resettle people residing in informal communities to areas outside the city, beginning with forced evictions starting in Phnom Penh in 1990–91. Such efforts often fail to solve the problems associated with informal settlements, as many people eventually return because the resettlement sites have often lacked essential services, basic infrastructure and employment opportunities (URC 2002). More recently, some government planners in concert with some civil society organisations have proposed alternative means of addressing the problems associated with informal communities, including upgrading infrastructure and housing along with different arrangements for providing secure land tenure, as well as planned relocation under certain circumstances.

In May 2003, the Prime Minister announced the government’s intention to upgrade 100 informal settlements in Phnom Penh annually for five years. Such plans assume that secure tenure in the form of land titles would serve as a foundation for household investments compatible with upgrading community infrastructure. The issuing of individual titles in formal communities, however, poses potential risks, including increased conflicts during surveying and adjudication, encouraging possible land speculation, especially in areas where formal land prices “offer the possibility of large windfall profits”, and encouraging more immigration into “well-located” communities. Other difficulties include the fact that surveying individual plots in informal communities requires considerable time and raises costs, exacerbating human and financial resource capacity constraints (Payne *et al.* 2004).

Given these and other concerns about the constraints and possible negative impacts of individual titles, some planners and researchers have proposed alternative measures for providing secure tenure to individual households in informal settlements. One set of proposals suggests incremental improvements to tenure security, in three main stages. The first stage

would include an announcement of a general moratorium on evictions and relocations for nine months, during which time all settlements could be surveyed to determine which were suitable for upgrading and formal tenure (i.e. individual land titles) as well as identify those for which relocation was required. The second stage would involve medium-term tenure options for different settlement categories, including certificates of communal land rights and community land leases. The third stage would eventually involve long-term tenure in which residents would have the rights to sell, inherit or otherwise transfer their property on the open market (Payne *et al.* 2004).

5A.5. Peri-Urban Areas

Peri-urban areas feature land use elements of both urban and rural areas, including agricultural production mixed with residential, commercial and industrial uses. The 1999 CSES reported a total extent of agricultural land of 12,067 hectares in Phnom Penh, including 10,000 hectares of paddy, of which about half was irrigated. As in rural areas, more secure land tenure in the form of titles could prompt landowners to increase investments in agriculture. Such investments could include variable inputs such as fertilisers and pesticides, as well as labour, machinery or irrigation. Increased investment should in turn stimulate observable increases in yields and in land and labour productivity. This assumes that market conditions, soil quality and climate are more or less constant. In addition to the availability of credit, the degree to which extension services are available to farmers in a particular area is an important factor that may influence investments.

There is, however, evidence suggesting that the amount of land used for agricultural purposes is rapidly decreasing as land is converted to residential and commercial uses. For example, Chan and Acharya (2002: 18), observed that “a sizeable part of Kandal’s agricultural land has been converted to factory sites and residential land as urbanisation spills over beyond the Phnom Penh area. In addition, a number of large parcels have been bought up and neatly fenced in anticipation of more factories and commercial ventures to come up in the future”. Although this observation applies to areas in Kandal near Phnom Penh, there is also considerable anecdotal evidence to suggest that a similar process has been under way in the peri-urban areas of Phnom Penh for some time. According to official land transaction data, the overwhelming majority of those buying residential and agricultural land in these areas are from Phnom Penh (Sophal and Acharya 2002). Such transactions are likely to increase as more people from the city and foreign-owned firms purchase land for housing, commercial and industrial investment or speculation. Land values in the three peri-urban districts have been steadily increasing over the past several years, and are likely to continue increasing for the foreseeable future, especially in areas where infrastructure, services and utilities are improving.

5B.0. Phnom Penh Baseline Survey

Six of the seven districts in Phnom Penh were included in the baseline survey. Of the four urban districts, Daun Penh, Chamkar Mon and Tuol Kork were included. The district of 7 Makara was originally included in the survey design, but because of difficulties locating property owners in the area it was later decided to do more surveys in other locations. Moreover, it was not clear how the LMAP work schedule would fit in with the baseline survey objective of conducting surveys close to the time when titles would be issued.¹⁸ All three peri-urban districts of Russey Keo, Dangkao and Meanchey were included in the survey. Russey Keo was not included in the survey design, but was added when it was decided not to survey in 7 Makara. Russey Keo was added also because fieldwork in the other two peri-

¹⁸ The experimental areas were chosen on the basis of where LMAP teams were expected to complete their work soon after the surveys were completed, while the control areas were chosen based on where it was expected LMAP would complete its work last. The choice of control areas assumes that land titles will not have been issued prior to the follow-up survey.

urban districts suggested land markets in peri-urban areas were becoming increasingly dynamic and it was considered important to capture this emerging dynamism in the survey sample.

The data can also be analysed at both commune and village level. While there is considerable variation in the number of key indicators across districts as discussed below, there is also considerable variation across communes and villages within districts. For example, land values and uses vary according to commune and village location. Such variations will need to be explored carefully in the course of sorting out the many intervening factors that may cloud or distort the actual impact of land titles. In the interest of space and the reader's time, the following discussion concerning location is limited to district comparisons. A complete list of villages and communes covered in the survey sample is provided in Annex B.

5B.1. Household Characteristics

A total of 1663 households were interviewed in Phnom Penh during the period 21 October–3 December 2005. Of these, 22.7 percent were headed by women, which is practically the same as the overall national average of 22.4 percent.¹⁹ In the three urban survey districts, 857 households were interviewed, including 175 with female heads, about 20.5 percent. In the three peri-urban districts, 806 households were interviewed, including 202 headed by females, about 25.1 percent.

In addition to location and sex of household head, the sample population can also be analysed according to per capita consumption expenditure. Respondents were asked to report household expenditures between Khmer New Year (mid-April) 2005 and the date of the interview on a number of items, primarily those that would entail larger costs (e.g. medical care) and sometimes one-off expenses (e.g. education, social ceremonies). For items such as utilities, respondents were asked to report average monthly expenses. Finally, they were asked to report weekly expenses for items such as food, transportation and entertainment. This information was aggregated to come up with an estimated per capita annual consumption figure. (The survey questionnaire is in Annex A.)

Table 5.3 shows the average household consumption expenditures for the year prior to the survey. Overall, the average per capita consumption expenditure for male-headed households is about 18 percent higher than for female-headed households. There is, however, a remarkable degree of similarity between male- and female-headed households in quintiles 2 and 3, which show almost exactly the same levels of per capita household consumption, while there are only six and two percent differences in quintiles 1 and 4, respectively. In quintile 5, female-headed households' per capita consumption expenditures exceed those of male-headed households by two percent.

Table 5.3: Consumption Quintiles (USD/year/person)

Quintile	Male HH		Female HH		No. HH	Mean	Range
	No	Mean	No	Mean			
1	242	290	90	274	332	285	80–402
2	247	502	86	504	333	502	402–604
3	257	721	76	721	333	721	605–860
4	262	1067	71	1048	333	1063	861–1310
5	277	2505	55	2561	332	2514	1312–23,576
Total	1285	1053	378	894	1663	1017	80–23,576

¹⁹ According to the CSES 2004, National Institute of Statistics.

Table 5.4 shows the average annual per capita consumption in each survey district. As might be expected, the three urban districts have the highest expenditure, Daun Penh having the highest average at USD1796. The three peri-urban districts are all lower, Russey Keo having the lowest average at USD696 per capita per annum.

Table 5.4: Annual Per Capita Consumption by District (USD)

District	No. HH	Mean Expenditure	Minimum	Maximum
Daun Penh	84	1796	339	10,790
Chamkar Mon	406	1136	170	8335
Tuol Kork	367	1301	177	23,576
Russey Keo	373	696	80	4205
Dangkao	313	822	109	7531
Meanchey	120	704	165	6598
Total	1663	1017	80	23,576

Table 5.5 summarises the distribution of the survey households in each district according to household consumption and sex of household head. It is interesting to observe that the percentage of households headed by women steadily declines according to consumption quintile. About 27.1 percent of households in the lowest consumption quintile are headed by women, whereas 16.6 percent of households in the highest quintile are headed by women.

Table 5.5: Number of Households Surveyed, by District and Consumption Quintile

District	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	Tot
Daun Penh	0	2	5	3	8	5	17	4	33	7	63	21	84
Chamkar Mon	27	11	62	14	62	13	90	17	93	17	334	72	406
Tuol Kork	22	22	51	18	63	18	67	12	81	13	284	83	367
Russey Keo	93	31	76	17	47	15	43	18	26	7	285	88	373
Dangkao	70	15	38	29	44	18	36	18	35	10	223	90	313
Meanchey	30	9	15	5	33	7	9	2	9	1	96	24	120
Total M/F	242	90	247	86	257	76	262	71	277	55	1285	378	
Total HH	332		333		333		333		332		1663		
% of Total	72.9	27.1	74.2	25.8	77.2	22.8	78.7	21.3	83.4	16.6	77.3	22.7	

5B.2. Plot and Unit Characteristics

This section provides some of the key data concerning plot and unit characteristics covered in the survey sample. The data concern the mode of acquisition, the type of documentation to claim or validate ownership, the location of the plot, the services available to it and plot values. Two different data sets are used. The most relevant data set concerns the plot or unit where the owner resides or works and where the interview took place. This is referred to as Plot/Unit 1 throughout the following discussion and is the primary unit of analysis for land titling impacts. The total of "Plot/Unit 1" is 1663, equal to the number of household interviews.

The second data set that is occasionally discussed concerns all the plots that are owned by the respondents. These data are compared to the Plot/Unit 1 data as appropriate to highlight certain points (e.g., mode of acquisition, mode of documentation) and to serve as a check on the Plot/Unit 1 data. The total number of "all plots" represented in this data set is 2834, or 1.70 plots per household. This is higher than the average of 1.36 plots per household found in the 2004 Sihanoukville survey in Sangkat 2 in Mittapheap. Both urban area averages,

however, are well below the average of 4.23 agricultural plots per household found in the rural LMAP titling areas, as one would expect given rural land use patterns and factors such as population density. About 92.5 percent of “all plots” are located in Phnom Penh municipality and 2.2 percent “near Phnom Penh”, while the remaining 5.3 percent are located elsewhere.

5B.2.1. Mode of Acquisition

Table 5.6 shows the mode of acquisition for Plot/Unit 1 according to location. It is interesting that the predominant mode of acquisition for all of Phnom Penh municipality is by purchase (50.5 percent), followed by state allocation (35.4 percent) and inheritance or family donation (12.9 percent). This pattern is significantly different from that found in the rural baseline survey, where the predominant modes of acquisition were state allocation (55.6 percent) and inheritance (21.7 percent), followed by purchase (15.2 percent) and clearing (7.4 percent). This pattern underscores the increasingly prominent role that transactions are playing in redistributing land throughout the municipality.

Table 5.6 also shows clearly that the predominant mode of acquisition for Plot/Unit 1 in the three urban districts is by purchase (71.5 percent of all plots), while the predominant mode of acquisition in the three peri-urban districts is through allocation by the state (49.6 percent) followed by purchase (28 percent) and inheritance (20.2 percent). Although one would expect the peri-urban areas to approximate the rural areas more closely in terms of a variety of indicators, the mode of acquisition suggests that the urban tendency toward land acquisition by purchase is making inroads on the outskirts of the city. The data discussed below in Section 5.3 concerning land transactions suggest that this trend has been accelerating over the past several years.

Table 5.6: Mode of Acquisition by District (Plot/Unit No. 1)

District	Given by State		Inherited		Purchased		Other		Total
	N	%	N	%	N	%	N	%	
Daun Penh	18	21.4	0		66	78.6	0		84
Chamkar Mon	70	17.2	24	5.9	309	76.1	3	.6	406
Tuol Kork	100	27.2	27	7.4	238	64.9	2	.6	367
Russey Keo	192	51.5	76	20.4	96	25.7	9	2.4	373
Dangkao	171	54.6	64	20.4	71	22.7	7	2.3	313
Meanchey	37	30.8	23	19.2	59	49.2	1	.8	120
Total	588	35.4	214	12.9	839	50.5	22	1.4	1,663

Table 5.7 shows that of the 839 plots/units acquired through purchase, 229 (27.3 percent) were purchased between 2000 and 2005. About 62 percent (142) of these purchased properties are in the three urban districts, where the average plot/unit values are considerably higher than in the three peri-urban districts. Over half (57.2 percent) of the purchases between 2000 and 2005 took place during the second half of that period.

Table 5.7: Plot Purchases, 2000–05, by Quintile (USD per Plot/Unit No. 1)

Location	2000	2001	2002	2003	2004	2005	Average
Daun Penh	37,333	18,000	60,000	117,625	141,143	112,500	100,786
Chamkar Mon	41,200	18,475	20,614	25,318	25,479	25,667	25,231
Tuol Kork	21,273	40,050	31,750	26,612	27,324	25,400	27,820
Russey Keo	5317	1290	1660	3463	5500	8125	3635
Dangkao	2267	875	3225	2,594	16,550	48,000	6247
Meanchey	12,167	4,000	20,000	7890	3517		8292
Average	16,933	16,379	17,017	24,778	35,255	41,332	25,471
No Unit/Plots	40	32	26	52	60	19	229

Table 5.8 shows that the predominant modes of land acquisition for all 2834 plots (henceforth “all plots”) covered in the Phnom Penh survey are purchase (52.3 percent), state allocation (34.6 percent), and inheritance (12 percent). Perhaps not surprisingly, the percentage of plots acquired through purchase steadily increases according to consumption levels, especially for male-headed households, while the percentage acquired from state allocation and through inheritance varies across consumption levels, especially for female-headed households. Overall, 54.4 percent of male-headed households and 44.7 percent of female-headed households purchased the plots they own. Almost an identical percentage of female-headed households (44.4) acquired land from the state, while a smaller percentage, 31.8 percent, of male-headed households received the land they currently own from the state. This may reflect of the fact that male-headed households have generally higher levels of consumption, which suggests they have more resources with which to purchase land. A similar percentage of male- and female-headed households, 12.5 and 10.2 percent, respectively, acquired land through inheritance.

The distribution of acquisition modes of all plots according to location also closely approximates the pattern for Plot/Unit 1. For example, in the three urban districts, 73.1 percent of all plots have been acquired through purchase, while 20.1 percent were acquired from the state. In the peri-urban areas 46.1 percent of the plots were acquired from the state, while 35.7 percent were acquired through purchase. The distribution of plot/unit ownership according to the sex of household head closely approximates the survey sample, as 22.7 percent of the survey households were headed by women, while 22.8 percent of all plots covered in the survey are owned by female-headed households.

Table 5.8: Mode of Acquisition, by Consumption Quintile (All Plots/Units)

Quintile	State		Inherit		Purchase		Clear		Other		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
1	146	59	73	13	125	51	3	1	4	0	475	
2	147	69	55	15	204	51	4	0	3	0	548	
3	137	56	62	10	235	55	2	1	2	0	560	
4	142	54	52	17	273	58	1	2	4	0	603	
5	134	36	35	8	368	61	5	0	1	0	648	
											M	F
Total M/F	706	274	277	63	1,205	276	15	4	14	0	2217	617
% of M/F	31.8	34.3	12.5	10.2	54.4	44.7	.7	.6			78.2	21.8
Total	980		340		1481		19		14		2834	
% of Total	34.6		12.0		52.3		0.6		0.5			

Given the acceleration of land transactions throughout the municipality (Section 5.3 below), the mode of acquisition will certainly shift in the direction of purchase, followed by inheritance. As a result, the share of land acquired through state allocation is likely to decline, perhaps sharply, unless some social land concession mechanism is established within the municipality (e.g., resettling residents evicted from informal settlements). Such shifts will occur in all three sectors—urban, peri-urban, and rural—but will not be the direct result of land titles *per se*. Particularly in the peri-urban and urban areas, they will be the result of expanding land markets for both speculative and productive investment. Land-titling, however, will surely facilitate the process by reducing the transaction costs of purchase and sale, thus making such exchanges more efficient. The degree to which transactions will be recorded with the official registry is another matter, and is discussed below (Section 5B.3.3).

5B.2.2. Documentation

Table 5.9 shows that urban and peri-urban households rely on a variety of documentation modes. As in the rural areas, it appears that urban households have relied on unofficial documentation. For Plot/Unit 1, this includes survey papers (50.2 percent) and receipts for certificate applications (22.8 percent), making a total of 73 percent of plots officially

recognised to a certain extent, but not legally documented. Only 5.4 percent of households reported having an official certificate, which is far below the 25 percent estimate cited in Section 5.0 above.

Table 5.9: Land Documentation, by Location (Plot/Unit 1)

District	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Daun Penh	2	57	21	2	2	0	84
Chamkar Mon	47	122	36	29	108	61	403
Tuol Kork	11	312	16	8	16	4	367
Russey Keo	138	188	4	1	33	8	372
Dangkao	106	153	7	2	23	21	312
Meanchey	74	1	5	4	29	7	120
Total N	378	833	89	46	211	101	1658 *
% of Total	22.8	50.2	5.4	2.8	12.7	6.1	

* 5 missing.

App. Receipt = Application Receipt; ComVil = Commune or Village level

Although the number of plots that have a certificate is surprisingly low compared to other studies, the average value of plots documented with certificates is significantly higher than plots documented with other types of paper. The average value of plots documented with certificates was USD100,704, while the average of land documented with survey papers, the most frequently used mode of documentation in the sample, was USD41,157. The average value of land documented with receipts for certificate applications, the second most frequent form of documentation, was USD30,451. Village and commune letters of ownership transfer averaged USD22,336 and USD37,398, respectively. Surprisingly, the average value of plots with “no documents available in the house” was USD7708 and the average of plots with lost documentation was USD40,396. Under certain circumstances, undocumented plots of this value would appear to expose owners to conflicts with others.

Table 5.10 shows a somewhat similar pattern for all plots covered in the survey. About 41.6 percent of all plots are documented with survey papers, while another 26.4 percent are documented with receipts for land certificate applications, making a total of 67.5 percent of plots documented officially but not legally. Only 6.1 percent of the plots were documented with a land certificate. Documentation by commune or village transfer agreements, however, is higher for all plots than in the Plot/Unit 1 sample. This may be due in part to the fact that more plots are located outside one’s village or commune in the wider sample, and people may feel more secure about having their more distant plots secured with seemingly stronger documentation.

Once LMAP completes its systematic titling, the structure of land tenure documentation will shift toward a much higher share of documentation using land titles, in principle 100 percent. This is one of the main objectives of the LMAP land-titling. In this regard, there are two important points to consider. The first is the degree to which land transfers, most importantly transactions and inheritances, will be facilitated through the official registry. There is already anecdotal evidence that many such transfers are being done the usual way via “soft” documents (e.g., certificate application receipts). Another concern is the enforceability of the LMAP titles. The degree to which such titles are upheld by state authorities and courts in cases of conflict over ownership will be an important test of tenure security. As discussed in Section 3.6 above, the question of enforcement is of special interest to the tenure rights of women, particularly in cases of divorce or the death of a husband.

Table 5.10: Land Documentation, by Location (All plots/units)

District	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Daun Penh	18	66	28	4	18	6	140
Chamkar Mon	87	138	64	38	176	74	577
Tuol Kork	48	348	38	13	84	8	539
Russey Keo	287	356	23	10	68	19	763
Dangkao	212	267	12	4	114	42	651
Meanchey	93	2	6	5	41	9	156
Total	745	1177	171	74	501	158	2826*
% of Total	26.4	41.6	6.1	2.6	17.7	5.9	

* 8 missing

App. Receipt = Application Receipt; ComVil = Commune or Village

5B.2.3. Location and Services

Table 5.11 shows the access to Plot/Unit 1 in each district. Some 61.2 percent of the survey plots are located along main paved roads or 2-way access streets, paved or otherwise. Special efforts were made to survey households with more difficult access, and this is reflected in the number of surveyed plots with one-way access (22.4 percent) or bicycle and foot access (16 percent). Although there is not a general survey of plot locations for Phnom Penh in terms of access, the sample is probably biased in favour of property located along main paved roads and 2-way access streets.

Table 5.11: Access to Plot/Unit 1, by District

District	Main Paved Road	2-way Access *	1-way Access*	Bike Access	Foot Access	Total
Daun Penh	69	4	4	7	0	84
Chamkar Mon	166	128	46	66	0	406
Tuol Kork	66	213	81	6	1	367
Russey Keo	38	172	90	69	4	373
Dangkao	15	100	131	66	1	313
Meanchey	28	25	21	46	0	120
Total	382	642	373	260	6	1663
% of Total	25.4	38.6	22.4	15.6	0.03	

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

Households were asked about the utilities and services they receive, including electricity, phone (land line), sewerage and water for cooking. Table 5.12 shows that 61.7 percent of the households in the sample have electricity from the state service. Perhaps not surprisingly, the households in the three urban districts tend to have a higher rate of electricity service than do the peri-urban areas, except for Meanchey, where 84 percent of survey households have state electricity, despite the fact that fewer than half (44.2 percent) of the households are located along main paved roads and 2-way access streets.

Table 5.12: Electricity Services (No. of Households Having Electricity)

District	Main Paved Road	2-way Access*	1-way Access*	Bike Access	Foot Access	Total	% of HH
Daun Penh	69	4	4	7		84	100
Chamkar Mon	166	120	43	49		378	93.1
Tuol Kork	66	213	80	6	1	366	99.7
Russey Keo	2	7	17	12		38	10.2
Dangkao	10	12	18	19		59	18.8
Meanchey	28	11	18	44		101	84.2
Total	341	367	180	137	1	1026	61.7
% of Total	33.2	35.8	17.5	13.4			

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

Fewer households (53.2 percent) have municipal sewage service. As with electricity, one would expect the three urban districts to have a higher percentage of service than the peri-urban areas, and Table 5.13 shows that this is indeed the case. The survey plots in Daun Penh and Chamkar Mon have almost identical rates of electrical and sewage services, while the survey plots in Russey Keo and Dangkao both have low rates for both services. Even though the survey plots in Meanchey have a high coverage rate for electricity, they have a very low rate of coverage for sewage (4.2 percent).

Table 5.13: Sewage Service (No. of Households Having Service)

District	Main Paved Road	2-way Access*	1-way Access*	Bike Access	Foot Access	Total	
							%
Daun Penh	69	4	4	7		84	100
Chamkar Mon	166	124	42	48		380	93.6
Tuol Kork	52	198	69	1	1	321	87.5
Russey Keo	1	11	6	1		19	5.1
Dangkao	14	20	15	27		76	24.3
Meanchey	2	1	0	2		5	4.2
Total	304	358	136	86	1	885	53.2
% of HH	34.4	40.4	15.4	9.7	.1		

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

5B.2.4. Land Use and Value

In this section, some of the key data on plot/unit type and land uses and land values are presented. Because of the expected impact of land titles on housing and property improvements, some information on buildings and housing quality is also presented.

5B.2.4.1. Plot/Unit Types and Uses

Table 5.14 summarises Plots/Units 1 according to consumption quintile and use. At least 88.6 percent of the plots were used only as residences, or as residences along with other uses. The percentage of residential only use declines as consumption increases, while residential/commercial use generally increases along with consumption. The same is also true for mixed uses. One assumes that households with higher consumption levels may have more diversified income sources, as evidenced by a larger share of combined residential and commercial uses as well as mixed uses. In contrast, a greater share of the lower consumption quintile households may have to earn income away from the home.

Table 5.14: Plot/Unit 1 Use (% of Households)

Quintile	Residential	Commercial	Res/Com	Res/Rent	Res/Ag	Mixed	Total Number
1	71.7	.6	14.5	7.2	1.5	4.5	332
2	57.1	1.2	19.2	5.4	5.1	12.0	333
3	58.9	.9	23.4	2.7	5.7	8.4	333
4	54.1	.3	25.2	2.4	5.1	12.9	333
5	53.6	.6	23.8	1.5	5.4	15.1	332
% of Total	59.0	.7	21.2	3.8	4.6	10.6	1663

Land titles are likely to have an indirect impact on land use patterns to the extent that they facilitate more efficient transactions and increase returns on investments. It is possible that in the three urban districts a shift will occur as residential property is converted to commercial and/or rental property, while in the peri-urban areas changes in land use may involve a shift from residential and agricultural uses to commercial or mixed uses. The nature and direction of land use changes in and around Phnom Penh will be highly dependent on the municipality's long-term development strategy. A key component of such a strategy will be clear and enforceable zoning, as discussed in Section 5.1. The data presented in Table 5.15 provide a good basis for assessing these hypotheses in a follow-up study.

Table 5.15: Plot Use, by District (No. of Households)

District	Residential	Commercial	Res/Com	Res/Rent	Res/Ag	Mixed	Total
Daun Penh	46	0	30	0	2	6	84
Chamkar Mon	204	1	112	0	20	69	406
Tuol Kork	252	1	68	4	10	32	367
Russey Keo	215	8	82	34	15	19	373
Dangkao	173	2	40	21	28	49	313
Meanchey	92	0	21	5	1	1	120
Total	982	12	353	64	76	176	1663
% of Total	59.0	.7	21.2	3.8	4.6	10.6	

5B.2.4.2. Land Values²⁰

Respondents were asked how much they would receive if they were to sell their plot (Plot/Unit 1) at the time of the interview. In some cases, they may have overestimated the value of their plot, because bank officials and real estate agents have observed that loan applicants or potential sellers tend to overstate the value of their land when it is in their interest to do so. Other respondents may have underestimated the value of their land, perhaps not completely trusting the purpose and intentions of the interviewers. In any event, the data concerning reported plot values closely conform to expected trends. First, Table 5.16 shows that average plot values in the three urban districts are significantly higher than the averages for the three peri-urban districts. In the case of Daun Penh and Russey Keo, the urban plots are valued at five times the peri-urban plots. In the other districts, the urban plot values are slightly more than double the peri-urban plot values.

Second, as expected, plot values increase along with better access, in part because access to services such as electricity and sewerage is generally easier. Although main paved roads and

²⁰ For the purposes of this report, land values are presented in terms of total USD per plot as reported by respondents, as we are interested in the total value of the plots and the total amounts involved in transactions (i.e., sales, purchases).

2-way access streets both represent two-way access, the reported average value of plots situated along main paved roads is almost double the average reported value of plots situated along either paved or unpaved streets. This is consistent across four of the six districts, and in the other two districts the plots along main paved roads are valued substantially higher than those situated along two-way streets.

Table 5.16: Land Values (USD/plot)

District	Main Paved Road	2-way Access *	1-way Access *	Bicycle	Foot Access	Total	
						No	Ave \$
Daun Penh	125,917	39,500	45,000	18,200		73	109,370
Chamkar Mon	66,163	59,664	32,023	18,131		390	52,715
Tuol Kork	92,226	53,803	19,590	11,250	5000	348	52,106
Russey Keo	54,348	18,837	19,225	14,942	4800	372	21,684
Dangkao	70,867	30,553	19,709	16,261	7000	312	24,878
Meanchey	37,500	27,154	18,024	14,196		120	23,003
Average Value	77,238	40,518	21,226	15,901	5200		40,412
Total HH	363	627	366	253	6		1615 **

* For a vehicle (Please see Survey Questionnaire, Question 2.1.)

** 48 no response

The data also conform closely to expectations when average plot values are analysed according to consumption quintiles. As Table 5.17 shows, the value of the plot steadily increases with the consumption quintile. The average values between the first and fifth quintile range from USD20,108 to USD70,589, while the range between the middle three quintiles is of course somewhat less. This general pattern holds for all districts, except for Chamkar Mon and Dangkao, where the average value dips between quintiles 2 and 3, and quintiles 3 and 4, respectively.

Table 5.17: Reported Plot/Unit Values (USD), by District and Consumption Quintile

District	Quint 1	Quint 2	Quint 3	Quint 4	Quint 5	Total	
						HH	Ave \$
Daun Penh	32,500	82,000	117,500	65,176	139,559	73	109,370
Chamkar Mon	24,378	45,719	41,268	57,820	70,132	390	52,715
Tuol Kork	32,317	39,919	48,404	49,506	74,950	348	52,106
Russey Keo	18,388	18,450	21,260	25,233	37,322	372	21,684
Dangkao	14,163	24,427	29,016	21,952	43,692	312	24,878
Meanchey	21,009	18,000	25,650	20,909	32,500	120	23,003
Average Value	20,108	31,561	37,746	42,818	70,589		40,412
Total HH	328	322	324	323	318		1615 *

* N = 48 no response

5B.2.5. Buildings and Housing

Data on the number, use and quality of buildings on the survey plot were also collected. This information will be important for assessing potential land-titling impacts according to the hypothesis that people will respond to more secure tenure by investing in housing and building improvements (which may include more buildings), and may use titles as collateral for credit for making improvements. Table 5.18 shows that many plots, about 21.5 percent, have more than one building. In this section, only a small sample of the available data for the primary building is presented.

Table 5.18: No. of Buildings per Plot/Unit 1, by Consumption Quintile

Quintile	1	2	3	4	5	6	Total
1	269	48	12	1	0	1	331
2	255	67	8	2	1	0	333
3	252	55	19	3	2	2	333
4	264	49	15	5	0	0	333
5	263	44	11	7	3	3	330
Total	1303	263	65	18	6	5	1660*

* 3 missing

With regard to building quality, information was collected on the materials used for roofing, walls and floors. Since roofing is generally considered a good indicator of household consumption level and well-being, one would expect to find a higher proportion of low-cost roofing among the lower quintiles. Over time, the overall quality of roofing would be expected to change, houses at each consumption level upgrading their roofing material, although upper quintile households may remain static because they are already using better materials. The data on roofing material, presented in Table 5.19, suggest that this assumption may be misleading. Although the quality of roofing generally does improve with the quintile level, there is a higher than expected level of zinc roofing in the upper two quintiles. Thus roofing may not be a useful indicator of household consumption levels after all, at least in urban areas, and as a result may not be a useful indicator of land-titling impacts.

Table 5.19: Housing Quality, Consumption Quintile by Roofing Type

Quintile	Thatch/Tent	Zinc sheets	Tile	Wood/plywood	Concrete	Total
1	1	233	73	3	21	331
2	1	196	94	5	37	333
3	1	187	83	5	57	333
4	0	188	88	8	48	332
5	0	144	106	14	66	330
Total	3	948	444	35	229	1659*

* 4 missing

5B.3. Land Transactions

This section presents some of the key data on land purchases and sales and the documentation used to facilitate and validate such transactions. Given the rapidly expanding land markets throughout the municipality and the role that land titles are expected to play in facilitating more efficient land transfers through the official registry, this section is especially germane to assessing the impact of land-titling in urban and peri-urban areas.

5B.3.1. Purchases

As observed above, 1470 of all 2834 plots (52.3 percent) covered in the survey were acquired through purchase. As shown in Table 5.20, of these plots, 631 (42.9 percent) were purchased during 2000–05. During this period the number of plot purchases increased steadily with consumption quintile. For example, households in quintiles 1 and 2 purchased 11.7 and 17.1 percent of the plots, respectively, while households in quintiles 4 and 5 purchased 22.3 and 29.8 percent. Comparing the first three years of this period to the second three years, it appears that the rate of land purchases is accelerating across all consumption quintiles. Land accumulation through purchase appears to be accelerating faster in the upper two quintiles than in the lower two quintiles.

Table 5.20: Plot Purchases 2000–05, by Quintile (All Plots)

Quintile	2000		2001		2002		2003		2004		2005		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	7	9.5	11	14.9	10	1.35	16	21.6	14	18.9	16	21.6	74	11.7
2	17	15.7	11	10.2	14	13.0	22	20.4	28	25.9	16	14.8	108	17.1
3	16	13.3	10	8.3	20	16.6	23	19.2	29	24.2	22	18.3	120	19.0
4	15	10.6	12	8.5	17	12.1	24	17.0	47	33.3	26	18.4	141	22.3
5	29	15.4	11	5.9	19	10.1	32	17.0	49	26.1	48	25.5	188	29.8
Total	84	13.3	55	8.7	80	12.7	117	18.5	167	26.5	128	20.3	631	

As for the location of all plot purchases during 2000–05, Table 5.21 shows that 52.9 percent took place in the peri-urban districts. Daun Penh and Meanchey have the lowest percentage of purchased plots. For Daun Penh, this is probably largely due to the high value of plots, while in Meanchey, where the average value of land is much lower, it could reflect a low level of services and poor access.

Table 5.21: Land Purchases (2000–05), by District and Consumption Quintile (All Plots)

District	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Daun Penh			1	.2	5	.8	9	1.4	24	3.8	39	6.2
Chamkar Mon	3	.3	21	3.3	10	1.6	28	4.4	51	8.1	113	17.9
Tuol Kork	9	1.4	21	3.3	25	4.0	38	6.0	52	8.2	145	23.0
Russey Keo	33	5.2	41	6.5	26	4.1	38	6.0	14	2.2	152	24.1
Dangkao	21	3.3	20	3.2	37	5.9	24	3.8	44	7.0	146	23.1
Meanchey	8	1.3	4	.6	17	2.7	4	.6	3	.5	36	5.7
Total	74	11.7	108	17.1	120	19.0	141	22.3	188	29.8	631	100

Table 5.22 shows that of the 631 all plot purchases in 2000–05, a total of 412 (65.3 percent) occurred in the last three years. Of this number, 221 (53.6 percent) were purchased by households in the three peri-urban districts, mostly in Russey Keo and Dangkao. The remaining 46.4 percent of purchases during the three-year period 2003–05 were purchased by households in the two urban districts of Chamkar Mon and Tuol Kork. The plot purchases in Daun Penh all occurred during 2000–02. Somewhat surprisingly, there were fewer property purchases reported in 2005 than in 2003 and 2004, except in Dangkao, where there was a 36.8 percent increase.

Table 5.22: Land Purchases (2000–05), by District (All Plots)

	2000	2001	2002	2003	2004	2005	Total
Daun Penh	8	3	2	10	9	7	39
Chamkar Mon	15	14	12	25	33	14	113
Tuol Kork	19	14	19	28	41	24	145
Russey Keo	16	18	27	29	37	25	152
Dangkao	19	3	17	17	38	52	146
Meanchey	7	3	3	8	9	6	36
Total	84	55	80	117	167	128	631
% of Total	13.3	8.7	12.7	18.5	26.5	20.3	100

Of the 1490 reported land purchases, a total of 278 (18.7 percent) took place during 1980–89, including as many as 45 in both 1985 and 1989. Although the data for this period almost certainly contain some reporting errors, the surprisingly large number suggests there was a nascent land market in the Phnom Penh area even before 1989, when the government reintroduced private property rights through Instruction Number 3, along with Sub-decree 25. Among other provisions, the sub-decree established ownership rights for residential land of up to 2000 sq. metres and possession rights for cultivated land of up to five hectares. The 1992 Land Law then provided for land tenure certificates that confirmed occupancy and use rights, although allowing only possession rights rather than ownership in rural areas.

Table 5.23 shows the reported average plot purchase price according to consumption quintile and district. Overall, the purchase price per plot increases with the consumption quintile. This conforms to the expected pattern that those better off would tend to pay more per plot. This is also consistent across all locations, except for quintile 2 in Meanchey and Quintile 4 in Daun Penh. The pattern according to location also conforms to expectations, as the purchase price per plot in the three urban districts is decidedly higher than the price in the peri-urban districts. This is consistent across all quintiles.

Table 5.23: Average Price of Land Purchased (2000–05), by District and Consumption Quintile (USD/Plot)

District	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Daun Penh		40,000	52,800	25,388	98,308	75,434
Chamkar Mon	8250	19,638	11,130	23,611	22,997	21,198
Tuol Kork	11,378	18,424	18,908	18,652	33,216	23,157
Russey Keo	1907	2814	2871	7657	7350	4284
Dangkao	4743	4423	6476	5152	9446	6643
Meanchey	2503	10250	6300	5988	7333	5946
Total	4103	10,106	10,709	14,368	30,916	16,669

It is interesting to compare Table 5.23 with Table 5.24, which shows the estimated current value of each plot at the time of the interview. The difference between the reported purchase price and the current (November 2005) estimated value is quite remarkable. Across each consumption quintile and district, the current estimated plot value is considerably higher than the reported purchase price. While this data could reflect understated purchase prices and/or inflated estimates of value, the data provide a clear example of how people in Phnom Penh perceive the exploding land values in the city. Of particular interest is the current estimated value for land in peri-urban areas, which are well over double the reported purchase price.

Table 5.24: Estimated Value of Land Purchased (2000–05), by District and Quintile (USD/Plot)

District	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Daun Penh		42,000	160,000	32,750	129,056	105,387
Chamkar Mon	16,700	34,000	19,889	35,138	33,336	32,310
Tuol Kork	15,125	33,912	29,667	29,039	74,213	44,784
Russey Keo	10,424	9,457	10,320	22,229	24,314	14,403
Dangkao	10,255	12,219	20,024	13,929	38,981	22,383
Meanchey	7375	21,125	14,397	10,250	15,667	13,229
Total	10,830	19,636	23,919	25,356	54,522	30,875

5B.3.2. Land Sales

Almost exactly half (831) of the survey households reported selling a total of 1017 plots of land since 1980, an average of 1.22 per selling household. The percentage selling land since 1980 was remarkably consistent across all consumption quintiles. Just over half of all sales took place since 1997, while one-third (33.6 percent) occurred since 2001. About 21.8 percent occurred in 2004–05. As with the purchase data, the land sales data suggest that the pace of land transactions is accelerating in and around Phnom Penh.

About 53.3 percent (443) of the plot sales took place during 2000–05. The distribution of sales according to district and consumption quintile is shown in Table 5.25. Seventy-two percent of all reported land sales during this period took place in the peri-urban districts, mostly in Russey Keo and Dangkao, while the remaining 28 percent occurred in the three urban districts, mostly in Chamkar Mon and Tuol Kork. Meanwhile, 49.4 percent of all plots were sold by households in quintiles 4 and 5, while 32.7 percent of plots were sold by quintiles 1 and 2.

Table 5.25: Land Sales (2000–05), by District and Quintile

District	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Daun Penh	0		1	.2	1	.2	2	.5	9	2.0	13	2.9
Chamkar Mon	2	.5	5	1.1	8	1.8	13	2.9	11	2.5	39	8.8
Tuol Kork	7	1.6	11	2.5	10	2.3	18	4.1	26	5.9	72	16.3
Russey Keo	32	7.2	32	7.2	19	4.3	39	8.8	23	5.2	145	32.7
Dangkao	24	5.4	23	5.2	31	7.0	31	7.0	39	8.8	148	33.4
Meanchey	6	1.4	2	.5	10	2.3	6	1.4	2	.5	26	5.9
Total	71	16.0	74	16.7	79	17.8	109	24.6	110	24.8	443	100

Table 5.26 shows that the reported value of plots sold also varied according to location, the three urban districts showing a significantly higher value per plot than the three peri-urban districts. The value of plots sold also generally increases across consumption quintiles, particularly from quintiles 3 through 5. The reported average value of plots purchased and plots sold varies with the year of transaction and the location.

Table 5.26: Land Sales (2000–05), by District and Consumption Quintile (USD/Plot)

District	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Average
Daun Penh		8400	50,000	70,000	78,250	68,700
Chamkar Mon	12,500	20,000	7438	16,885	40,214	21,701
Tuol Kork	8071	22,227	19,000	40,761	45,288	33,364
Russey Keo	4961	4740	7212	9490	9585	7159
Dangkao	4326	6904	8956	9522	16,692	10,043
Meanchey	5100	4500	12,070	13,167	21,500	10,858
Average	5277	9086	10,568	16,858	34,094	16,862
Total No.	71	74	79	109	110	443

5B.3.3. Transaction Documentation

Table 5.27 shows that a significant proportion of land sales (92.6 percent) were facilitated by changing names on the application receipts. A majority (59.4 percent) of these sales were

documented at the commune level, while 19.7 and 13.3 percent were documented at the village and district level, respectively. The high percentage of commune documentation across all quintiles may reflect the fact that the commune is viewed as an important locus of local governmental authority, at least for land transactions. It is also interesting, however, that the share of sales documented at the village level steadily decreases according to quintile, while steadily increasing at the district level. This suggests that transaction costs associated with documentation may be an important factor in determining how people document land transactions, with the lower quintile groups documenting more frequently locally, while a greater percentage of upper quintile households document with the district.

Table 5.27: Mode of Documentation of Land Sales, by Quintile (percent)

Quintile	Village	Commune	District	Province	Title/MLUPC	Contract	Total No.
1	33.1	48.9	8.4	1.1	0	8.4	178
2	24.1	64.6	6.2	1.0	0	4.1	195
3	24.6	53.8	15.9	2.1	0	3.6	195
4	12.0	67.0	13.4	1.9	.1	5.3	209
5	8.5	60.9	20.9	5.1	.2	3.8	235
Total No.	199	601	135	24	3	50	1012*
% of total	19.7	59.4	13.3	2.4	0.3	4.9	

* 5 missing

This observation suggests that if, as expected, land sales increase among the survey population after titles are issued, people may still continue to document transactions locally in ways that are not really legal. There is anecdotal evidence of this occurring already in areas where titles have been issued (e.g., Markussen, 2007) as well as documented evidence in areas such as Prey Nob in Sihanoukville (ADI, 2007). This is a matter of fundamental importance because one of the key reasons for undertaking systematic land titling was to facilitate land transfers through the official registry. Transactions that take place outside the official registry will contribute to continued conflicts over land and represent a major source of lost revenue for the government.

5.4. Conflicts

Households were asked, “Have you ever had conflicts over land or other property since the national election of 2003”? Somewhat surprisingly, only 36 instances of conflict were reported, about 2.2 percent of the Phnom Penh survey households, during the period in question July 2003–December 2005). This represents 1.5 percent of all the plots covered in the survey sample, which is only slightly higher than the 1.3 percent of conflicted plots in the rural survey sample. In an increasingly active land market in which values are rapidly climbing, one would expect more conflicts in and around Phnom Penh. There are, however, several reasons why this figure may not be too far off within the survey population. One is the fact that the LMAP has tended initially to target titling efforts where there is less conflict over land. Moreover, in many of the areas of the municipality, particularly where boundaries have been secured by fencing, many land conflicts may well have been resolved prior to 2003. That being said, it is also entirely possible that land-related conflicts have been under-reported within the survey population.

Within the 36 cases, there is no discernible pattern over time. Almost two-thirds of the cases involved residential land, while about one-third involved agricultural land. More than 60 percent of the households reported seeking resolution from either the village chief or the commune leader, while 10 percent of the cases were resolved with the help of neighbours or through agreement. This suggests, albeit not with any degree of certainty given the small sample, a preference for managing conflicts locally. However, fewer than half of the cases

(17) were reported to have been resolved, and only one-third of the households reported satisfaction with the result.

This limited number of cases of conflict will probably not be useful for measuring the extent, if any, to which land titles will have helped reduce land conflicts in a follow-up impact study. In addition to asking people about land conflicts experienced since receiving titles, interviewers will also need to ask households more specifically about their perceptions concerning the role that titles may or may not have played in reducing conflicts. It will also be important to inquire about the role that land titles have played in resolving conflicts. For example, in the event that conflicts arise over land that has been titled, how have the conflicts been resolved? This suggests that semi-structured questions must be added to the survey in order to allow for more probing follow-up. Most important are questions concerning the role the courts and local authorities play in enforcing land titles in cases of conflict.

5B.5. Credit

Of the 1663 households covered in the survey, 359 reported obtaining a total of 501 loans during the period since the national election of 2003. Although the number of loans per borrowing household, 1.40, is similar to the ratio in the rural survey, the percentage of surveyed households reporting credit activity, about 21.6 percent, is much lower than the 54.7 found in the rural survey. It is also interesting that the urban survey covered a period of about two and a half years, while the rural survey covered only the six months prior to the survey (in early 2004). By comparison, the small sample in Sihanoukville found that 31 households out of 99, or 31.3 percent, had obtained 41 loans in cash or gold, a ratio of about 1.32 loans per borrowing household. The Sihanoukville survey also covered a six-month period prior to the interviews in early 2004.

There are several possible reasons for this pattern. One is that the number of loans may be under-reported, just as people may under-report their income or consumption. However, one might expect that as households are generally better off in urban areas than in rural areas, they may have less need to borrow. In this regard, the pattern in loan activity across the different consumption levels is interesting. Table 5.28 shows that the percentage of households in each quintile that report any credit activity steadily decreases as consumption increases. For example, quintile 1 households accounted for 26.9 percent of the borrowing, while quintile 5 households accounted for only 14.0 percent.

According to the research hypothesis, land titles are expected to stimulate increased borrowing from formal sources. It is likely that the trends discussed above will accelerate the actual numbers of loans, with lower quintile households continuing to borrow at an even more rapid rate than upper quintile households. The upper quintile groups, however, are likely to borrow larger amounts.

Table 5.28: Credit Sources, by Consumption Quintile

Source	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Relative	28	20.7	31	24.8	28	30.8	36	45.0	25	35.7	148	29.5
Friend	3	2.2	13	10.4	3	3.3	8	10.0	5	7.1	32	6.4
Moneylender	28	20.7	20	16.0	15	16.5	16	20.0	17	24.3	96	19.2
NGO	6	4.4	8	6.4	9	9.9	0		0		23	4.6
MFI	8	5.9	9	7.2	2	2.2	3	3.8	5	7.1	27	5.4
Acleda	62	45.9	44	35.2	34	37.4	17	21.3	13	18.6	170	33.9
Other	0		0		0		0		5	1.9	5	1.0
Total	135	26.9	125	25.0	91	18.1	80	16.0	70	14.0	501	100

Table 5.29 also shows that credit activity, as measured in the number of loans, increased each year in each consumption category during 2003–05. Of particular interest is the fact that just over half (50.8 percent) of the loans reported during this period occurred in 2005.

Table 5.29: Credit Activity (2003–05), by Quintile

Quintile	2003		2004		2005		Total	
	No.	%	No.	%	No.	%	Loans	HH
1	30	22.2	29	21.5	76	56.3	135	332
2	19	15.2	40	32.0	66	52.8	125	333
3	21	23.3	21	23.3	47	52.2	89	333
4	15	18.8	31	38.8	33	41.3	79	333
5	18	25.7	21	30.0	31	44.3	70	332
Total	103	20.7	142	28.5	253	50.8	498*	1663

* 3 missing

Table 5.28 also shows the distribution of loans according to source. In terms of potential land-titling impacts, it is important to note that although family and friends combined provide 35.9 percent of all loans, these sources are closely followed by Aceda Bank with 33.9 percent. Moneylenders account for 19.2 percent. Only a few years ago the formal banking sector would have accounted for a much lower percentage of loans, while the share for relatives, friends and moneylenders would have been much greater. NGOs and MFIs account for another 10 percent of loans for the formal sector. The research hypothesis predicts that land titles will increase household access to formal commercial loans. If this is the case, we should observe an increase in the share of loans from Aceda and other commercial banks. Based on discussions with bank loan officers, this shift may already be under way.

Table 5.30 shows the distribution of loan uses across consumption quintiles. There are several aspects of the data that bear closer scrutiny, especially regarding key land-titling impact indicators such as business activity, real estate and housing and farming. A total of 35.8 percent of the loans were used for business-related purposes. Real estate, home improvements and housing construction together accounted for another 20 percent of all reported loans, while farming accounted for 7 percent. Food, health, and education accounted for another 22.8 percent of loans, while loan repayment and transport accounted for 12.4 percent.

Table 5.30: Credit Use, by Consumption Quintile (percent of loans)

Credit Use	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	
						No.	%
Farming	25.7	40.0	22.9	8.6	2.9	35	7.0
Business Start-up	16.7	38.3	20.0	11.7	13.3	60	12.0
Business Expansion	15.2	22.8	13.9	24.1	24.1	79	15.8
Business Input	32.5	17.5	20.0	22.5	7.5	40	8.0
Food	45.7	28.7	8.6	14.3	2.9	35	7.0
Health	31.7	18.3	16.7	13.3	20.0	60	12.0
Education	5.3	42.1	31.6	15.8	5.3	19	3.8
Real Estate	12.9	38.7	19.4	6.5	22.6	31	6.2
Loan Repay	41.7	12.5	16.7	16.7	12.5	24	4.8
Home Improve	35.5	16.1	16.1	12.9	19.4	31	6.2
Home Constr.	31.6	10.5	13.2	31.6	13.2	38	7.6
Transport	31.6	15.8	36.8	10.5	5.3	19	3.8
Other	41.4	24.1	17.2	20.7	10.3	29	5.8
Total	135	125	90	80	70	500 *	100
% of Total	27.0	25.0	18.0	16.0	14.0		

* 1 missing

Again, the research hypotheses predict that the volume of commercial loans will increase as households use their land titles as collateral for bank credit. The research hypotheses explicitly indicate that two of the most visible areas are likely to be business and the housing and real estate sector. Recent discussions with banking and realty agents suggest that this is indeed likely to be the case. For example, although it appears people are continuing to use own resources for business start-ups, there has been an observed increase in the number of loans for business operations and expansion. This is attributed to the fact that people are less willing to borrow at the outset because of the perceived risks, but as their business shows signs of stability and profitability, they are more willing to obtain credit for expansion. There is also anecdotal evidence of an increase in borrowing for real estate, including speculation, and housing investments. This is likely to continue at least for several years as land values will continue increasing in the near to medium term. As a result, the share of loans for these two sectors is likely to increase, while the shares for other sectors will decrease. It is possible that the percentage of loans for farming will decrease along with shifts in land use patterns away from agriculture in the direction of residential and commercial or industrial uses.

Finally, it should also be noted that another indicator of the level of loan activity is the average amount of each loan. The research hypothesis predicts that as people increase the number of commercial bank loans they obtain using land titles as collateral, the use of the loan will shift along with the amount. If this is the case, then the average amount of loans secured with land titles should increase over time, bearing in mind that increasing land values will increase the amount of lending for which people are eligible. These trends may be fairly consistent across all quintiles, which suggests that those with more valuable land may benefit more from land-titling in this regard.

5B.6. Small and Medium Enterprises

Of the survey group, 439 households (28.4 percent) reported owning 470 small or medium businesses, 1.09 SMEs per owner. About 60.7 percent (286) of the SMEs were owned by female heads of households. Households in the uppermost quintile owned almost 23 percent (107) of the businesses, while 12.5 percent of the businesses were owned by the lowest quintile. The top two quintiles accounted for 47.6 percent (224) of the businesses, while the lower two quintiles accounted for 31.6 percent (149). Almost 58 percent of the SMEs have been started since 2000. Table 5.31 shows that the number of business start-ups has increased each year since 2001. Moreover, the increases have been steady in all quintiles, except for the top one.

Table 5.31: SME Start-ups, by Year and Quintile

Year	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	% of Total
2000	5	4	8	12	12	41	15.0
2001	2	5	4	7	4	22	8.1
2002	7	4	5	8	6	30	11.0
2003	9	9	14	9	10	51	18.7
2004	5	11	13	15	9	53	19.4
2005	17	14	17	20	8	76	27.8
Total	45	47	61	71	49	273	
% of Total	16.5	17.2	22.3	26.0	17.9		

5B.6.1. SME Financing

Table 5.32 identifies 479 sources of financing for SMEs reported by the Phnom Penh survey group. Almost 92 percent of small business financing comes from own resources and savings, while family makes up 6.1 percent of the sources. So far both informal moneylenders and the formal commercial sector appear to play practically no role in financing SMEs. Some 95.5 percent of new businesses were started with own resources or savings, while 88.2 percent of

the businesses were sustained with own resources and 76.1 percent of expansions came from own resources.

Table 5.32: Small Business Financing, by Sources and Consumption Quintile

Quintile	Own Resources	Family	Moneylender	Private Bank	Other	Total
1	60	0	0	0	0	60
2	84	5	0	1	0	90
3	92	7	1	1	1	102
4	106	8	0	1	1	116
5	98	9	0	1	3	111
Total	440	29	1	4	5	479
% of Total	91.9	6.1	.2	.8	1.0	

These data closely parallel the information from the smaller survey in Sihanoukville's Sangkat 2 in 2004, which found that 93.0 percent of the financial sources for business start-ups involved own resources, which included family resources. This also closely parallels Kang's 2005 findings, in which 84.6 percent of business start-ups were financed with own resources. It is also interesting that in the rural land-titling baseline survey, more than 94.0 percent of agricultural input expenditures were purchased with own sources. The data collected in the Phnom Penh survey appear to be consistent with other surveys that suggest productive investments in both rural and urban sectors are still largely made with own resources and savings, and that there is as yet little commercial borrowing for such investments.

This observation raises the question of why so many small business owners continue to rely on own resources and family to finance business start-ups and maintain or expand businesses. Owners were asked to rank the degree to which they agreed with a particular reason for not seeking a loan. More than 81 percent of respondents indicated that they either "strongly agreed" or "somewhat agreed" with the reason that expected profit would not be higher than the interest. About 44.2 percent indicated that they strongly or somewhat agreed that collateral requirements inhibited them from seeking commercial loans, while 51.3 percent strongly or somewhat disagreed. About 30.5 percent also indicated that they strongly or somewhat agreed that they have been refused a loan because of a lack of collateral. Other reasons for not seeking a loan included complicated bank procedures (33.7 percent), informal payments (30.8 percent) and being uninformed about banking requirements (29.4 percent).

While problems associated with collateral appear to play a role in some people's decisions not to seek a loan, the data clearly suggest that small business owners also perceive other important constraints on obtaining loans. Business profitability relative to interest rates is especially important. This suggests that while land titles may improve access to commercial loans by providing collateral, other constraints must also be addressed in order for the collateral effects of land titles to be fully realised.

There is a seeming discrepancy in the data concerning credit uses (Table 5.30) and the data concerning SME financing. The credit data above show a total of 179 loans during the period 2003–05 for business activities, while the data for SME financing show an almost negligible number of loans for any aspect of the SMEs covered in the survey. One might expect to find a higher percentage of loans from commercial sources in the SME sector. However, SMEs are a sub-sector of the business activities referred to in the above discussion. The number of business expansions referred to in the credit discussion, for example, may refer to businesses other than SMEs.²¹

²¹ For a more complete discussion, see Ballard and Phim (2007).

5B.6.2. SME Employment

The survey data suggest that SMEs are a potentially important source of employment in Phnom Penh. Table 5.33 shows that the number of employees, including permanent employees, daily wage labour and employed family members, steadily increases with the consumption quintile of the owner. It is also important that the total number of employees, including each labour category, tends to increase over time. The total number of employees at the time of start-up for 436 SMEs was 1037, an average of 2.38 employees per SME, while the number of employees at the time of the interview was 1364, an average of 3.13. The employment impact of land titles therefore may be significant if titles help stimulate increased SME investment and expansion by promoting a more secure tenure and providing access to more affordable credit.

Table 5.33: SME Employment, by Type and Consumption Quintile

Quintile	No. of Businesses	Permanent		Daily Labour		Family Members		Total	
		Start*	Current	Start	Current	Start	Current	Start	Current
1	55	3.9	2.2	8.3	8.3	107.3	118.3	120	129
2	84	4.2	15.1	9.2	19.3	109.2	164.6	123	199
3	92	38.6	56.1	13.8	39.6	194.1	215.3	247	311
4	104	80.1	92.6	5.2	9.4	210.1	222.6	295	325
5	101	112.1	144.4	22.2	48.5	115.1	208.1	362	401
Total	436	239	310	59	125	739	929	1037	1364

* Fractional figures refer to average number of employees per SME.

According to recent discussions with banking officials, the number of loan applications and grants has increased dramatically over the past year, especially for business expansions, including SMEs. According to anecdotal evidence, investors are still reluctant to borrow from commercial banks for business start-ups because they are not willing to take loans when they are unsure of the return on the investment. As a result, business start-ups continue to rely primarily on own sources and savings as well as family and friends. However, once the business is up and running and the owner sees a steady and predictable flow of returns, he or she may be more willing to obtain a commercial loan to expand.

Such shifts in attitudes concerning commercial banks appear to be a relatively recent phenomenon. As the business climate in Cambodia improves and business investors develop more trust in the banking sector, it is likely that the trend toward increased demand for credit for a variety of purposes will continue. Because commercial banks require “hard” land titles to secure loans, it is quite likely that land titles will contribute to increased consumer and business borrowing. However, such an increase probably could not be solely attributable to land titles, but to the convergence of several factors to form a virtuous cycle of development and growth. These variables would include increased tenure security via land titles, business experience and skill (i.e., entrepreneurship), political stability and security, banks that want to lend and know how to do so and people’s trust in banks. The development of land and credit markets and businesses all seem to rely on many of the same factors involving trust in institutions. Once these factors are reasonably in place, land and credit markets may function more efficiently, thus enabling entrepreneurs to predict returns with greater accuracy and reliability.

5B.7. Expected Benefits of Land Titling

Table 5.34 shows that more than 78 percent of respondents believed tenure security is the primary benefit from land titles. Assuming that land conflicts are also a function of insecure tenure, it then appears that 85 percent expected the primary benefit to concern improved

tenure security. Only 8.8 percent of respondents expected the primary benefit of land titles to be improved access to formal credit. If “facilitating transfers” refers to improved efficiency in registering transactions, and “facilitating sales” involves making the property more attractive to potential buyers, it appears that about 5.7 percent of respondents expected the primary benefit of titles to involve land transactions and transfers.

Table 5.34: Expected Benefits, by Consumption Quintile

Quintile	Secure Tenure	End Conflict	Obtain Loan	Facilitate Transfer	Facilitate Sale	Nothing Different	Total
1	274	11	33	6	7	1	332
2	254	22	30	10	16	1	333
3	247	33	24	16	12	1	333
4	256	29	29	8	8	3	333
5	267	22	31	6	6	0	332
Total	1298	117	147	46	49	6	1663
% of Total	78.1	7.0	8.8	2.8	2.9	.4	

The importance of land tenure security as an expected benefit is underscored by the responses concerning expected secondary benefits. About 40.7 percent of respondents identified ending conflict as the second most important benefit, while another 13.4 percent identified “stability in owning the land”, for a total of 54.1 percent of responses that concerned land tenure security. About 20.3 percent identified “ease in borrowing money” as the second most important benefit, which suggests that access to credit is an important consideration for many people. Another 12.7 identified “ease in transferring inheritance” and 11.4 percent “ease of selling”, for a total of 24.1 percent of responses that concerned improved facilities for land transactions.

Another survey conducted in 2006 found that 97 percent of respondents perceived “improved tenure, as well as a reduction of land disputes” as benefits of the land-titling programme, while 77 percent of respondents reported a reduction in the number of disputes since land titles were issued (Deutsch, 2006). Although the sample was rather small, 309 households in all, and spread over both rural and urban areas, including Phnom Penh, the data also suggested that people expect land titles to provide better security of tenure, a perception that is consistent with urban baseline survey data. Only about 20 percent of the respondents reported making improvements on or upgrading their property, “at least in the short term”. This suggests that there are other intervening factors that influence a household’s decision to improve or invest in land and housing. In other words, secure titles may be necessary in the long run, but they are not sufficient on their own to stimulate investments in real estate and housing.

5B.8. Summary: Expected Land-Titling Impacts in Phnom Penh

The expected land-titling benefits in Phnom Penh must be understood in the wider context of the municipality’s rapid growth and longer-term development plans. The rapid growth of the real estate and housing markets, the expanding business sector, including SMEs and FDI, along with the expanding consumer loans, home mortgages and commercial investments, suggest that consumer and business confidence is high in the short to medium term. Therefore the introduction of the LMAP systematic land-titling programme appears to be quite timely in terms of promoting urban economic growth. Given the wide disparities in wealth, however, the impact of land titles on economic growth must also be understood within the context of expected social impacts, primarily with respect to poverty reduction, equity and gender.

The expected results of land titles and their associated tenure security include investments in land improvement and housing, investments in business start-ups and expansion, improved access to commercial credit, reduced conflicts over land and property, more efficient land markets that allocate land to more economically productive uses, increased use of the official registry to facilitate land transactions, increased revenues for government from land sales taxes and potential property taxes and, finally, poverty reduction. The recent trends in the key measurement indicators suggest that land titles are likely to have an important impact on many of these areas, and will therefore strengthen the institutional framework to sustain Cambodia's current growth.

Secure tenure is expected to stimulate investment in housing and home improvements. Lower quintile households may make modest improvements according to available resources, capacity to borrow and location of land relative to transport and services. Such activities can be measured by the quality of building materials and the extent of improvements. Upper quintile households, on the other hand, may have already made improvements in their housing, although they may add or improve other buildings on their plots. These households might instead purchase additional land for either productive or speculative purposes. They may also invest in housing complexes, which would increase the overall supply of housing. The distribution of such housing would depend on the price of individual units and rental markets. This is a matter of particular importance for the poor because access to good affordable housing is a key component of poverty reduction efforts in urban areas. Therefore it will also be important to monitor housing rental prices throughout the municipality.

Land titles may have an indirect impact on land use patterns to the extent they facilitate more efficient transactions that provide greater returns on investments. It is possible that in the three urban districts a shift will occur as residential property is converted to commercial or rental property, while in the peri-urban areas changes in land use patterns may involve a shift from residential and agricultural uses to commercial and industrial uses. The nature and direction of land use changes in and around Phnom Penh will also be highly dependent on the municipality's long-term development strategy. A key component of the strategy will be transparent land use planning and enforceable zoning.

Transactions will be the primary mode of land acquisition, and hence of land redistribution, throughout the municipality. As a result, the share of land acquired through state allocation is likely to decline, perhaps sharply, unless some social land concession mechanism is established. Such shifts will not be the direct result of land titles, but rather the result of expanding land markets for productive and speculative investment. Land-titling, however, will surely facilitate the process by reducing the transaction costs associated with contractual exchanges. As a result, land titles will also serve as the key institutional mechanism through which sufficient land assets can be mobilised for medium and large-scale development projects.

The degree to which such transactions will be recorded with the official registry is another matter. The survey data show people rely primarily on documents that are not legal in terms of validating ownership. There is anecdotal evidence that people continue to use such documents to validate land transactions at the village or commune level even after the issuance of the LMAP titles. This is of fundamental importance because a key reason for undertaking systematic land titling has been to facilitate land transfers through the official registry. Transactions that take place outside the official registry will also contribute to continued conflicts over land and represent a major source of lost revenue for the government.

The limited number of cases of conflict reported in the survey will not be useful for measuring the extent to which land titles will reduce land conflicts. In the follow-up survey, interviewees will need to be asked more specifically about their perceptions of the role land titles may or may not have played in reducing conflicts. It will be especially important to inquire about the role that land titles have played in resolving conflicts that arise after titles

were issued. Another important line of inquiry in this regard will concern the role the courts play in enforcing land titles in cases of conflict.

The research hypotheses predict that the volume of commercial loans will increase as households use land titles as collateral for bank credit. Two of the most visible areas of impact are likely to be housing and real estate, as well as business. Although it appears that people still use own resources for business start-ups, there is anecdotal evidence of a recent increase in the number of loans for business operations and expansion. The indirect employment impact of land titles may be significant if they help stimulate increased investment in business start-ups and expansions.

There is also evidence of an upsurge in borrowing for real estate, including speculation, and housing investments. Land titles are expected to sustain, if not accelerate, these trends in the near to medium term. As a result, the number of loans is expected to increase along with the average amount of loans. The use of loans is likely to shift as well as more people borrow from commercial banks. These trends may be fairly consistent across quintile groups, suggesting that upper quintile households may benefit more from titles than lower ones because the higher value of their land will make them eligible for larger loans.

The research hypotheses predict that land titles will have a wide range of impacts on gender-related matters pertaining to land. Many indicators identified in the rural baseline survey, such as land holdings and access to affordable credit, are also applicable to assessing the impact of land-titling on gender in urban and peri-urban areas. Other indicators include investments in housing and business start-ups and expansion. It is expected that female-headed households will obtain an increased number of loans that are used for investing in housing and business improvements. However, the rate at which female-headed households obtain loans may depend on a variety of circumstances, including household assets.

The research hypotheses also predict that women's tenure security will be strengthened. One way to assess this will be to examine the outcome of cases involving the death of a husband or divorce and the extent to which the spouse's or widow's land rights have been upheld. Another way to assess this will be to examine cases involving households headed by single women. While household surveys may enable researchers to count the number of such cases, a qualitative approach will also be required to understand better the social and legal dynamics of such cases.

The data collected in the Phnom Penh survey largely conformed to expected trends and patterns and therefore appear to be reliable. Only in a few instances, such as the number of upper quintile households using zinc roofing and the surprisingly low number of reported land-related conflicts, did the data show questionable or puzzling results. More rigorous efforts concerning land and building valuation techniques and procedures should be employed in the follow-up survey. It is suggested that MLMUPC personnel familiar with land valuation techniques be more involved in both helping train field enumerators and helping oversee quality control of valuation in the field. Most importantly, the follow-up survey should incorporate qualitative research tools in order to provide more substance and texture to the household data, because many of the important nuances concerning the social and economic impacts of land titles cannot be captured well by a standard household survey.

Chapter 6.

Siem Reap Baseline Survey

This section concerns the survey that was conducted in Siem Reap district from 5 to 17 December 2005. It provides an overview of some of the key aspects of Siem Reap district and city, including locational and demographic features, tourism development, business and SME development, land transactions and the role of the Apsara Authority²² in land use management. The second part of this section discusses the Siem Reap baseline survey data from Sala Kamraeuk and Siem Reap communes, following the same outline used above in presenting the Phnom Penh material. A summary of the key observations from the Siem Reap survey concludes this section.

6A.0. Background Overview²³

Siem Reap district is situated in the centre of Siem Reap province in Cambodia's north-west. The economy of Siem Reap town and the surrounding area is largely driven by rapidly expanding tourism centred on Angkor Wat and other ancient temple sites in the area. The residential population of the district in 2004 was estimated to be about 139,000, with an additional 16,000 who commuted from surrounding areas to work in tourism and other activities. Planners estimate that by 2020 the population may be as high as 211,000, with as many as 65,000 additional commuters. A great deal of this population growth will be fuelled by migrants seeking employment in the tourism industry. The scale of recent migration is reflected in the fact that the population of Siem Reap was about 50,000 in the early 1990s, while the estimated population of Angkor Park was 20,000 in 1994 and has been recently estimated at 100,000.

According to the JICA draft master plan (2004), Siem Reap district comprises three types of area: urban, rural/heritage and around the Tonle Sap Lake. The urban area consists of an urbanised area and an urbanising area. The urbanised area consists of a central urban and a peri-urban area. The urbanised area lies within a radius of about 2 km from the intersection of National Road 6 and the Siem Reap River, and is densely populated. The built environment includes hotels, guesthouses, shops and commercial complexes, as well as housing for local residents and administration buildings. The central urban area has already been built up with grid roads constructed earlier and features administrative and commercial facilities. The peri-urban area surrounds the central urban area and also accommodates commercial, tourism and residential facilities. The road grid in these areas has not yet been completed because of the "disordered expansion of the residential area".

The urbanising area is defined as the area surrounding the urban area and being developed with urban activities/facilities. It contains a populated area mainly for residential or mixed residential and commercial use. It is expanding. The JICA draft plan (JICA: III-1-13) observes that new development in the urbanising areas is expanding rapidly, although changes from agriculture to residential or hotel uses have been sporadic and "without much coordination with the provision of infrastructure". As a result, the urbanising area is characterised by urban sprawl involving "narrow, unpaved and winding ... disconnected roads and a shortage or lack of infrastructure on site".

²² Authority for the Protection and Management of Angkor and the Region of Siem Reap.

²³ This section borrows heavily from the JICA draft master plan (2004).

Unlike in Phnom Penh, the direction of Siem Reap's growth is somewhat constrained by zoning regulations enforced by the Apsara Authority. As a result, Siem Reap is expected to grow eastward along National Route 6 and south-south-eastward in response to commercial and residential development requirements. Growth toward the north and west will not be as great because these areas overlap Apsara-designated protection zones.²⁴

Table 6.1 summarises the population projections through 2020. Population density in Sala Kamraeuk is projected to grow rapidly, from 20.5 persons per ha in 2004 to 52.5 in 2020.²⁵ This growth will include increased density in the already urbanised area of the commune as well increased population in the urbanising areas. As in the rapidly urbanising areas around Phnom Penh, this growth will come from natural population growth and immigration and will increase demand for housing, public services and infrastructure. This growth is expected to restructure the composition of land use in Sala Kamraeuk. Table 6.2 shows that the total of land devoted to residential and commercial uses will increase somewhat, while the most significant increase will be in mixed use, from 94.2 ha to 424 ha.

Table 6.1: Projected Population Density in the Survey Areas

Commune	Area (ha)	Total Population			Density (pop/ha)		
		2004	2012	2020	2004	2012	2020
S. Kamraeuk	841	17,229	32,099	44,145	20.5	38.2	52.5
Siem Reap	5515	16,128	17,742	19,401	2.9	3.2	3.5
Tot. District	35,612	139,566	170,687	210,643	3.9	4.8	5.9

Source: JICA draft Master Plan (2004)

In Siem Reap commune, population is expected to grow at a much slower pace, resulting in an increase in density from 3.9 to 5.9 persons per hectare. This is expected to result in a modest shift in land use, as 45.4 ha will be converted from other uses to mixed. Such changes will most likely occur along the road connecting Siem Reap town to the Tonle Sap Lake, as well as various Angkor Heritage preservation sites located elsewhere in the commune. This will generate a modest increase in demand for housing, public services and infrastructure, but certainly not on the scale of Sala Kamraeuk.

Table 6.2: Composition of Land Use (hectares)

Land Use Classifications	Sala Kamraeuk		Siem Reap	
	Current	2020	Current	2020
Administration Area	1.3	1.3	0	0
Residential Area	279.5	306.4	0	0
Commercial Area	23.5	38.9	0	0
Mixed Use Area	94.2	424.3	0	45.4
Small/Medium Industrial Area	0.4	0.4	0	0
Tourism Area	18.8	33.1	0	0
Culture Area	1.2	0	0	0
Public Space	0.0	12.8	0	0
Sport/Recreation Area	0.0	0	0	0
Technical Infrastructure	0.0	0	0	0
Reservation Area	0.0	0	0	0
Sub-Total	419	817.3	0	45.4
Others (agriculture, roads, etc)	421.6	23.3	5515.3	5469.8
Total	840.6	840.6	5515.3	5515.3

Source: JICA draft Master Plan (2004)

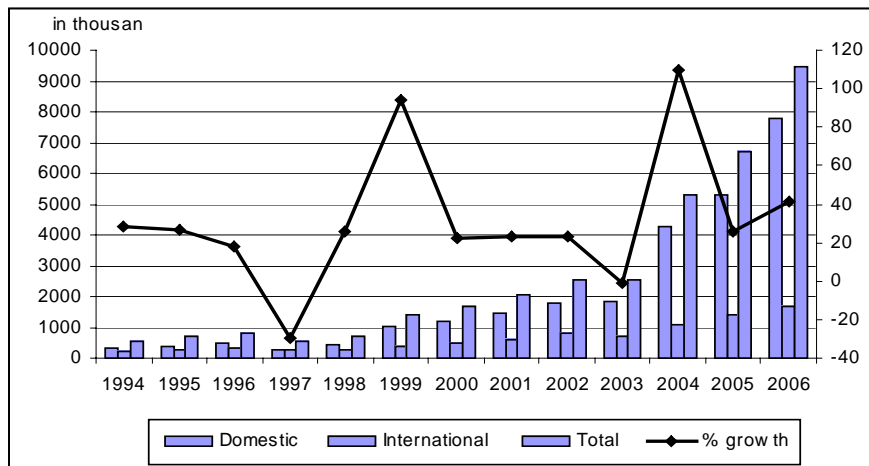
²⁴ Apsara is mandated to maintain and preserve the Angkor Archaeological Park and other temple sites throughout the district and province. In addition to Apsara, the provincial department of land management will also play an important role in enforcing zoning regulations throughout the district.

²⁵ Of the four urbanised communes in Siem Reap district, only Sala Kamraeuk is considered 100 percent urban.

6A.1. Tourism Development

The number of international visitors to Siem Reap increased from 44,833 in 1995 to 560,947 in 2004 and 653,639 in 2006 through November. It is targeted to reach more than 2.3 million in 2010. The number of domestic visitors has also been impressive, growing from 264,000 in 2001 to 372,382 through November 2006. (See Figure 6.1.) Siem Reap town itself is not a main tourist attraction, but rather serves as the base for the main attractions, which are Angkor Wat and other ancient temples. The Siem Reap/Angkor 2020 master plan envisions “a beautiful and unique tourist city based on a harmony of history, arts and nature of Khmer”. The plan outlines three objectives: (1) a quality tourism city where tourists can fully feel a touch of Khmer culture, history and arts; (2) a human-scale city in the atmosphere of Angkor; and (3) an environmentally friendly city. The draft plan proposes six over-arching strategies for achieving these three objectives. These are (a) promoting tourism focused on up-market tourists; (b) maximising local benefits from tourism; (c) making the town more attractive to tourists; (d) making the town more environmentally sustainable; (e) strengthening infrastructure for tourists and people; and (f) strengthening local administration and finance.

Figure 6.1: Number of Tourists and Growth Rate, 1994–06*



* In Hing and Tout (2007)

Source: NIS, Statistical Yearbook 2005 and MoT (2006).

The rapid increase in the number of international and domestic tourists, along with increased immigration, is placing enormous strain on the built environment and the natural environment. The development of the town’s transport, power, water supply and waste and sewage facilities is barely keeping pace with the demand. There are also many concerns regarding the impact of tourism on the area, including fears that the water table that supports Angkor Wat and other temples is shrinking, thus posing a threat to the stability of the attractions that are drawing the tourists in the first place. The sustainable management of tourism, infrastructure development and the natural environment requires that the city’s proposed master plan, including zoning regulations, be strictly enforced.

6A.2. Business and SME Development

Siem Reap also serves as an increasingly important transport hub connecting to the north at Anlong Veng, as well as the administrative centre for the province. This role is spurring growth in manufacturing and services. For example, the share of those employed in the primary (agriculture) sector decreased from 38.1 percent in 1998 to 24.5 percent in 2004, while employment in manufacturing grew from 10.2 to 18.7 percent. Employment in the tertiary sector (services) grew from 51.7 to 56.8 percent during the same period (Ballard 2005). It is quite likely that the shift away from the primary sector will continue as land is converted from agriculture to mixed uses.

The rapid development of the business sector, including SMEs, therefore cannot be solely attributed to tourism. Nevertheless, the dynamic development of businesses associated with tourism is indicative of the scope and scale of the overall growth in the business sector in Siem Reap. Table 6.3 highlights the impressive growth in several tourism-related business activities. To this one could add the growth in the transport industry as well as the number of restaurants of varying quality.

Table 6.3: Growth in Tourism Services, 1998–06*

	1998	2001	2004	2006	% Growth 1998–06
Hotels	216	247	299	351	63
Guest-Houses	147	370	615	742	405
Tour Agencies	137	236	302	382	179
Tour Guides	369	727	1371	2712	635

Units of measurement: rooms for hotels and guesthouses, offices for tour agencies, persons for tour guides.

Source: MoT, Annual Report of Tourism Statistics (2006)

** In Hing and Tuot (2007)*

6A.3. Land Markets

In a qualitative survey of the linkages between local communities and the tourism industry in and around Siem Reap town, Ballard (2005) observed that in certain areas near the town, some families were selling land in order to enter the labour market, establish a business and/or purchase land further from town. For some families, it appeared to make economic sense to sell land now rather than continuing with farming, which has carried high risks.

A more recent study (Hing and Tuot, 2007) provides more evidence of the scope and scale of the emerging real estate markets in and around Siem Reap. A survey of 509 households from eight villages around Siem Reap town found that 27 percent of households had reported selling at least some of their land. About 70 percent of land sales took place before 1998, while more non-poor households than poor had sold land since 1998. Meanwhile, about 14 percent of the households had purchased some land. Only 8 percent of the poor households had bought land, while 18 percent of the non-poor households bought land, most of it (62.3 percent) purchased since 1999. Although most land purchases (82 percent) were in the same village, non-poor households purchased about 24 percent of their land outside the village, while only three percent of the poor buyers bought land outside the village. This probably reflects the fact that land prices are much higher outside the survey villages, as most of the survey sample is located within Apsara Zones 1 and 2, where land sales are closely regulated. Poor households cannot afford to buy land outside the village, while non-poor households are better able to do so.

Although the areas regulated by Apsara are not representative of the real estate markets operating elsewhere, the reasons that households gave for buying land provide some clues about trends in the real estate markets in and around Siem Reap. For example, poor households buy land more often for housing than do the non-poor, while the non-poor households tend to buy more land for speculation and savings. This observation conforms with general expectations because more non-poor households will have already satisfied their housing needs, and with more disposable income are more inclined to look elsewhere for investment and savings opportunities.

6A.4. Role of the Apsara Authority

The rural/heritage area referred to above is under the jurisdiction of the Apsara Authority, which is mandated with oversight responsibilities for the management, preservation and development of Siem Reap-Angkor sites. The government has designated five different

categories of land for protection. Zones 1 and 2 have the strictest regulations concerning land use and real estate markets. People generally are not allowed to undertake any development or modification of land or buildings in which they are living without special permission. Residents may renovate or repair dilapidated houses, or construct a new house to replace an old one. The sale or purchase of land by traders for business activities or tourism facilities is strictly prohibited. However, land can be traded within the village. These regulations have kept land prices substantially lower than elsewhere in the area. Land in Zones 1 and 2 is essentially excluded from the real estate markets surrounding them. There is some Zone 1 and 2 land in Siem Reap commune, but not in Sala Kamraeuk.

6B.0. Siem Reap Baseline Survey

At the time of the baseline survey, land titling was just getting under way. Siem Reap district was the initial focal point of LMAP work, and Sala Kamraeuk and Siem Reap were chosen as the first communes to be surveyed and titled. As the location and order of subsequent titling areas were not known, it was decided to proceed with the baseline survey work in Sala Kamraeuk and Siem Reap. Although this presents some difficulties with regard to a control group, it does provide an opportunity to survey and compare both an urban and a peri-urban area in Siem Reap. A total of 10 villages in the two communes were surveyed. (See Appendix B.)

6B.1. Household Characteristics

A total of 536 households were interviewed during 5–17 December 2005. Of these, 20.9 percent were headed by women, slightly less than the figure of 22.7 in Phnom Penh. A total of 179 households were surveyed in Siem Reap commune, including 16.2 percent that were headed by women. A total of 357 households were interviewed in Sala Kamraeuk, including 23.2 percent headed by women.

As in Phnom Penh, respondents were asked to report on various household expenditures over different periods. This information was aggregated to estimate a per capita annual consumption figure. Table 6.4 shows the average household consumption expenditures for the year prior to the survey. Unlike in Phnom Penh, the overall per capita consumption for female-headed households was higher than male-headed households, by 4.3 percent. Although the averages for both male- and female-headed households were fairly similar for the first four quintiles, the average for female-headed households in the uppermost quintile was about 17.6 percent higher than that of male-headed households.

Table 6.4: Consumption Quintiles (USD/year/person)

Quintile	Male HH		Female HH		No. HH	Mean	Range
	No.	Mean	No.	Mean			
1	83	267	24	255	107	264	47–366
2	84	439	23	447	107	366	366–513
3	87	629	21	617	108	514	514–736
4	84	954	23	950	107	740	740–1203
5	86	2154	21	2534	107	1,204	1204–9397
Total	424	894	112	932	536	902	47–9397

The average annual per capita consumption expenditure in Sala Kamraeuk was USD1001, while in Siem Reap commune it was USD705. In comparison to Phnom Penh, the average per capita consumption figure for Siem Reap commune was almost exactly the same as that of the peri-urban district of Meanchey, while the average for Sala Kamraeuk was lower than all three urban districts in Phnom Penh, but higher than the three peri-urban districts.

Table 6.5 shows the distribution of the survey households in the two communes according to per capita consumption and gender of household head.

Table 6.5: Household Surveys, by Gender and Consumption

Commune	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	Tot
Siem Reap	37	5	36	12	33	7	26	4	18	1	150	29	179
S. Kamraeuk	46	19	48	11	54	14	58	19	68	20	274	83	357
Total M/F	83	24	84	23	87	21	84	23	86	21	424	112	
Total HH	107		107		108		107		107				536

6B.2. Plot/Unit Characteristics

This section provides some of the key data on plot/unit characteristics covered in the Siem Reap survey. These data concern the mode of acquisition, the type of documentation to claim or validate ownership, the access, the services available and plot values. As in Phnom Penh, two different data sets are used. The most important set concerns the plot or unit where the owner resides or works and where the interview took place. This is referred to as Plot/Unit 1 throughout the discussion and is the primary unit of analysis for land-titling impacts. In Siem Reap, the total number of Plots/Units 1 was 536, equal to the number of household interviews.

The second data set concerns all the plots that are owned by the survey respondents. These data are occasionally compared to the Plot/Unit 1 data as appropriate to highlight certain points and to serve as a check on the Plot/Unit 1 data. The total number of “all plots” in this data set is 1109, about 2.07 plots per household. This is higher than the average of 1.70 plots per household in Phnom Penh, and much higher than the 1.36 per household found in the earlier 2004 Sihanoukville survey of Sangkat 2. About 87.8 percent of “all plots” are located in the same village (79.5 percent) or elsewhere in Siem Reap district (8.3 percent), while the remaining 12.2 percent were located in another district of Siem Reap province (10.0 percent) or elsewhere (2.2 percent).

6B.2.1. Mode of Acquisition

Table 6.6 shows the mode of acquisition for Plot/Unit 1 according to commune. The mode of acquisition for both communes was almost equally divided among state allocation (33.8 percent), purchase (33.6 percent) and inheritance (32.6 percent). This differs from Phnom Penh, where the predominant mode of acquisition was purchase (50.5 percent), followed by state allocation (35.4 percent) and inheritance (12.9 percent). This suggests that land markets in and around Siem Reap are less developed than in Phnom Penh.

Table 6.6 also shows that the predominant mode of acquisition for Plot/Unit 1 in Sala Kamraeuk is purchase (41.2 percent), followed by state allocation and inheritance at 29 and 28.9 percent, respectively. The predominant mode of acquisition in Siem Reap commune is state allocation (42.5 percent) and inheritance (39.2 percent), while only 18.4 percent of the plots were acquired by purchase. This pattern is similar to that of Phnom Penh, where the predominant mode of acquisition in the urban areas was purchase, while in the peri-urban areas it was state allocation, followed by inheritance. The percentage of plots acquired through purchase tended to increase with consumption quintile, while the percentage acquired through inheritance tended to decrease as consumption increased. The share of plots acquired through state allocation varied across consumption quintiles.

Table 6.6: Mode of Acquisition, by Commune (Plot/Unit 1)

Commune	Given by State		Inherited		Purchased		Other		Total
	N	%	N	%	N	%	N	%	
Siem Reap	76	42.5	70	39.2	33	18.4	0	0	179
Sala Kamraeuk	107	29.0	103	28.9	147	41.2	2		357
Total	181	33.8	173	32.3	180	33.6	2		536

Of the 180 plots acquired through purchase, only 56, about 31.1 percent, were bought since 2000. Less than half of these plots, 42.9 percent, were purchased during 2003–05. This is surprising, because one would expect more recent purchases due to the impression of a booming land market. There also does not appear to be much variation across consumption quintiles. As expected, however, about 80.4 percent of the purchases (45) since 2000 have taken place in Sala Kamraeuk. The data concerning the mode of acquisition for Plot/Unit 1 suggest that increasing population density in Sala Kamraeuk is driving the higher number of purchases compared to Siem Reap commune, which in turn suggests that the land market in Sala Kamraeuk will continue to grow over the next few years.

The data concerning the mode of acquisition for all plots reaffirm this impression. Table 6.7 shows that the percentage of all plots acquired through purchase is close to that of Plot/Unit 1, and the distribution of purchases by commune is also very similar.

Table 6.7: Mode of Acquisition, by Commune (All Plots)

Commune	Given by State		Inherited		Purchased		Other		Total
	N	%	N	%	N	%	N	%	
Siem Reap	249	56.8	102	23.3	81	18.5	6		438
Sala Kamraeuk	237	35.3	148	22.1	284	42.3	2		671
Total	486	43.8	250	22.5	365	32.9	8	.8	1109

Table 6.8 shows that there is a significant variation in purchases across the quintiles. The top two quintiles represent 26.3 and 29.0, respectively, of the plots acquired through purchase, while the bottom two quintiles represent 12.9 percent and 13.0 percent, respectively. The bottom two quintiles account for 24.0 and 21.2 percent of all plots acquired through inheritance, while the upper two quintiles account for 22.0 and 14.4 percent, respectively. There is a remarkable degree of consistency across all consumption quintiles concerning those plots acquired through state allocation, all being in the range of 20.2 to 20.6 percent.

Table 6.8: Mode of Acquisition, by Consumption Quintile (All Plots)

Quintile	State		Inherit		Purchase		Other		Total		
	M	F	M	F	M	F	M	F	M	F	Tot
1	76	23	48	12	37	10	0	3	161	48	209
2	70	28	48	5	38	10	0	0	156	43	199
3	84	16	42	9	51	17	0	1	177	43	220
4	73	16	38	12	82	14	0	0	193	42	235
5	79	21	36	0	92	14	3	1	210	36	246
Total M/F	382	104	212	38	300	65	3	5	897	212	
% of M/F	42.6	49.1	23.6	17.9	33.4	30.7	0.3	2.3	80.1	19.9	
Total	486		250		365		8		1,109		
% of Total	43.8		22.5		32.9		.08				

6B.2.2. Documentation

Table 6.9 shows that households in Siem Reap use a variety of means to document land ownership but, as elsewhere, tended to rely on unofficial documentation. For Plot/Unit 1, this included receipts of certificate applications (35.1 percent) and survey papers (17.9 percent). Compared to Phnom Penh, households seemed to rely more on village or commune transfer documents (13.3 percent). Households in the Siem Reap survey also used certificates more often to document landownership than the households in Phnom Penh, 20.3 percent compared to 5.4 percent. This may reflect differences in the transaction costs associated with obtaining certificates. It could also be a reflection of the possible sampling bias away from better off households, discussed above in Section 4.4, as the wealthiest households are probably under-represented in the survey sample. A higher proportion of the better off households would presumably have more of their land documented with certificates than less well-off households.

Table 6.9: Land Documentation, by Location (Plot/Unit 1)

Commune	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Siem Reap	27	91	58	0	2	0	178
S. Kamraeuk	161	5	51	6	69	65	357
Total N	188	96	109	6	71	65	535 *
% of Total	35.1	17.9	20.3	1.1	13.3	12.1	

* 1 missing

App. Receipt = Application Receipt; ComVil = Commune or Village

Of the three most common means of documentation, property that is documented with a certificate has a significantly higher reported value, USD80,936, followed by application receipts (USD56,406) and survey papers (USD21,680).²⁶ As in Phnom Penh, where Plots/Units 1 with certificates also had a significantly higher reported value (USD100,704), this raises the question whether the certificate itself adds value to the property, or households tend to obtain certificates for property that has a higher value. While secure documentation may indeed add some value to a property, it probably has more to do with the fact that people want to secure more valuable property with “hard” paper. Village transfer documents have an average value of USD30,971, while those in the commune have an average value of USD45,113. Interestingly, the 22 households that lost their application receipts had an average reported value of USD68,603, while 41 with no paper available in the house averaged USD48,165. As in Phnom Penh, this suggests the potential for conflict prior to or during the LMAP titling.

Table 6.10 shows that the pattern of documentation for all plots closely approximated the pattern for Plot/Unit 1. The fact that there were more certificates for Plots/Units 1 (20.3 percent) than for all plots (16.9 percent) suggests that additional plots may be further from town, where land values are less. Although the percentage of application receipts and survey papers varied, these two types of not-legal documents together accounted for 54.5 percent of all plots, compared to 53.0 percent for Plot/Unit 1. The percentages of transfers documented at the village and commune level are quite similar, and the percentage of households with no paper or lost paper was identical. The similarities between the two data sets suggest that households have a consistent approach to documenting land ownership, regardless of its location.

²⁶ “Agreement papers”—or contracts—between buyer and seller had a higher average value, USD98,030, but the number of cases was small (six).

Table 6.10: Land Documentation, by Location (All plots)

Commune	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Siem Reap	74	218	118	1	13	14	438
S. Kamraeuk	270	43	69	13	156	120	671
Total N	344	261	187	14	169	134	1109
% of Total	31.0	23.5	16.9	1.2	15.2	12.1	

App. Receipt = Application Receipt; ComVil = Commune or Village

6B.2.3. Location and Services

Table 6.11 shows the type of access for Plot/Unit 1 in both communes. About 35.3 percent of the survey plots were located along main paved roads or 2-way access streets, paved or otherwise. This is a much lower percentage than in Phnom Penh (61.2 percent). As in Phnom Penh, special efforts were made to survey households with more difficult access, and this is reflected in the number of surveyed plots with one-way access (31.7 percent) or bicycle and foot access (23.3 percent), both of which are greater than in Phnom Penh. Although there is not a general survey of plot access in Siem Reap or Phnom Penh, the sample is probably more representative than that of Phnom Penh.

Table 6.11: Access, by Commune (Plot/Unit 1)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bicycle Access	Foot Access	Total
Siem Reap	38	52	41	47	1	179
S. Kamraeuk	46	105	129	76	1	357
Total	84	157	170	123	2	536

* For a vehicle (Please see Survey Questionnaire, Question 2.1)

As in Phnom Penh, households were asked about the utilities and services they received, including electricity, phone (land line), sewerage and water for cooking. Table 6.12 shows that 76.9 percent of the households had electricity service, which was somewhat higher than the survey households in Phnom Penh (61.7 percent). As expected, land located along main paved roads had a much higher rate of service (91.6 percent) than other locations. About 76.2 percent of households in Sala Kamraeuk had electricity service, while 78.2 of households in Siem Reap had it. The situation concerning sewerage was quite different. Only 37.1 of households reported having city sewage service, while no households in Sala Kamraeuk had it.

Table 6.12: Electricity Services, by Type of Access (No. of households)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bike Access	Foot Access	Total
Siem Reap	34	37	34	34	1	140
S. Kamraeuk	43	75	102	52	0	272
Total	77	112	136	86	1	412
% of Total	91.6	71.3	80.0	69.9	50.0	76.9

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

6B.2.4. Land Use and Value

This section presents some of the key data concerning land use and plot values in the two survey communes.

6B.2.4.1. Plot/Unit Types and Land Uses

Table 6.13 summarises Plot/Unit 1 according to consumption quintile and use. Almost all (97.1 percent) of the properties in the survey were used as residences only, or residences plus other uses. This was more than in Phnom Penh (88.6 percent), although the percentages were similar for residential only and residential commercial. In the Siem Reap group, there were no commercial only properties, while in Phnom Penh there were only 0.7 percent of properties used only for commercial purposes. As in Phnom Penh, the percentage of residential only property tended to decrease as consumption level increased, while residential/commercial use appeared to increase along with consumption. This pattern was more pronounced in Phnom Penh.

Table 6.13: Plot/Unit 1 Use, by Consumption Quintile (No. of Households)

Quintile	Residential	Res/Com	Rental/Ag	Res/Rent	Res/Ag	Total
Quintile 1	70	11	3	4	19	107
Quintile 2	69	18	3	8	9	107
Quintile 3	54	24	2	13	15	108
Quintile 4	56	22	1	10	18	107
Quintile 5	49	28	2	13	15	107
Total	298	103	11	48	76	536
% of Total	55.6	19.2	2.1	9.0	14.2	

As discussed regarding Phnom Penh, land titles may have an indirect impact on land use to the extent that they facilitate more efficient transactions for greater returns on investments. About 51 percent of the properties in Sala Kamraeuk are residential only. Given the expected population growth and concomitant increase in the demand for housing, the percentage of residential only properties could increase. As rental prices increase, the residential/commercial and residential/agricultural land will probably decrease, as more property is converted to rental or mixed uses. The nature and direction of land use changes in and around Siem Reap may more closely approximate the pattern in the peri-urban areas of Phnom Penh, where changes may involve a shift from residential and agricultural to commercial uses. As in Phnom Penh, the direction and pace of land use change in Siem Reap will depend on the city's longer-term development strategy, a key component of which is clear and enforceable zoning.

6B.2.4.2. Land Values

Respondents were asked how much they would receive if they were to sell their Plot/Unit 1 at the time of the interview. Although the same caveats exist in Siem Reap as in Phnom Penh concerning the possibility of respondents either overestimating or underestimating the value of their property, the reported plot values in Siem Reap also closely conform to expected trends. Table 6.14 shows that average plot values in the urban commune of Sala Kamraeuk were significantly higher than the average plot values in the peri-urban commune of Siem Reap. In fact, the average reported value of property in Sala Kamraeuk was almost three times that in Siem Reap commune.

Second, average plot values steadily increased along with better access in both communes, in part because access to services is generally easier. Although main paved roads and 2-way access streets both represent two-way access, the reported average value of plots situated

along main paved roads was significantly more than the average reported value of plots situated along 2-way access streets.

Table 6.14: Land Values, by Access and Commune (USD/plot)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bicycle	Foot Access	Total	
						No	Ave \$
Siem Reap	38,979	28,839	15,455	12,581	2016	178	23,420
Sala Kamraeuk	149,386	81,195	52,858	28,900	504	354	68,422
Average Value	100,168	63,631	43,837	22,613	1260		
Total HH	83	155	170	122	2		532**

* For a vehicle (Please see Survey Questionnaire, Question 2.1.)

** 4 missing

Again as in Phnom Penh, the data conform closely to expectations when plot values are analysed according to consumption quintiles. As Table 6.15 shows, the average value of the plot steadily increased along with consumption quintile in both communes. The average plot value ranged from USD27,984 in the first quintile to USD94,404 in the fifth, while the range among the middle three quintiles was of course less, USD36,404 to USD57,254).

Table 6.15: Reported Plot/Unit 1 Values, by Commune and Consumption Quintile (USD)

Commune	Quint 1	Quint 2	Quint 3	Quint 4	Quint 5	Total	
						HH	Ave \$
Siem Reap	14,313	19,790	25,883	31,879	34,781	178	23,420
Sala Kamraeuk	36,955	50,153	66,049	67,254	106,740	354	68,422
Average Value	27,984	36,404	51,173	57,254	94,404		53,365
Total HH	106	106	108	107	105		532 *

* 4 missing

6B.2.5. Buildings and Housing

Data concerning the number, use and quality of buildings on the survey plot were also collected. This information will be important for assessing potential land-titling impacts according to the hypothesis that people will take advantage of more secure tenure to invest in housing and building improvements (which may also include more buildings), and may use titles as collateral for credit for making such improvements. Table 6.16 shows that most plots in the Siem Reap survey group, about 64.6 percent, had one building. In this section, only a small sample of the available data for the primary building is presented.

Table 6.16: No. of Buildings per Plot/Unit 1, by Consumption Quintile

Quintile	1	2	3	4	5	Total
1	72	22	12	1	0	107
2	70	21	14	2	0	107
3	72	26	9	1	0	108
4	72	26	6	2	1	107
5	60	31	13	3	0	107
Total	346	126	54	9	1	536
% of Total	64.6	23.5	10.1	1.7	0.1	

Information was collected on the building materials used for roofing, walls, floors and fencing. As roofing is generally considered a good indicator of household consumption level and well-being, one would expect to find a higher proportion of low-cost roofing among the

lower quintile households than among the higher. Over time, the overall quality of roofing would be expected to change, with houses at each consumption level upgrading the quality of their roofing material, although upper quintile households might remain static because they were already using better materials. The data concerning roofing material are presented in Table 6.17 and suggest that such an assumption may be misleading. As in Phnom Penh, although the quality of roofing generally did improve with quintile level, there was a somewhat higher than expected amount of zinc roofing in the upper two quintiles. As a result, roofing may not be a useful indicator of household consumption, at least in urban areas, and therefore not a useful indicator of land-titling impacts.

Table 6.17: Roofing Type, by Consumption Quintile

Quintile	Thatch/Tent	Zinc sheets	Tile	Wood/plywood	Concrete	
1	14	65	28	0	0	107
2	4	70	31	1	0	106
3	4	48	52	2	2	108
4	0	49	50	2	6	107
5	1	49	47	3	7	107
Total	23	281	208	8	15	535*

* 1 missing

6B.3. Land Transactions

This section presents some of the key data concerning land purchases and sales reported by the survey households, as well as the documentation used to facilitate and validate sales. As with Phnom Penh, this discussion is particularly relevant for assessing the impact of land-titling in urban and peri-urban areas around Siem Reap in the context of emerging land markets and the role that land titles are expected to play in facilitating more efficient land transfers through the official registry.

6B.3.1. Purchases

The 536 survey households reported purchasing a total 365 plots since 1980. Of this number, 162, or 44.4 percent, were purchased since 2000. Table 6.18 shows the average reported purchase price of the plots/units acquired through purchase since 2000. More than half, 56.8 percent, of these purchases took place in the most recent three-year period, 2003–05. As expected, the number of purchases tended to increase along with consumption level, especially in Sala Kamraeuk. About 78.4 percent of the purchases since 2000 took place in Sala Kamraeuk.

Table 6.18: Average Purchase Price, 2000–05 (All Plots) (USD/plot)

Commune	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total	
	N	Amt	N	Amt	N	Amt	N	Amt	N	Amt	N	Amt
Siem Reap	6	1946	5	545	9	10,272	6	4183	9	6994	35	5569
S. Kamraeuk	21	2593	14	3040	21	4971	32	6053	37	16,950	125	8279
Total	27	2449	19	3047	30	6,651	38	5758	46	15,002	160*	7686

* 2 missing

Table 6.18 also shows that the average reported value of all plot purchases between 2000 and 2005 was USD7686. As expected, the reported values were higher in the urban district of Sala Kamraeuk (USD8279) than in the peri-urban district of Siem Reap (USD5569), but the difference between the two was not as great as in Phnom Penh. Generally speaking, the average reported purchase price of all plots steadily increased according to consumption quintile, with the exception of the third quintile in Siem Reap commune. This was very

similar to the pattern found in Phnom Penh, although on a smaller scale in terms of average values. As in Phnom Penh, this trend suggests that those who are better off tend to pay more per plot when buying property.

As in Phnom Penh, it is interesting to compare the information in Table 6.18 with that in Table 6.19, which shows the estimated current value of each plot reported at the time of interview. Again as in Phnom Penh, the difference in the reported purchase price and the current value was remarkable. Across each consumption quintile and both communes, the current estimated plot value was significantly higher than the reported purchase price. While this could reflect understated purchase prices and/or deliberately inflated estimates of current value, the data provide a very good sense of people's perceptions and expectations of how the Siem Reap land market is developing. Generally speaking, the average reported purchase price during 2000–05 and the estimated current value differ by a factor of three in both communes and across most consumption quintiles.

Table 6.19: Current (Dec. 2005) Estimated Value of All Plots (USD/Plot)

Commune	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total	
	N	Amt	N	Amt	N	Amt	N	Amt	N	Amt	N	Amt
Siem Reap	6	4471	3	5067	9	39,138	6	8317	9	14,324	33	17,366
SKamraeuk	22	7909	14	29,048	21	15,604	32	21,032	37	45,892	126	26,027
Total	28	7172	17	24,816	30	22,664	38	19,024	46	39,716	159*	24,229

* 3 missing

Of the total plots purchased between 1980 and 2005, about 19 percent were purchased during 1980–89. As in Phnom Penh, it appears there was a nascent land market in Siem Reap even before 1989, when the government reintroduced private property rights (see Section 5B.3.1).

6B.3.2. Land Sales

Of the 536 survey households in Siem Reap, 181 (33.8 percent) reported selling a total of 209 plots since 1980, an average of 1.15 per selling household. About 77.5 percent (162) of plot sales took place in Sala Kamraeuk. The uppermost quintile accounted for about 29 percent of the plot sales, while the remaining sales were fairly evenly distributed across the other four quintiles.

Of these sales, 120 occurred during 2000–05. Table 6.20 shows that 78.3 percent of the plot sales took place in Sala Kamraeuk. Generally speaking, the land sales by year do not show a consistent pattern either in the number of sales or their average value. This is different from Phnom Penh, where 72 percent of the sales took place in peri-urban areas. As would be expected, however, the average reported value of sales was significantly higher in Sala Kamraeuk than in Siem Reap commune, in fact more than double. This is similar to Phnom Penh, where the average sale values were consistently higher in urban than in peri-urban areas.

Table 6.20: Average Land Sale Values (USD), by Location (2000–05)

Commune	2000	2001	2002	2003	2004	2005	Total	
							N	Average
Siem Reap	2225	11,000	6500	14,500	12,910	650	26	8540
S. Kamraek	10,904	9556	11,565	16,805	13,976	49,302	94	19,347
Average	8975	9917	10,374	16,252	13,786	39,571		17,005
Total N	18	12	17	25	28	20		120
% of Total	15.0	10.0	14.2	20.8	23.3	16.6		

The average value of the reported land sales during 2000–05 was higher than the reported value of all plot purchases during the same period. In the case of Sala Kamraeuk, it was more than double the reported value of the purchased plots. However, it was not nearly as great as the difference between the average purchase price and the estimated current value of plots. This is also similar to Phnom Penh, although the range of values was much larger there.

6B.3.3. Land Sale Documentation

As in Phnom Penh, almost 90 percent of land sales were facilitated by changing names on documents below the provincial level. Table 6.21 shows that a majority of sales were documented in the commune level, about half that number in the village and fewer than a tenth at district level. While the percentage of sales documented in the commune was similar in the two communes, there was more documentation at village level in Siem Reap commune.

Table 6.21: Land Sales, by Mode of Documentation

Quintile	Village	Commune	District	Province	Title/MLUPC	Contract	Total
1	16	18	2	0	0	1	37
2	8	25	3	0	0	2	39
3	9	18	3	0	0	2	32
4	9	26	3	1	0	1	40
5	15	27	5	2	3	9	61
Total No	57	114	16	3	4	15	209
% of total	27.3	54.5	7.7	1.4	1.9	7.1	

As in Phnom Penh, the high percentage of land sales documented in the commune across all consumption quintiles suggests that people view the commune as the locus of local governmental authority. While it has been suggested that a preference for documenting land sales at the village and commune level is also related to high transaction costs, which includes transportation costs, associated with provincial documentation, neither Sala Kamraeuk nor Siem Reap commune is far from the provincial cadastral office. This suggests there are other costs involved that explain why people avoid registering land transactions officially and legally, including the land sales tax and high unofficial fees. As in Phnom Penh and elsewhere, the fact that people avoid using the official registry is a matter of serious concern because transactions taking place outside the official registry are likely to contribute to continued land conflicts and represent lost revenue for the government.

6B.4. Conflicts

Households were asked, “Have you ever had conflicts over land or other property since the national election of 2003”? As in Phnom Penh, surprisingly few households (20) reported being involved in a conflict over land during the period from July 2003 to December 2005. This represented about 2.0 percent of all the plots covered in the survey, only slightly higher than the 1.3 percent of conflicted plots in the rural survey sample. As in Phnom Penh, one would expect more land conflicts in such a dynamic emerging land market. One reason there are so few reported conflicts may be that the LMAP is targeting initial titling in Siem Reap where there is less conflict over land. Also, in the areas surveyed, most land conflicts may have been resolved prior to 2003, and any fencing put in place since then would tend to secure boundaries. As in Phnom Penh, it is also possible that the extent of land-related conflicts has been under-reported.

The 20 cases were fairly evenly divided across consumption quintiles, while 12 cases occurred in Sala Kamraeuk. Ten of the cases occurred in 2005. Although this might suggest that conflicts may be increasing, the number is far too small to allow for a firm conclusion. Seventeen of the cases involved residential land, while the other three were mixed.

More than 60 percent of the households reported seeking resolution from either the village chief or the commune leader, while another 10 percent of the cases were resolved with the help of neighbours or through mutual agreement. As with documentation, this suggests a preference for managing conflicts locally. Fewer than half of the cases (seven), however, were reported to have been successfully resolved, and only one-third of the households reported satisfaction with the result.

6B.5. Credit and Finance

Among the 536 survey households, 135 (25.2 percent) reported obtaining a total of 195 loans between the national election of 2003 and the survey, making about 1.44 loans per borrowing household. The percentage of households reporting credit activity was only slightly higher than in Phnom Penh (21.6 percent). This suggests that urban and peri-urban landowners tend to borrow less than their rural counterparts, perhaps because they are generally better off and have less need for borrowing, as suggested in the discussion concerning credit activity in Phnom Penh. Also, the number of loans per borrowing household in Siem Reap was very similar to the rate of 1.40 in Phnom Penh.

In Siem Reap, there was a sharp increase in the number of borrowings reported over the three years: in 2003, there were 37 loans, in 2004 there were 58 and in 2005 there were 100. This pattern is quite similar to that in Phnom Penh. Of the loans, 28.7 percent came from relatives (25.1 percent) and friends (3.6 percent), while almost half (49.7 percent) were from formal institutions, including MFIs and commercial banks. Nearly 19 percent were from moneylenders. Again, this pattern was similar to that of Phnom Penh, although there was a higher percentage of loans from formal sources in Siem Reap than in Phnom Penh (33.9 percent).

Table 6.22 shows loan uses across consumption quintiles. Some 38.5 percent of all loans were used for business purposes. This closely approximated the percentage used for business purposes in Phnom Penh, 35.8 percent. Real estate, home improvements and housing construction together accounted for another 25.1 percent of loan uses, slightly more than the 20.0 percent in Phnom Penh. Food, health and education accounted for 13.8 percent, compared to 22.8 percent in Phnom Penh. Farming and animal raising was 6.8 percent, while loan repayments and transport accounted for 12.3 percent. These figures are almost equal to those of Phnom Penh, 7.0 percent and 12.4 percent, respectively.

Table 6.22: Credit Use, by Consumption Category

Credit Use	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	
						Number	%
Farming/animal	3	7	1	2	0	13	6.8
Bus Start-up	4	2	6	5	3	20	10.3
Bus Expansion	0	13	9	6	11	39	20.0
Bus Input	3	7	2	1	3	16	8.2
Food	7	1	1	3	0	12	6.1
Health	2	3	2	6	1	14	7.1
Education	0	0	0	0	1	1	.5
Real Estate	0	1	1	3	2	7	3.6
Loan Repay	2	1	2	0	0	5	2.6
Home Improve	3	1	2	1	0	7	3.6
Home Constr.	10	10	3	4	8	35	17.9
Transport	1	5	5	4	4	19	9.7
Other	1	0	0	4	2	7	3.6
Total	36	51	34	39	35	195	
% of Total	18.5	26.2	17.4	20.0	17.9		100

As in Phnom Penh, the volume of borrowing from commercial sources is expected to increase in part because land titles will enable more credit seekers to meet collateral requirements. It is expected that the shares of loans for business, real estate and housing will increase as a result, while other uses will decrease, and land use patterns will shift in the direction of more residential and commercial uses. This will be the case especially in Sala Kamraeuk, where the draft master plan for city development envisions increasing population density increasing the demand for housing up to 2020. Also as in Phnom Penh, it is expected that the average size of loans obtained using land titles as collateral will increase, as rising land values raise the amount for which borrowers will be eligible. Again, although these trends are likely to be fairly consistent across all consumption quintiles, upper quintile households will likely benefit more because their property against which loans can be secured tends to be of higher value than the property of lower quintile households.

6B.6. Small and Medium Enterprises

Of the survey group, 164 household respondents reported operating a total of 192 SMEs, which means that about 30.6 percent of the survey households operated an average of 1.17 SMEs. Almost half (49.2 percent) of business owners were female, less than the percentage of female owners in the Phnom Penh survey (60.7 percent). About 60.4 percent of the businesses (116) had been started since 2000, and of this number more than half (58.6 percent) were started during 2003–05. Households in the upper two quintiles owned 47.4 percent of the businesses, while the lower two quintiles owned 26.7 percent. Table 6.23 shows that the number of business start-ups increased each year from 2002.

Table 6.23: SME Start-ups, by Year and Quintile

Year	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	
						Tot	%
2000	2	2	7	1	5	17	14.7
2001	1	4	2	2	7	16	13.8
2002	6	1	2	3	3	15	12.9
2003	1	2	5	7	4	19	16.4
2004	1	2	6	6	6	21	18.1
2005	5	4	8	7	4	28	24.1
Total	16	15	30	26	29	116	
% of Total	13.8	12.9	25.9	22.4	25.0		100

6B.6.1. SME Financing

Table 6.24 identifies 194 sources of financing for SMEs reported by the Siem Reap survey group. Some 86.1 percent of SME financing came from own resources and savings, while family were 8.2 percent of the sources. The financing from own sources was slightly less than in Phnom Penh (almost 92 percent), while family financing was slightly higher. As in Phnom Penh, both informal moneylenders and the formal commercial sector appeared to play almost no role in financing SMEs.

Table 6.24: Sources of Small Business Financing, by Consumption Quintile

Quintile	Own Resources	Family	Private Bank/MFI	Other	Total
1	18		1		19
2	27		3	1	31
3	38	7	1	1	47
4	40	2	3		45
5	44	7	1		52
Total	167	16	9	2	194
% of Total	86.1	8.2	4.6	1.0	

Of the 100 sources of finance used to start a new business, 91 percent were from own sources and savings; of the 64 sources used to operate the business, 78.1 percent were own sources and savings. Of the 33 sources of credit used for expanding business, 84.8 percent were own sources and savings.

As in Phnom Penh, it appears that small business investors in Siem Reap are reluctant to borrow from commercial banks for business start-ups, because they are not willing to take loans when they are unsure of the returns on the investment. As a result, business start-ups continue to rely primarily on own sources and saving as well as family and friends. Once the business is up and running, however, and an owner sees a steady and predictable flow of returns, at least some entrepreneurs appear to be more willing to obtain a loan from commercial banks to expand their business.

The 135 owners who said they were not seeking a loan were asked to rank the degree to which they agreed with particular reasons for not doing so. About 75.5 percent of the respondents indicated that they either “strongly agreed” (40.7 percent) or “somewhat agreed” (34.8 percent) that profit from the business would not be higher than the interest. About 45.1 percent indicated that they strongly (28.1 percent) or somewhat agreed (17.0 percent) that collateral requirements inhibited them, while 43.7 percent strongly disagreed. Other reasons for not seeking a loan included complex bank procedures (33.7 percent), informal payments (30.8 percent) and being uninformed about banking requirements. Informal payments and time-consuming procedures were considered less important constraints.

As in Phnom Penh, the data clearly demonstrate that small business owners perceived several important constraints on obtaining loans. This suggests that while land titles may improve access to commercial loans by providing collateral, other constraints must also be addressed in order for this effect to be fully realised.

The same apparent discrepancy between data concerning credit and data concerning SME financing, and its explanation, exist in Siem Reap as in the case of Phnom Penh, discussed in Section 5B.6.1.

6B.6.2. SME Employment

As in Phnom Penh, the survey data suggest that SMEs are a potentially important source of employment. Table 6.25 shows that the number of employees generally increased with the consumption quintile of the business owner, with a significant increase in the number of employees in the top quintile. As in Phnom Penh, the total number of employees, in each category, increased over time. The total number of employees at the time of start-up for the 192 SMEs was 554, an average of 2.89 per SME, 20 percent higher than the average of 2.38 reported in Phnom Penh. The current average was 3.19 per SME, almost the same as in Phnom Penh (3.13). Again, this suggests that the employment impact of land titles may be significant if titles stimulate increased SME investment and business expansions.

Table 6.25: SME Employment, by Consumption Quintile

Quintile	No. of Employers	Permanent		Daily Labour		Family Members		Total	
		Start	Current	Start	Current	Start	Current	Start	Current
1	19	0	0	8	10	30	33	38	43
2	30	1	1	5	5	56	55	62	61
3	46	1	3	7	5	90	93	98	101
4	45	11	11	0	7	79	80	90	98
5	52	40	72	128	133	98	104	266	309
Total	192	53	87	148	160	353	365	554	612
Employees / SME		0.28	0.45	0.77	0.83	0.84	1.90	2.89	3.19

6B.7. Expected Benefits of Land Titling

Table 6.26 shows that 75.4 percent of survey respondents believed that tenure security is the primary benefit from land titles. If we assume that land conflicts are a function of insecure tenure, then almost 85 percent of survey households expect the primary impact to be improved tenure security. This is almost exactly the percentage found in the Phnom Penh survey. Also, 10.8 percent of the survey households in Siem Reap felt that the primary benefit of titles would be to improve access to formal credit; in Phnom Penh, 8.8 percent mentioned improved access to formal credit as the primary benefit. The remaining 4.3 percent mentioned “facilitating transfers” (improved efficiency of registering sales and inheritances), and “facilitating sales” (making the property more attractive to potential buyers).

Table 6.26: Expected Benefits of Land Titling, by Quintile

Quintile	Secure Tenure	End Conflict	Obtain Loan	Facilitate Transfer	Facilitate Sale	Total
1	86	9	8	1	3	107
2	80	9	11	4	3	107
3	85	8	13	2	0	108
4	77	15	10	5	0	107
5	76	10	16	3	2	107
Total	404	51	58	15	8	536
% of Total	75.4	9.5	10.8	2.8	1.5	

As in Phnom Penh, the importance of land tenure security was also underscored by the responses concerning expected secondary benefits. About 41.8 percent of Siem Reap households identified ending conflicts as the second most important expected benefit, while another 16.6 percent identified “stability in owning land”, making a total of 58.4 percent of responses that concerned land tenure security. This closely approximated the total of 54 percent found in Phnom Penh. About 22.4 percent identified “ease in borrowing money” as the second most important benefit. In Phnom Penh, the percentage was 20.3, 12.7 percent identified “ease in transferring inheritance” and 11.4 percent “ease in selling”, a total of 24.1 percent that concerned facilitating land transactions.

6B.8. Summary of Siem Reap Land Titling Impacts

The potential impacts of land titling in Siem Reap district must be considered in the context of the city’s booming tourism industry and rapidly increasing population, both of which are now placing considerable demands and strains on land resources. Until now, much urban and tourism infrastructure has been unplanned and haphazard in the absence of enforceable zoning regulations, resulting in anarchic development in some areas. How the city responds to such challenges in the near future will be guided by a medium-term (to 2020) city master development plan prepared with assistance from JICA. In terms of land use planning and infrastructure development, land titles may play an important role in strengthening the institutional fabric of the city’s development, as envisioned in the draft master plan, provided that zoning regulations are rigorously and objectively enforced.

It is important to clarify and designate land use areas and boundaries of private land, state private land and state public land. Although the systematic titling of private land by LMAP represents an important step, it can make land management more problematic if the titling is confused with the other two processes. For this reason, it will be important to demarcate state private land and state public land prior to land titling. It will also be important to ensure that any conversion of state land to private use be done in an orderly and transparent fashion according to the overall urban development plan. In areas where land use is transferred in

anarchic ways, land titles will eventually have to be adjusted to make space for public services. Such a process would be costly and burdened with conflict.

As in Phnom Penh, land titles could also have a significant, albeit indirect or complementary, impact on land use patterns to the extent that they facilitate more efficient transactions and provide greater and more predictable returns on investments. The nature and direction of land use impacts will be highly dependent on the district's medium-term development strategy. As with the Apsara Authority's management of rural heritage land, land management in the urban and urbanising areas must be strictly enforced according to transparent procedures and zoning regulations within a context of clearly defined boundaries throughout the district. The impact of land titles will be undermined and eroded to the extent that boundaries are ambiguous or contested.

The expected economic impacts of land titles in Siem Reap are similar to the expected impacts in Phnom Penh. Given the nature of the local economy, land titles are likely to have the most significant impact in sectors most closely associated with tourism, housing and transportation. The primary conduit for impacts will be formal credit for housing, services and small business development, which in turn may generate a potentially significant impact on employment. Housing development will include residential property to accommodate the rapid population growth as well as guesthouses and hotels for international and domestic tourists. Services will include both those specifically targeted at tourists and those for local residents, such as schools, water and sanitation. Small business development includes a wide range of commercial activities for tourists, residents and merchants.

As in Phnom Penh, there had been a sharp increase in the number of reported loans during the two and a half years prior to the survey. Almost half of the reported loans were obtained from the formal sector, somewhat more than in Phnom Penh. It is expected that the number of loans obtained from commercial banks and MFIs for productive investments will increase as property owners use their land titles for collateral. Although it is also expected that the average amount of loans will increase, those with more property may be able to obtain larger loans and therefore benefit more than those with less property.

Also as in Phnom Penh, the employment impact of land titles may be significant if titles stimulate increased SME investment and business expansions by promoting a more secure tenure and providing access to more affordable credit. Shifts in attitudes concerning borrowing from commercial banks appear to be relatively recent. As the business climate in Cambodia improves and investors develop more trust in the banking sector, it is likely that the increased demand for credit for a variety of purposes will continue. By creating reliable collateral, it is quite likely that land titling will support an increase in consumer and business borrowing. This may unfold at a somewhat slower pace among borrowers in Siem Reap because traditional attitudes toward financing small business with own and family sources may be stronger in a less diversified economy. It may take more time for business entrepreneurs in Siem Reap to embrace alternative modes of financing, and so the overall employment impact through SMEs may be somewhat less in Siem Reap than in Phnom Penh, at least initially.

Despite the fact that the volume of land transactions has been increasing rapidly, Siem Reap can still be characterised as an emerging land market when compared to the more active and diverse market in and around Phnom Penh. The urbanised commune of Sala Kamraeuk, however, exhibits characteristics suggesting it is a rapidly maturing land market. As in Phnom Penh, land transactions will be the primary mode of land acquisition, and hence of redistribution. The survey data show that people in Siem Reap also rely on a wide range of documentation modes, although the use of certificates was somewhat higher than in Phnom Penh. This may reflect differences in the transaction costs associated with obtaining certificates in the two locations, as the extent to which people will use the official registry is sensitive to such costs, particularly with respect to unofficial fees.

The concern expressed in the Phnom Penh section about the use of the official registry to facilitate land transactions is equally valid for Siem Reap. Although land ownership was more frequently documented with certificates by survey households in Siem Reap than in Phnom Penh, there was still widespread use of unofficial papers that are not legally valid. Unless land transfers are facilitated through the official registry, the prospect of land conflicts remains serious. That being said, the number of land conflicts reported by survey households was just as small as in Phnom Penh. It may be that the instrument used in this survey was not the most appropriate tool for understanding how land titles affect land conflicts. Again as in Phnom Penh, another important question concerns the role that the courts and local authorities will play in enforcing land titles in cases of conflict.

As in Phnom Penh, it is expected that women's tenure security will be strengthened. One way to assess the impact of land titles on women's tenure security would be to examine the data concerning female-headed households. Another would be to examine the outcome of cases involving the death of a husband or divorce and evaluate the extent to which the woman's land tenure rights are upheld. Qualitative methods will be required to understand the social and legal dynamics of land tenure security for women.

The data collected in the Siem Reap survey largely conform to expected trends and patterns and reasonably approximate the Phnom Penh data in areas such as land values according to location and consumption quintile, modes of documentation and credit. In other areas there are interesting variations that reflect the different characteristics of the two cities and their respective development trajectories. As in Phnom Penh, the follow-up study to the Siem Reap baseline survey should involve MLMUPC personnel who are familiar with land valuation techniques. The follow-up survey should also employ qualitative research approaches.

Chapter 7.

Serei Saophoan Baseline Survey

The Serei Saophoan baseline survey was conducted from 18 to 27 December 2005. The land-titling programme, however, has yet to begin in Banteay Meanchey, except for a pilot effort conducted in 2005 in Svay Chek. The gap between the time of the baseline survey and when titling is likely to get under way (2008) will be too long for the current survey data to be used as a baseline. One possible solution to this problem would be to repeat the survey just prior to land titles being issued. In the meantime, the baseline survey data for Serei Saophoan are still useful because they offer an interesting contrast to the Phnom Penh and Siem Reap data. A second baseline survey would also help to create a set of panel data with which to analyse the development of emerging land markets in and around Serei Saophoan, which appears to be an increasingly dynamic area affected by the transport industry.

7.1. Household Characteristics

A total of 507 households were interviewed in Serei Saophoan. Of these, 18.7 percent were headed by women, less than the 22.7 percent in Phnom Penh and 20.7 percent in Siem Reap. Two hundred and ninety households were surveyed in Kompong Svay commune, including 17.9 percent headed by women. One hundred and eight households were interviewed in Preah Ponlea commune, only 11.1 percent headed by women. One hundred and nine households were surveyed in Ou Ambel commune, 28.4 percent headed by women.

As in the other surveys, respondents were asked to report on various household expenditures over different periods, and this information was aggregated to estimate a per capita annual consumption figure. Table 7.1 shows the distribution of the survey households in the three communes according to per capita consumption and sex of household head.

Table 7.1: Households Surveyed, by Consumption Quintile and Sex of Household Head

Commune	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	Tot
Kg. Svay	53	5	47	17	51	9	43	10	44	11	238	52	290
Preah Ponlea	13	0	15	3	19	4	26	3	23	2	96	12	108
Ou Ambel	23	7	13	7	7	11	15	5	16	5	78	31	109
Total M/F	89	12	75	27	81	20	84	18	83	18	412	95	
Total Quintile	101		102		101		102		101				507
% of Quintile	88.1	11.9	73.5	26.5	80.2	19.8	82.4	17.6	82.2	17.8	81.3	18.7	

Table 7.2 shows the average per capita consumption expenditures for the year prior to the survey. The aggregate average as well as the averages for both male- and female-headed household are much lower than in Siem Reap. The aggregate average per capita consumption for female-headed households is lower than male-headed households, by about 5.5 percent.

Table 7.2: Average Consumption, by Quintiles and Sex of Head (USD/year/person)

Quintile	Male HH		Female HH		No. HH	Mean	Range
	No.	Mean	No.	Mean			
1	89	237	12	225	101	236	120–311
2	75	392	27	374	102	387	312–463
3	81	551	20	564	101	554	464–636
4	84	788	18	808	102	792	639–984
5	83	1857	18	1685	101	1,826	985–18,450
Total	412	766	95	726	507	758	120–18,450

The average annual per capita consumption expenditure in Preah Ponlea was USD870, in Kompong Svay USD737 and in Ou Ambel USD704. Ou Ambel was almost exactly the same as Siem Reap commune in Siem Reap district. Kompong Svay also closely approximated Siem Reap commune, while Preah Ponlea was closer to Sala Kamraeuk. All three communes in Serei Saophoan more closely resembled the peri-urban district averages in Phnom Penh than the averages in the urban districts.

7.2. Plot/Unit Characteristics

This section provides some of the key data concerning plot/unit characteristics covered in the survey sample. As in the same sections concerning Phnom Penh and Siem Reap, the data presented are the mode of acquisition, the type of documentation to claim or validate ownership, the location of and services available to the plot and plot values. Two different data sets are used. The most relevant set concerns Plot/Unit 1, the plot or unit where the owner resides or works and where the interview took place. The total number of Plot/Unit 1 in Serei Saophoan was 507, equal to the number of survey households.

The second data set concerns all the plots owned by the 507 respondents. The total number of “all plots” represented in the data from Serei Saophoan is 905, about 1.79 plots per survey household. This closely approximates the 1.70 plots per household found in Phnom Penh, but is somewhat lower than the 2.07 per household in Siem Reap. About 73.3 percent of “all plots” were located in the same village, while another 6.0 percent were located elsewhere in the same district. About 11.3 percent were within Banteay Meanchey province but outside the district. The remaining 9.4 percent were located outside the province.

7.2.1. Mode of Acquisition

Table 7.3 shows that a majority (53.1 percent) of Plots/Units 1 were acquired through purchase, followed by state allocation and inheritance. This pattern more closely resembled that of Phnom Penh than Siem Reap. In Phnom Penh, 50.5 percent of Plot/Unit 1 acquisitions were through purchase, followed by state allocation (35.4 percent) and inheritance (12.9 percent), while in Siem Reap the modes of acquisition were fairly evenly divided.

Table 7.3: Mode of Acquisition, by Commune (Plot/Unit No. 1)

Commune	Given by State		Inherited		Purchased		Other		Total
	No.	%	No.	%	No.	%	No.	%	
Kg. Svay	87	30.0	29	10.0	173	60.0	1	0.3	290
Preah Ponlea	40	38.5	12	37.0	54	50.0	2	0.3	108
Ou Ambel	45	41.3	22	20.2	42	38.5	0	0	109
Total	172	33.9	63	12.4	269	53.1	3	0.6	507

Table 7.4 shows the mode of acquisition by sex of household head. Of the 95 Plots/Units 1 owned by female heads of household, just over 50 percent were acquired through purchase, followed by state allocation (40 percent) and inheritance (8.4 percent). This differed from

Siem Reap, where a smaller percentage (30.7) of the female-headed households acquired their plot through purchase, while a greater percentage (49.1) acquired it through state allocation. A greater percentage (17.9) also acquired their plot through inheritance. As for male-headed households, a greater percentage (53.6) also purchased their land in Serei Saophoan than in Siem Reap (33.4 percent). However, a smaller percentage (35.5) received plots through state allocation than in Siem Reap (42.6 percent). A smaller percentage (13.3) also received plots from inheritance than in Siem Reap (23.6 percent).

Table 7.4: Mode of Acquisition, by Gender of HH Head (Plot/Unit 1)

Commune	Given by State		Inherited		Purchased		Other		Total		
	M	F	M	F	M	F	M	F	M	F	Tot
Kg. Svay	72	15	26	3	139	34	1	0	238	52	290
Preah Ponlea	34	6	12	0	49	5	1	1	96	12	108
Ou Ambel	28	17	17	5	33	9	0	0	78	31	109
Total	134	38	55	8	221	48	2	1	412	95	507
% of Gender	35.5	40.0	13.3	8.4	53.6	50.5					
Total	172		63		269		3		507		
% of Total	33.9		12.4		53.1		0.6				

Table 7.5 shows that the majority (55.2 percent) of all plots in the Serei Saophoan survey were acquired through purchase. This was similar to Phnom Penh, where 52.3 percent were purchased, and much higher than in Siem Reap, where the figure was 32.9 percent. The pattern of acquisition for all plots closely approximated the pattern of Plots/Units 1. These patterns suggest that despite many rural characteristics, the emerging land market in Serei Saophoan is taking on at least some urban characteristics.

Table 7.5: Mode of Acquisition, by Commune (All Plots/Units)

Commune	State	Inherit	Purchase	Clearing	Other	Total
Kg. Svay	138	68	289	10	2	507
Pr. Ponlea	52	22	109	3	0	186
Ou Ambel	64	34	102	11	1	212
Total	254	124	500	24	3	905
% of Total	28.1	13.7	55.2	2.7	0.3	100

7.2.2. Documentation

Table 7.6 shows that households in Serei Saophoan, like those in Phnom Penh and Siem Reap, used a wide range of means to document landownership. The households in Serei Saophoan tended to rely on documents that might be officially endorsed, but are not legal in terms of securing tenure rights. For Plot/Unit 1, the percentage of survey properties documented with official certificates was highest in Serei Saophoan at 22.5 percent, (Phnom Penh 5.4 percent and Siem Reap 20.3 percent). The use of certificate application receipts in Serei Saophoan (38.1 percent) was similar to that of Siem Reap (35.1 percent). Survey papers were hardly used at all by the Serei Saophoan survey households, while 17.9 of properties in Siem Reap were documented with such paper. A higher percentage of properties (23.3 percent) were documented with transfer documents at either the village or commune levels in Serei Saophoan than in Siem Reap (13.3 percent). As in Phnom Penh and Siem Reap, a surprising percentage of households in Serei Saophoan, about 10.5 percent, had either lost the documentation or never had any.

Table 7.6: Type of Land Documentation, by Location (Plot/Unit 1)

Commune	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Kg. Svay	106	3	55	10	81	35	290
Preah Ponlea	56	1	13	5	17	16	108
Ou Ambel	31	0	46	0	20	12	109
Total N	193	4	114	15	118	63	507
% of Total	38.1	0.7	22.5	3.0	23.3	10.5	

App. Receipt = Application Receipt; ComVil = Commune or Village

It is interesting to observe the differences in documentation between Plot/Unit 1 and all plots, the latter being shown in Table 7.7. In the case of Plot/Unit 1, the use of certificates and village or commune transfer papers was practically the same. In the case of all plots, village or commune transfer papers are used almost twice as often as certificates. This suggests that households in Serei Saophoan were more inclined to obtain certificates for their primary plot or unit, while relying on less secure but locally accepted documentation for other plots/units. These other plots/units could be less valued land, including agricultural or *chamkar* land outside the town. Approximately the same percentage of properties were documented with application receipts in both data sets, about 38 percent of Plot/Unit 1 and 34 percent of all plots. There is a higher percentage of all plots than Plot/Unit 1 with no paper.

Table 7.7: Type of Land Documentation, by Location (All Plots)

Commune	App. Receipt	Survey Paper	Certificate	Sales Letter	ComVil Transfer	No Paper	Total
Kg. Svay	160	3	71	21	155	97	507
Preah Ponlea	87	1	16	6	47	29	186
Ou Ambel	60	0	53	4	60	35	212
Total N	307	4	140	31	262	161	905
% of Total	33.9	0.4	15.5	3.4	29.0	17.8	

App. Receipt = Application Receipt; ComVil = Commune or Village

7.2.3. Location and Services

Table 7.8 shows the location of Plot/Unit 1 in all three communes according to access. Eighty-nine percent of the survey plots were located on main paved roads or 2-way access streets, while the remaining 10.9 percent were in less accessible locations. This pattern contrasts with Siem Reap, where 54.9 of Plots/Units 1 were in less accessible locations. While this may reflect to some degree a selection bias on the part of field enumerators, it is probably more reflective of the general character of the urban design in Serei Saophoan, where main paved roads (residential and commercial property) and 2-way access streets (mostly residential) are arranged on a rectangular grid. As mentioned above, in Siem Reap the road grid has yet to be completed.

Table 7.8: Type of Access, by Commune (Plot/Unit 1)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bike Access	Foot Access	Total
Kg. Svay	78	182	20	8	2	290
Preah Ponlea	54	34	17	3		108
Ou Ambel	22	81	1	5		109
Total	154	297	38	16	2	507
% of Total	30.4	58.6	7.5	3.2	0.4	

* For a vehicle (Please see Survey Questionnaire, Question 2.1.)

Table 7.9 shows that only 67 households reported having electricity service, about 13.2 percent of the survey. This is in sharp contrast to Phnom Penh and Siem Reap, where 61.7 and 76.9 percent, respectively, had electricity. Of the 67 households with electricity, 86.6 percent were in Kompong Svay, which is the main commercial part of Serei Saophoan. Only properties located on main paved roads (28) and 2-way access streets (39) have electricity.

Table 7.9: Households with Electricity Service, by Type of Access (Plot/Unit 1)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bike Access	Foot Access	Total
Kg. Svay	25	33	0	0	0	58
Preah Ponlea	1	1	0	0	0	2
Ou Ambel	2	5	0	0	0	7
Total	28	39	0	0	0	67
% of Total	41.8	58.2				

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

The situation regarding sewage service was similar to that of electricity. Table 7.10 shows that 83 properties, about 16.4 percent, had sewage service. As with electricity, most properties with sewage service (75.9 percent) were located in Kompong Svay. Also, all properties except two with sewage services were located along main paved roads (69) or 2-way access streets (12). This pattern closely resembled Siem Reap, where none of the survey households in the peri-urban commune of Siem Reap reported having sewage service. Except for two properties, those few households (52, or 9.7 percent of the total) in Sala Kamraeuk that had sewage service were all located on main paved roads (31) or 2-way access streets (19).

Table 7.10: Households with Sewage Service, by Type of Access, (Plot/Unit 1)

Commune	Main Paved Road	2-way Access*	1-way Access	Bike Access	Foot Access	Total
Kg. Svay	53	10	0	0	0	63
Preah Ponlea	14	0	2	0	0	16
Ou Ambel	2	2	0	0	0	4
Total	69	12	2	0	0	83
% of Total	83.1	14.5	2.4			

* For a vehicle (Please see Survey Questionnaire, Question 2.1).

7.2.4. Land Use and Values

7.2.4.1. Land Values

Respondents were asked how much they would receive if they were to sell Plot/Unit 1 at the time of interview. Although some respondents may have over- or underestimated their plot values, the data concerning reported plot values conform to expected trends. Table 7.11 shows that the average reported value of a Plot/Unit 1 in Serei Saophoan was USD15,469, considerably lower than the averages of USD40,412 in Phnom Penh and USD53,365 in Siem Reap. It was also lower than in the peri-urban commune of Siem Reap, where the average was USD23,420 per plot, and lower than the reported average value of USD23,120 for the three peri-urban districts of Phnom Penh. Land values in and around Serei Saophoan seem to resemble rural areas more closely than urban or peri-urban areas.

The reported plot values, however, shared similarities with both Phnom Penh and Siem Reap. First, the average steadily increased with improved access in all three communes. As in Phnom Penh and Siem Reap, access appears to have a significant impact on plot values.

Although main paved roads and 2-way access streets both represent 2-way access, the reported average value of plots located along main paved roads was significantly more than the average reported value of plots along 2-way access streets in all three communes. In fact, in Kompong Svay and Ou Ambel, the reported value of houses on main paved roads was more than twice that on 2-way access streets.

Table 7.11: Average Land Values, by Type of Access (USD/plot)

Commune	Main Paved Road	2-way Access*	1-way Access*	Bicycle	Foot Access	Total	
						No.	Ave \$
Kg. Svay	23,938	9426	3413	2500	8750	290	12,719
Preah Ponlea	31,972	18,162	9000	7333		108	23,324
Ou Ambel	30,682	11,275	4000	8610		109	15,003
Average	27,719	10,931	5928	5316	8750		15,469
Total HH	154	297	38	16	2		507

* For a vehicle (Please see Survey Questionnaire, Question 2.1.)

Second, the data also conform closely to expectations when average plot values are considered according to consumption quintiles. As Table 7.12 shows, the average value of the plot steadily increased with the consumption quintile in all three communes. The average plot values ranged from USD9,008 to USD27,146 between the first and fifth consumption quintiles, while the range between the middle three quintiles was of course less, USD10,382 to USD17,860.

Table 7.12: Reported Plot/Unit 1 Values (USD), by Consumption Quintile

Commune	Quint 1	Quint 2	Quint 3	Quint 4	Quint 5	Total	
						HH	Ave \$
Kg. Svay	8156	8785	12,078	14,647	20,949	290	12,719
Preah Ponlea	10,212	14,792	16,478	25,448	40,120	108	23,324
Ou Ambel	9,008	11,522	13,372	15,370	27,931	109	15,003
Average	9008	10,382	13,311	17,860	27,146		15,469
Total HH	101	102	101	102	101		507

The gap between quintiles one and five was USD18,138 in Serei Saophoan, while the gap in Siem Reap was USD66,420 and in Phnom Penh USD50,481. The narrower gap suggests again that Serei Saophoan still retains certain rural characteristics.

7.2.5. Buildings and Housing

As in Phnom Penh and Siem Reap, data concerning the number, use and quality of buildings on Plot/Unit 1 were also collected. This information will be important for assessing potential land-titling impacts according to the hypothesis that people will take advantage of more secure tenure to invest in housing and building improvements, and may use titles as collateral for credit for making such improvements. Table 7.13 shows that most plots, about 65.9 percent, had one building.

Table 7.13: No. of Buildings Per Plot/Unit 1, by Consumption Quintile

Quintile	1	2	3	4	Total
1	53	39	0	1	93
2	66	31	3	2	102
3	69	24	8	1	102
4	75	20	6	2	103
5	70	24	5	3	102
Total	333	138	22	9	505*
% of Total	65.9	27.3	6.1	1.7	

* 2 missing

As in Phnom Penh and Siem Reap, information was collected on the building materials used for roofing, walls, floors and fencing. Since roofing is generally considered a good indicator of household consumption level and well-being, one would expect to find a higher proportion of low-cost roofing among the lower quintile groups. Over time, the overall quality of roofing would be expected to change, with houses in each quintile upgrading, although upper quintile households might remain static if they were already using better materials. The data concerning roofing material are presented in Table 7.14 and seem to conform to expectations, because the percentage of houses using zinc sheets for roofing does decrease as consumption increases. This is unlike Phnom Penh and Siem Reap, where the patterns were puzzling. This may represent another instance in which Serei Saophoan more closely resembles a rural area and, as a result, here roofing may be a useful indicator of household consumption levels and of possible land-titling impacts.

Table 7.14: Roofing Type, by Consumption Quintile

Quintile	Thatch/Tent	Zinc sheets	Tile	Wood/plywood	Concrete	Total
1	1	99	1	0	0	101
2	0	92	7	1	1	101
3	0	91	6	2	2	101
4	3	84	8	3	4	102
5	2	79	8	1	9	99
Total	6	445	30	7	16	504*

* 3 missing

7.3. Land Transactions

7.3.1. Purchases

The 507 survey households reported purchasing a total of 501 plots since 1980, almost one plot per household. Of this number, 152, about 30.3 percent, were purchased between 2000 and 2005. Over half of these purchases, 58.6 percent, took place in the latter half of this period, 2003–05. Table 7.15 shows the average reported purchase price of all plots/units acquired through purchase since 2000. There does not appear to be any pattern in the number of purchases or the average value of purchase by year. The average reported purchase value was considerably less than the overall average for either Phnom Penh or Siem Reap, as would be expected, and reinforces the impression of Serei Saophoan as an emerging land market.

Table 7.15: Average Plot/Unit Purchase Prices (USD), 2000–05, by Quintile (All Plots)

Commune	2000	2001	2002	2003	2004	2005	Total
Kg. Svay	2725	1179	7925	1948	5024	3335	3360
Pr. Ponlea	2634	2585	9275	781	2273	1943	2918
Ou Ambel	479	9520	2868	1013	2637	1233	2830
Average	2158	3887	6366	1649	3734	2676	3142
Number	29	18	16	25	29	35	152

Of the 501 reported land purchases, 103 took place during 1980–89, including 20 and 21 purchases in 1985 and 1989, respectively. As with Phnom Penh and Siem Reap, the data concerning the year of purchase may contain some reporting errors, but it appears there was a nascent land market in this area even before 1989.

The 507 survey households reported acquiring 269 Plots/Units 1 through purchase, 53.1 percent of the total. Of this number, only 49 (18.2 percent) were purchased during 2000–05. Fewer than half of these purchases were made during the second half of this period,

suggesting that the land market in Serei Saophoan is rather lethargic compared to Phnom Penh and Siem Reap. One possible explanation for most plots being purchased prior to 2000 could be a large influx of domestic migrants who purchased land in and around Serei Saophoan, perhaps including refugees returning from the camps along the Thai-Cambodian border in the early 1990s.

Table 7.16: Average Price of Plot Purchases (2000–05), by Commune and Year (USD per Plot/Unit 1)

Commune	2000	2001	2002	2003	2004	2005	Total
Kg. Svay	6738	11,875	11,375	9730	12,750	10,192	9791
Pr. Ponlea	10,750	31,000	8000	6333	9000	2500	11,536
Ou Ambel	4500	60,000	7250		4000		14,583
Average	7564	29,150	9714	8456	10,250	9093	10,877
Total	14	5	7	8	8	7	49
% of Total	28.6	10.2	14.3	16.3	16.3	14.3	

Table 7.17 also does not show any discernible pattern in terms of the number of plot purchases across consumption quintiles during 2000–05. However, the average purchase price of Plot/Unit 1 increased along with consumption quintile, which conforms to expectations and is similar to the patterns found in Phnom Penh and Siem Reap, albeit on a significantly smaller scale.

Table 7.17: Average Price of Plot Purchases (2000–05), by Commune and Quintile (USD per Plot/Unit 1)

Commune	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Kg. Svay	3850	3460	8607	16,000	14,111	9791
Pr. Ponlea	5250	8000	2500	30,000	21,750	11,536
Ou Ambel	3500	4500		8000	60,000	14,583
Total Ave.	4340	4725	6775	15,714	19,571	10,877
Number	10	8	10	7	14	49
% of Total	20.4	16.3	20.4	14.3	28.6	

7.3.2. Sales

Of the 507 survey households, 99 (19.5 percent) reported selling a total of 118 plots since 1980, an average of 1.19 plots per selling household. Well over half (64.6 percent) of the sales occurred in Kompong Svay. Between 2000 and 2005, 51 households reported selling one plot/unit each. Table 7.18 shows that of the 51 sales, just under half (49.0 percent) took place in Kompong Svay, while 31.4 percent took place in Preah Ponlea. As in Siem Reap, the percentage of land sales by year does not show a consistent pattern in the number of sales or the average reported value of the sales.

Table 7.18: Average Price of Land Sales, by Commune and Year (2000–05) (USD/Plot)

Commune	2000	2001	2002	2003	2004	2005	Total	
							N	Ave.
Kg. Svay	4223	6000	2800	2817	2917	10,1227	25	4529
Pr. Ponlea	4315	1200	375	11750	455	9250	16	2878
Ou Ambel	746	20,250	4000	1250	3375		10	5924
Total Ave.	3759	11,925	2494	2117	2040	9835		4285
Total No.	14	4	8	6	13	6	51	
% of Total	27.5	7.8	15.6	11.8	25.5	11.8		100

Table 7.19 shows the average reported values for all plot sales between 2000 and 2005 in each commune. As with the year of land sales, the data for consumption quintiles do not reveal a clear pattern. One possible explanation may have to do with where the plots are located. The data above concerning the commune refer to the location of the selling household, not the location of the sold plot. The sample size of 51 is also quite small.

Table 7.19: Average Price of Land Sales, by Commune and Quintile (2000-05) (USD/Plot)

Commune	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Kg. Svay	3596	3907	1588	7958	4250	4529
Pr. Ponlea	629	6625	581	6675		2878
Ou Ambel	1000	2746	1750	40,000	2313	5924
Total Ave.	2236	4219	1177	10,405	2958	4285
Total No.	15	10	9	11	6	51

7.3.3. Documentation

The data showed a strong preference for documenting land sales by changing the name of the owner at the village (48) or commune (44) level, 78 percent of all sales. Only 5.9 percent changed the name at the district level, while even fewer (3.4 percent) registered the transfer with the official provincial registry. Another 12.7 percent of plots were transferred using a contract or letter between the buyer and seller. As in Phnom Penh and Siem Reap, the preference for transferring ownership locally may be due to the high transaction costs of unofficial fees and sales taxes associated with legal transfers. As in Siem Reap, location cannot be a factor, because Serei Saophoan is both the provincial headquarters and the district headquarters.

7.4. Conflicts

As in the other surveys, households were asked, “Have you ever had conflicts over land or other property since the national election of 2003?” The number of affirmative answers (eight) was even fewer than in Phnom Penh (36) and Siem Reap (20). This represented only a very small fraction of all 905 plots in the survey. In fact, the number of cases was so small that it is not possible to identify any trends one way or another. This could bode well for LMAP’s future titling efforts in the area because the adjudication phase may be less impeded by conflicts than in some other areas. The relevant question is why so few conflicts were reported. One possible explanation might be that real estate values have yet to reach the point where competing owners see it as worthwhile to contest boundaries or ownership. If this is the case, more conflicts may emerge as land values increase.

7.5. Credit and Finance

A total of 113 households, 22.3 percent of the survey, reported taking 145 loans, 1.28 loans per borrowing household, since the national election in 2003. Although the percentage of households taking loans was similar to Siem Reap (25.2 percent), the average number of loans per borrowing household was somewhat less, since Siem Reap reported an average of 1.44. The number of loans decreased steadily as the consumption quintile rose. As in Siem Reap, there was a sharp increase in the number of loans during 2003–05. In 2003, there were 19 loans reported, while in 2004 there were 37; this number more than doubled to 87 in 2005.

The sources of loans in the Serei Saophoan survey were considerably different from those in Phnom Penh and Siem Reap. Some 19.3 percent of all loans were obtained from relatives (15.9 percent) and friends (3.4 percent), fewer than the 28.7 percent in Siem Reap. Another 38.6 percent were obtained from formal sector institutions, including MFIs (10.3 percent) and

Aclea (28.3 percent), fewer than the 49.7 percent in Siem Reap. Moneylenders provided 37.2 percent of the loans. This figure is much higher than the 19 percent found in Siem Reap, and suggests that in terms of credit, Serei Saophoan again more closely resembles a rural area than it does other urban areas.

Table 7.20 shows loan uses across consumption quintiles. More than 34 percent of all loans were used for business purposes. This closely approximated the findings in both Phnom Penh (35.8 percent) and Siem Reap (38.3 percent). Real estate, home improvements and housing construction accounted for another 21.0 percent of loans, slightly more than in Phnom Penh (20.0 percent) but less than in Siem Reap (25.1 percent). Food, health and education accounted for 17.5 percent of all loans, compared to 22.8 percent in Phnom Penh and 13.8 percent in Siem Reap. Farming and animal raising were 11.9 percent, more than in both Siem Reap and Phnom Penh, which suggests again that Serei Saophoan still retains attributes of a rural environment. Transportation accounted for 10.5 percent, which closely approximated Siem Reap.

Table 7.20: Credit Use, by Consumption Category

Credit Use	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	
						No	%
Farming/animals	9	4	2	1	1	17	11.9
Bus. Start-up	2	2	8	3	0	15	10.5
Bus. Expansion	3	4	3	1	5	16	11.2
Bus. Input	6	5	1	3	3	18	12.6
Food	5	1	2	1	1	10	7.0
Health	5	3	1	2	0	11	7.7
Education	0	2	0	2	0	4	2.8
Real Estate	4	0	3	2	1	10	7.0
Loan Repay	0	0	1	2	0	3	2.1
Home Improve	1	1	1	2	0	5	3.5
Home Constr.	4	2	3	3	3	15	10.5
Transport	4	4	5	2	0	15	10.5
Other	1	1	2	0	0	4	2.8
Total	44	29	32	24	14	143*	
% of Total	30.8	20.3	22.4	16.8	9.8		

* 2 missing

As in Phnom Penh and Siem Reap, the volume of borrowing from commercial sources is expected to increase because land titles will enable more credit seekers to meet collateral requirements. The shares of loans for business-related activities and real estate and housing will increase, while other uses will decrease; land use patterns will shift in the direction of commerce and residences. The average amount of loans using land titles as collateral will probably increase, albeit at a somewhat slower pace than in Phnom Penh and Siem Reap, as increasing land values increase the size of loans for which potential borrowers can qualify. Upper quintile households may benefit more than lower ones because their property used as collateral tends to be valued more highly. The gap in benefits between upper and lower quintile households may be smaller than in either Phnom Penh and Siem Reap because the gap in property values is smaller.

7.6. Small and Medium Enterprises

In the survey, 241 households reported operating a total of 285 SMEs, which means that 47.5 percent of the households operate an average of 1.18 SMEs each. The percentage of households operating SMEs was far higher than in Siem Reap, where the figure was 30.6 percent. The average number of SMEs per household, however, was almost identical to the 1.17 in Siem Reap.

More than half (55.8 percent) of SME operators were female heads, between Siem Reap (49.2 percent) and Phnom Penh (60.7). Some 52.6 of the SMEs were operated by households in Kompong Svay commune; households in Preah Ponlea operated 29.1 percent; households in Ou Ambel operated 18.2 percent.

Table 7.21 shows that 56.1 percent (160) of the SMEs had been started since 2000, and of this number more than half (59.4 percent) were started during 2003–05, very similar to the trend found in Siem Reap. Households in the upper two quintiles operated 43.7 percent of the businesses, while the lower two quintiles operated 31.9 percent. Table 7.21 also shows that the number of start-ups in 2001 was sharply down, while the number doubled from 2004 to 2005.

Table 7.21: SME Start-ups, by Year and Quintile (2000–05)

Year	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total	
						Tot	%
2000	2	6	13	8	5	34	21.3
2001	1	0	3	1	4	9	5.6
2002	5	5	4	6	2	22	13.8
2003	4	4	7	9	5	29	18.1
2004	2	4	2	9	5	22	13.8
2005	8	10	10	9	7	44	27.5
Total	22	29	39	42	28	160	
% of Total	13.8	18.1	24.4	26.2	17.5		100

7.6.1. SME Financing

Table 7.22 identifies 301 sources of SME financing reported by the Serei Saophoan group. Eighty-five percent of the SME financing came from own sources and savings, while family accounted for 8.6 percent. These figures are almost identical to Siem Reap, where own resources and savings and family accounted for 86.1 percent and 8.2 percent, respectively, of the sources. As in the other centres, non-formal moneylenders and formal commercial and MFI lenders appeared to play almost no role in financing SMEs in Serei Saophoan.

As for the use of SME financing sources, more than half (54.0 percent) were used to start a new business, 27.3 percent to operate the business and the remaining 18.7 percent to expand the business. Of the financing from own sources and savings, in 58.3 percent of cases the funds were used to start a new business, in 29.1 percent to operate the business and in 12.2 percent to expand.²⁷

Table 7.22: Small Business Financing, Sources by Consumption Quintile

Quintile	Own Resources	Family	Private Bank MFI	Other	Total
1	27	1	2	1	31
2	43	3	1	3	50
3	64	5	1	5	75
4	66	8	1	4	79
5	56	9	1	0	66
Total	256	26	7	12	301
% of Total	85.0	8.6	2.3	4.1	

²⁷ The remaining 0.4 percent of usage is not mentioned.

7.6.2. SME Employment

As in Phnom Penh and Siem Reap, the survey data suggest that SMEs are a potentially important source of employment in Serei Saophoan. Table 7.23 shows that the number of employees was higher in the upper quintile businesses than in the lower. Again, the total number of employees in each labour category had increased over time. The total number of employees at the time of start-up for the 285 SMEs was 566, an average of 1.99 per SME, fewer than in Siem Reap and Phnom Penh. The number of employees at the time of the interview was 649, an average of about 2.28 per SME, also lower than in the other two cities.

Table 7.23: Type of SME Employment, by Consumption Quintile

Quintile	No.	Permanent		Daily Labour		Family Members		Total	
		Start	Current	Start	Current	Start	Current	Start	Current
1	28	0	0	0	0	47	50	47	50
2	43	1	5	12	1	80	88	93	94
3	60	8	16	16	17	127	145	151	178
4	58	1	9	4	21	117	125	122	155
5	52	43	62	4	7	106	103	153	172
Total	241	53	92	36	46	477	511	566	649

7.7. Expected Benefits of Land Titles

Table 7.24 shows that 80.9 percent of survey households in Serei Saophoan believed tenure security to be the primary benefit from land titles. Adding in the 5.7 percent who expected fewer land conflicts gives a total of 86.6 percent of households that expected the primary benefit to be improved tenure security. This was very similar to both Phnom Penh and Siem Reap. Another 10.8 percent identified improved access to formal credit as the primary benefit, exactly the same as in Siem Reap and slightly more than in Phnom Penh. Another 2.2 percent of households mentioned facilitating transfers, fewer than the 4.3 percent in Siem Reap.

Table 7.24: Expected Primary Benefits of Land-Titling, by Quintile

Quintile	Secure Tenure	End Conflict	Obtain Loan	Facilitate Transfer	Facilitate Sale	Total
1	81	6	12	1	1	101
2	90	5	4	2	1	102
3	76	8	13	1	1	99
4	81	5	13	1	2	102
5	82	5	13	1	0	101
Total	410	29	55	6	5	505*
% of Total	80.9	5.7	10.8	1.2	1.0	

* 2 = "Nothing different"

The importance of land tenure security as an expected benefit was again highlighted by the responses concerning expected secondary benefits. Some 39.3 percent of the Serei Saophoan survey households identified ending conflict as the second most important expected benefit, while another 12.6 percent identified "stability in owning the land", making a total of 51.9 percent of responses that concerned land tenure security. This was less than the 58.4 percent found in Siem Reap, but closer to the 54.0 percent found in Phnom Penh. Another 27.2 percent identified "ease in borrowing money" as the second most important benefit. In Siem Reap, the percentage was 22.4 percent and in Phnom Penh 20.3 percent. Another 11 percent cited "ease in transferring inheritance" and 7.7 percent "ease in selling", a total 18.7 percent of responses concerning improved facilities for transfers. The remaining 1.2 percent identified "no idle land" as the second most important benefit.

7.8. Summary

The potential impact of land-titling in Serei Saophoan must be considered in the context of its strategic location on key transport networks in Cambodia's north-west. This suggests that Serei Saophoan will likely develop into an important transportation and, perhaps, commercial hub in the medium to long term. The surrounding area is fertile farmland, and Serei Saophoan could also eventually emerge as an important agro-processing zone. Its commercial and residential areas are structured on a rectangular grid with wide, largely unpaved, streets that should facilitate the development of urban infrastructure and services. It is likely that the city's commercial sector will initially expand in three directions along the major national routes, while residential areas will develop off the major highways.

As in Phnom Penh and Siem Reap, land titles could have a significant if indirect impact on land use patterns to the extent that they facilitate more efficient transactions and provide larger and more predictable returns on investments. Land in and around Serei Saophoan must be managed according to transparent procedures and enforceable zoning regulations in the context of clearly defined boundaries between state public, state private and private land. The impact of land titles will be undermined and eroded to the extent that such boundaries are ambiguous or contested. Serei Saophoan does not have a city development or land use master plan.

The expected economic impacts of land titles in Serei Saophoan are similar to those in Phnom Penh and Siem Reap, although on a smaller scale. As the economy of Serei Saophoan is likely to be increasingly based on transport, trade and light manufacturing, land titles are likely to have the most significant impact in those sectors most closely associated with services and SMEs. The primary conduit for land-titling impacts will be formal credit for services and business development, which in turn may generate a potentially significant impact on employment. Services will include activities that support a growing transport sector, including vehicle maintenance and repair facilities, petrol service stations and road and rail construction and maintenance. Small businesses will include restaurants, trade, light manufacturing and perhaps limited food processing. The housing market could also begin to pick up if an expanding and diversifying economy in the town increases household income and attracts domestic migrants.

As in Phnom Penh and Siem Reap, the employment impact may depend on the degree to which land titles actually stimulate increased SME investment and business expansions. Borrowing from the commercial sector, however, has not yet reached similar proportions to that in Siem Reap, suggesting that people will turn to commercial banks for financing businesses and home improvements more slowly, because traditional attitudes toward finance may be even stronger in Serei Saophoan than in Siem Reap. Borrowing from moneylenders continues to be very high.

The number of recent land transactions is somewhat lower than in Siem Reap, suggesting that land markets are only now emerging as an important feature of the local economy. It is likely, however, that as road and rail transport improves, stimulating increased trade between Thailand and the rest of Cambodia, real estate markets will expand more robustly. Land transactions therefore will eventually be the primary mode of land acquisition and redistribution also in Serei Saophoan. As elsewhere, households in Serei Saophoan rely on a wide range of documentation to claim or validate land ownership, most of which are of an "official but not legal" variety. This raises similar concerns as in Phnom Penh and Siem Reap about the use of the official registry to facilitate transactions. Unless land transfers are facilitated through the official registry, the prospect of land conflicts remains high, especially in an emerging land market like this.

Again, land titles are expected to strengthen women's land tenure security. One way to assess the impact on women's land tenure security will be to examine the data concerning female-

headed households. Another way will be to examine the outcome of cases involving the death of a husband or divorce and the extent to which the woman's land tenure rights are upheld. Qualitative methods will be required to understand land tenure security for women.

As in the other cities, the data from Serei Saophoan largely conform to expected trends and patterns and reasonably approximate the Siem Reap data in areas such as land values varying with urban or peri-urban location and consumption quintile, modes of documentation and credit. In other areas, there are differences that reflect the different characteristics of the three cities and their development.

Unfortunately, the 2005 survey data cannot be used as a baseline with which to assess the impact of the land titles because land titling in Serei Saophoan has not yet begun. The time lag between the 2005 survey and the issuance of titles will be too great; too many other intervening variables and factors will cloud or distort the impact measurements. It is recommended that a new baseline survey be undertaken in 2008, prior to the issuing of titles in the three survey communes. The 2005 data remain extremely useful, providing an initial set of panel data that can be used to analyse the emerging land markets in the area. As in the two other urban areas, the follow-up study should involve MLMUPC personnel who are familiar with land valuation techniques. The follow-up should also employ qualitative research approaches.

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Annex A:

**Baseline Survey: Land Titling/Registration
(Urban—Phase 2)**

Interviewer code:... Date of Interview...../...2005 **Ordinal Number of Questionnaire:.....**

Interview time: Started at..... Ended at..... Total Time:.....minutes

Family book N.:.....

Address:

House No:..... Street:.....	Distance of house to:
Village:.....	Municipality/Provincial office:..... (km)
Sangkat/commune:.....	Khan/District office:..... (km)
Khan/District:.....	Commune office:.....(km)
City/provincial town:.....	Market:..... (km)

Interview Record

Interviewee's name: Age:..... Sex:..... Sex: 1 = male 2 = female

Household head (plot owner)? 1 = Yes 2 = No

Or what relation to hh head (plot owner)? (Use code 1.2b)

Interviewer's Signature after reviewing the completed questionnaire:

Interviewer's Remarks (according to your feeling, how do you rate your interview process):
1= very good 2= fairly good 3= moderate 4= low

Quality Control Record

Survey Team Leader's Name (code based on the enumerator list):.....

Signature after checking all the questions:..... Checked on: /..... 2005

Remarks by Survey Team Leader:

Supervision by CDRI Researcher

Name of the CDRI Researcher who checked the questionnaire: Date:/... 2005

Questions clarified:

Questions called back:.....

Records on Data Cleaning and Entry

Name of Data Cleaning Person: Signature Date:...../...2005

Remarks, questions with problems:

Data entry by..... Signature Date/..... 2005

I. HOUSEHOLD DEMOGRAPHY

1.1 How many members are in your household (both children and adults)?..... persons

1.2 Sex of household head: 1 = Male 2 = Female

▲ **Detailed information about household members: Please list also children who attend kindergarten, if they are not in kindergarten/school, please list from 6 years old and above. (Write number 0 where there are no answers).**

No	Name (first name only) HH Head/owner (full name)	Relationship with hh head	Sex 1=M 2=F	Age	Marital status	Education	Econo mically active?	Occupation of each family member.		
		code			code	code	code	Occ 1	Occ 2	Occ 3
	1.2 a	1.2 b	1.2 c	1.2 d	1.2 e	1.2 f	1.2 g	code 1.2 h	code 1.2 i	code 1.2 j
01										
02										
03										
04										
05										
06										
07										
08										
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16										
17										
18										
19										
20										
21										

For question 1.2 b:

- | | | |
|--------------------------|-------------------------|---------------------|
| 1 = Household head | 2 = husband or wife | 3 = in-law siblings |
| 4 = son or daughter | 5 = in-law son/daughter | 6 = grandchildren |
| 7 = step/foster children | 8 = parents | 9 = Grandparents |
| 10 = niece/nephew | 11 = Other relatives | 12 = home servant |

For question 1.2 e:

1 = married 2 = single 3 = Divorced 4 = widow/widower 5 = deserted

For question 1.2 f:

1 = No 2 = little 3 = some
 4 = primary level 5 = Lower secondary 6 = Upper secondary
 7 = tertiary or above 8 = kindergarten

For question 1.2 g:

1 = Can work for income 2 = Work for no income
 3 = study and work (with no income and income)
 4 = Only study 5 = Disabled cannot work
 6 = Too old to work, 7 = Too young to work

For question 1.2 h – j:

0 = None 1 = Government official 2 = Skilled worker 3 = Unskilled worker
 4 = Private staff 5 = NGO staff 6 = Vendor
 7 = Services (car wash, tel/internet/ CP service provider,..)
 8 = Motodop/Cyclo/Taxi driver 9 = hotel/guesthouse owner
 10 = migration overseas 11 = Garment factory worker
 12 = Sales agent/credit provider, ... 13 = Agriculture work
 14 = selling labour in agriculture 15 = Gambling
 16 = Workshop (rice mill, distillery,.....)

II. PLOT/UNIT CHARACTERISTICS**2.1** What is the location of your plot /unit? (circle one suitable answer only)

1 = On the side of main paved road. 2 = Two-way road accessible by vehicle.
 3 = One-way road accessible by vehicle. 4 = Accessible only by bicycle or motorbike.
 5 = Accessible only by foot.

2.2 What is the size of this plot in square metres?

Please provide dimensions: (.....m x.....m)

2.3 How is this plot/unit used?

1 = Owner residential only (skip sections IV & VIII)
 2 = Owner commercial only (skip section III)
 3 = Owner residential and commercial (Fill in sections IV&VIII)
 4 = Owner residential and agricultural
 5 = Mixed (owner residential/commercial/agricultural/rent...)
 6 = Owner residential and rent (for housing or business)

2.4 How many buildings/units in this plot?Buildings/Units**2.5** Does this plot/unit have (state) electricity service? 1 = Yes 2 = No**2.6** Does this plot/unit have landline telephone service? 1 = Yes 2 = No**2.7** Does this plot/unit have municipal sewage service? 1 = Yes 2 = No**2.8** What is the main source of water for cooking at this plot/unit?

1 = piped in dwelling 2 = hand pump/bore hole 3 = dug well
 4 = pond/stream 5 = (big) river 6 = Purchase

III. RESIDENTIAL PLOT/UNIT

3.1 How many buildings/units are on this plot of land? buildings/units
 How is each one used?

Building/ unit	Used for (code) 3.2 a	Rental/month (in USD) (code) 3.2 b	No. of Families in residence/use (code) 3.2 c	Relationship with owner		
				(code) 3.2d1	(code) 3.2d2	(code) 3.2d3
No. 1						
No. 2						
No. 3						
No. 4						
No. 5						
No. 6						
No. 7						

Code **3.2a**: 1 = Owner of the plot only 2 = Owner residential and business
 3 = Rent to other for housing 4 = Guesthouse/hotel
 5 = Owner resident, commercial and rent to other for staying and business
 6 = Kitchen 7 = garage 8 = Owner resident, and rent to other for staying
 9 = relative resident 10 = bathroom 11 = *Kchos*, stock (rice barn,....)

Code **3.2b**: Exchange rate (\$1=.....R):

1993: 2797 1994: 2569 1995: 2467 1996: 2640 1997: 2991 1998: 3774
 1999: 3814 2000: 3854 2001: 3924 2002: 3922 2003: 3970 2004: 4023

Code **3.2d1-3**: 1 = Owner of the plot 2 = other family residence/non-rental
 3 = other family residence/rental 4 = other non-family residence/non-rental
 5 = other non-family residence/rental
 6 = other (please specify).....

Building/unit No. 1

Condition of the building/unit where the plot owner currently lives:

(3.3 a) Roof	(3.3 b) Wall	(3.3 c) Floor	(3.3 d) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

3.4 How long have you been living here? years.

Construction: extension and repairs

N	Establishment	3.5a Total area (sq. m)	3.5b Year of building	3.5c N. of rooms	3.5d (code) Building permit	3.5e (code) If no BP	3.5f (code) Repair/ex tend	3.5g construction /purchase/ repair cost (US\$)	3.5h (code) Source of funds	3.5i Current price (US\$)	3.5j (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 rd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Code **3.5d**: 1 = None, 2 = Permission from khan/district
3 = Permission from municipality/provincial,
4 = Permission from LMUPC, 5 = Informed village/commune chief

Code **3.5e**: 1 = Complicated and slow administrative system.
2 = Too expensive 3 = Not necessary 4 = Don't know where to apply.
5 = Old building 6 = Not allowed by law

Code **3.5f**: 0 = None 1 = Roofing 2 = Wall 3 = Floor 4 = Electricity 5 = Pump/water
6 = Expansion (e.g. new room, new floor,...)
7 = Security (i.e. inside bar at window,...)
8 = Repairing bathroom/toilet. 9 = whole

Code **3.5h**: 1 = relative 2 = friend 3 = moneylender 4 = Trader (name....)
5 = NGO (Name.....) 6 = MFI (Name.....) 7 = ACLEDA 8 = Own money
9 = Mixed (own money & borrow...) 10 = Other (specify).....

Code **3.5j**: 1 = living 2 = living and own business place 3 = own business place only
4 = others for living 5 = rent to other for living and business
6 = rent to others for business place 7 = Guest house
8 = owner resident, business and rent to others for living and business
9 = garage 10 = Bathroom 11 = *Kchos*/Stock (rice barn, ...) 12 = kitchen

Building/Unit No. 2

Condition of building/unit:

(3.3 aa) Roof	(3.3 ba) Wall	(3.3 ca) Floor	(3.3 da) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairs

N	Establishment	3.5aa Total area (sq. m)	3.5ba Year of building	3.5ca N. of rooms	3.5da (code) Building permit	3.5ea (code) If no BP	3.5fa (code) Repair/ /extend	3.5ga construction /purchase/ repair cost (US\$)	3.5ha (code) Source of funds	3.5ia Current price (US\$)	3.5ja (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 3

Condition of building/unit:

(3.3 ab) Roof	(3.3 bb) Wall	(3.3 cb) Floor	(3.3 db) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairs

N	Establishment	3.5ab Total area (sq. m)	3.5bb Year of building	3.5cb N. of rooms	3.5db (code) Building permit	3.5eb (code) If no BP	3.5fb (code) Repair/ /extend	3.5gb construction /purchase/ repair cost (US\$)	3.5hb (code) Source of funds	3.5ib Current price (US\$)	3.5jb (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 4

Condition of building/unit:

(3.3 ac) Roof	(3.3 bc) Wall	(3.3 cc) Floor	(3.3 dc) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairs

N	Establishment	3.5ac Total area (sq. m)	3.5bc Year of building	3.5cc N. of rooms	3.5dc (code) Building permit	3.5ec (code) If no BP	3.5fc (code) Repair/ extend	3.5gc construction /purchase/ repair cost (US\$)	3.5hc (code) Source of funds	3.5ic Current price (US\$)	3.5jc (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 5

Condition of building/unit:

(3.3 ad) Roof	(3.3 bd) Wall	(3.3 cd) Floor	(3.3 dd) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairing

N	Establishment	3.5ad Total area (sq. m)	3.5bd Year of building	3.5cd N. of rooms	3.5dd (code) Building permit	3.5ed (code) If no BP	3.5fd (code) Repair/ extend	3.5gd construction/pu rchase/ repair cost (US\$)	3.5hd (code) Source of funds	3.5id Current price (US\$)	3.5jd (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 6

Condition of building/unit:

(3.3 ae) Roof	(3.3 be) Wall	(3.3 ce) Floor	(3.3 de) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairs

N	Establishment	3.5ae Total area (sq. m)	3.5be Year of building	3.5ce N. of rooms	3.5de (code) Building permit	3.5ee (code) If no BP	3.5fe (code) Repair/ extend	3.5ge construction /purchase/ repair cost (US\$)	3.5he (code) Source of funds	3.5ie Current price (US\$)	3.5je (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 7

Condition of building/unit:

(3.3 af) Roof	(3.3 bf) Wall	(3.3 cf) Floor	(3.3 df) Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1 – None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

Construction: extension and repairs

N	Establishment	3.5af Total area (sq. m)	3.5bf Year of building	3.5cf N. of rooms	3.5df (code) Building permit	3.5ef (code) If no BP	3.5ff (code) Repair/ extend	3.5gf construction /purchase/ repair cost (US\$)	3.5hf (code) Source of funds	3.5if Current price (US\$)	3.5jf (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

IV. COMMERCIAL PLOT/UNIT

4.1 How many commercial buildings/units are on this plot of land?

How is each one used?

Building/ unit	Used for (code) 4.2 a	1 = Rent 2 = Not rent 4.2 b	Rental/month (in USD) 4.2 c	No. of business 4.2 d	Type of business (see SME code)		
					(code) 4.2 e1	(code) 4.2 e2	(code) 4.2 e3
No. 1							
No. 2							
No. 3							
No. 4							
No. 5							
No. 6							
No. 7							

Code **4.2a:** 1 = Business of the owner of the plot 2 = other family business/non-rental
 3 = other family business/rental 4 = other non-family business/non-rental
 5 = other non-family business/rental 6 = Owner and rent to other for business.

Building/Unit No. 1

The condition of the Plot Owner business building/unit:

4.3 a Roof	4.3 b Wall	4.3 c Floor	4.3 d Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.4 How long have you been conducting business here?: Years

Construction: extension/repairs

N	Establishment	4.5a Total area (sq. m)	4.5b Year of building	4.5c N. of rooms	4.5d (code) Building permit	4.5e (code) If no BP	4.5f (code) Repair/ extend	4.5g construction /purchase cost (US\$)	4.5h (code) Source of funds	4.5i Current price (US\$)	4.5j (code) used for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Code **3.5d:**

- 1 = None, 2 = Permission from Khan/district
- 3 = Permission from municipality/provincial
- 4 = Permission from LMUPC
- 5 = Informed to village/commune chief

Code **3.5e:**

- 1 = Complicated and slow administrative system
- 2 = Too expensive 3 = Not necessary 4 = Don't know where to apply
- 5 = Old building 6 = Not allowed by law

Code **3.5f:**

- 0 = None 1 = Roofing 2 = Wall 3 = Floor 4 = Electricity 5 = Pump/water
- 6 = Expansion (i.e. new room, new floor,...)
- 7 = Security (i.e inside bar at window,)
- 8 = Repairing bathroom/toilet.
- 9 = whole

Code **3.5h:**

- 1 = relative 2 = friend 3 = moneylender 4 = Trader (name.....)
- 5 = NGO (Name.....) 6 = MFI (Name.....) 7 = Aceda 8 = Own money
- 9 = Mixed (own money & borrow ...)
- 10 = Other (specify).....

Code **4.5j:**

- 1 = Living 2 = Living and own business place 3 = own business place only
- 4 = rent to other for living 5 = rent to other for living and business
- 6 = rent to other for business place 7 = guesthouse
- 8 = own living, business and rent to other for living, business
- 9 = other (specify).....

Building/unit No. 2

The condition of building/unit:

4.3 aa Roof	4.3 ba Wall	4.3 ca Floor	4.3 da Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1 – None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.6 How long have you been conducting business here?: Years

Construction: extension/repairing

N	Establishment	4.5aa Total area (sq. m)	4.5ba Year of building	4.5ca N. of rooms	4.5da (code) Building permit	4.5ea (code) If no BP	4.5fa (code) Repair/ extend	4.5ga construction /Purchase cost (US\$)	4.5ha (code) Source of fund	4.5ia Current price (US\$)	4.5ja (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 3

The condition of building/unit:

4.3 ab Roof	4.3 bb Wall	4.3 cb Floor	4.3 db Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1 – None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.7 How long have you been conducting business here?: Years

Construction: extension/repairing

N	Establishment	4.5ab Total area (sq. m)	4.5bb Year of building	4.5cb N. of rooms	4.5db (code) Building permit	4.5eb (code) If no BP	4.5fb (code) Repair/ extend	4.5gb construction /Purchase cost (US\$)	4.5hb (code) Source of fund	4.5ib Current price (US\$)	4.5jb (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 4

The condition of building/unit:

4.3 ac Roof	4.3 bc Wall	4.3 cc Floor	4.3 dc Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.7a How long have you been conducting business here?: Years

Construction: extension/repairing

N	Establishment	4.5ac Total area (sq. m)	4.5bc Year of building	4.5cc N. of rooms	4.5dc (code) Building permit	4.5ec (code) If no BP	4.5fc (code) Repair/ extend	4.5gc construction /Purchase cost (US\$)	4.5hc (code) Source of fund	4.5ic Current price (US\$)	4.5jc (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 5

The condition of building/unit:

4.3 ad Roof	4.3 bd Wall	4.3 cd Floor	4.3 dd Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1– None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.7b How long have you been conducting business here?: Years

Construction: extension/repairing

N	Establishment	4.5ad Total area (sq. m)	4.5bd Year of building	4.5cd N. of rooms	4.5dd (code) Building permit	4.5ed (code) If no BP	4.5fd (code) Repair/ extend	4.5gd construction /Purchase cost (US\$)	4.5hd (code) Source of fund	4.5id Current price (US\$)	4.5jd (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 6

The condition of building/unit:

4.3 ae Roof	4.3 be Wall	4.3 ce Floor	4.3 de Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1 – None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.7c How long have you been conducting business here? Years

Construction: extension/repairing

N	Establishment	4.5ae Total area (sq. m)	4.5be Year of building	4.5ce N. of rooms	4.5de (code) Building permit	4.5ee (code) If no BP	4.5fe (code) Repair/ extend	4.5ge construction /Purchase cost (US\$)	4.5he (code) Source of fund	4.5ie Current price (US\$)	4.5je (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

Building/unit No. 7

The condition of building/unit:

4.3 af Roof	4.3 bf Wall	4.3 cf Floor	4.3 df Fence
1 – Thatch/tent	1 – Thatch/tent	1 – On the ground	1 – None
2 – Zinc sheets	2 – Zinc sheets	2 – Wood/bamboo strips	2 – Tree branches
3 – Tile	3 – Wood	3 – Concrete/brick	3 – Small pole/bamboo
4 – Wood/plywood	4 – Concrete/Brick	4 – Concrete and wood	4 – Wood
5 – Concrete	5 – Concrete and wood	5 – Other:.....	5 – Wire
6 – None	6 – None		6 – Concrete/Bar

4.7d How long have you been conducting business here?: Years

Construction: extension/repairing

N	Establishment	4.5af Total area (sq. m)	4.5bf Year of building	4.5cf N. of rooms	4.5df (code) Building permit	4.5ef (code) If no BP	4.5ff (code) Repair/ extend	4.5gf construction /Purchase cost (US\$)	4.5hf (code) Source of fund	4.5if Current price (US\$)	4.5jf (code) use it for
1	Ground floor										
2	Mezzanine										
3	1 st floor										
4	Mezzanine										
5	2 nd floor										
6	3 rd floor										
7	4 th floor										
8	5 th floor										
9	entire establishment										

V. LAND OWNERSHIP, LAND TRANSACTIONS, AND LAND CONFLICTS

This section concerns all the plots of land or units on which you are currently living and/or working and/or farming. In the table below, your residential plot is referred to as Plot 1.

5.1 Do you have any other residential/unit or commercial or agricultural lands?

1 = Yes (skip 5.2) 2 = No (ask plot 1)

5.2 If "No", why?

1 = sold

2 = never had any other land

3 = lost other land due to grabbing by other/state took the land back

4 = lost land due to displacement (just settled in this village/ divorce)

5 = gave all away to offspring

5.3 If "Yes", How many plots do you own?

These additional plots are referred to as Plots 2-4.

Q.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
	P. 1	P. 2	P. 3	P. 4	P. 5	P. 6	P. 7	P. 8	P. 9	P. 10	P. 11	P. 12	P. 13	P. 14	P. 15	P. 16	P. 17
5.4																	
5.5																	
5.6																	
5.7																	
5.8																	
5.9																	
5.10																	
5.11																	
5.12																	
5.13																	
5.14																	
5.15																	

Note:

P. = Plot. Please fill in plot by plot.

Please see the questionnaires in the table below. Please feel in the number for each question as in the column.

Question N	Question for the above questionnaires	Use the following
5.4	Where is it located? (commune/district/province) 1. In the village of interview 2. In the district/khan of interview 3. In other district/khan 4. In peri – urban of Phnom Penh 5. In province nearby the city 6. In district/provincial town 7. In rural area 8. In other place (specify).....	1 2 3 4 5 6 7 8
5.5	What is the size? (in square metres)	
5.6	What is plot used for? (Use codes) 1 = own living only/giving other to live/garage 2 = living and own business place 3 = own business place only/store/other doing business 4 = rent to other for living 5 = rent to other for living and business/agriculture 6 = rent to other for business place/agriculture 7 = guesthouse 8 = own living/business and rent to other for living and business/agriculture 9 = rice field (own/other) 10 = chamkar land/plantation/fruit trees 11 = living and agriculture (planting, raising animal,.....) 12 = leave it idle	1 2 3 4 5 6 7 8 9 10 11 12

5.7	Irrigation system 1 = Yes, 2 = No	
5.8	If you sell this land now, how much would you get in US\$?	
5.9	When did you acquire this plot? 1 = Before 1979 2 = Between 1979 and the 1993 (UNTAC Election) After 1993 (UNTAC Election)	1 2 3
5.10	How did you acquire it? 1 = given by the state (or local authority) 2 = inherited it or donated by relatives (parents/brother/sister) 3 = donated by friends 4 = own purchase 5 = cleared land/occupied for free 6 = mixed (given by the state and inheritance/purchase	1 2 3 4 5 6
5.11	If you bought this plot, how much did you pay for it? (US\$)	
5.12	When did you buy this plot? (in which year)	
5.13	Do you have any paper to certify this land? 1 = application receipt 2 = land investigation paper 3 = certificate (or title) 4 = agreement paper between buyer and seller 5 = letter transferring ownership at village level 6 = letter transferring ownership at commune level 7 = none (or no document available in the house) (ask 5.14) 8 = lost application receipt	1 2 3 4 5 6 7 8
5.14	If you haven't registered, what was the main reason? 1 = thought it was not necessary 2 = to avoid paying tax 3 = too much under table (unofficial) fee 4 = not knowing how to register 5 = land conflict 6 = no confidence in land title 7 = too complicated administrative processing 8 = no justify 9 = no measuring plan by the state/prohibited zone by the state	1 2 3 4 5 6 7 8 9
5.15	If you leave it idle, why? 1 = not enough labourers 2 = not profitable 3 = rotation 4 = lack of investment capital 5 = for transaction 6 = for rental/giving to children	1 2 3 4 5 6

Land Transactions

5.16 Have you sold any land/house/unit since 1989? (Circle an appropriate code)

1 = Yes 2 = No (If "No", go to Question 5.27)

(Ask by plot)	a Plot 1	b Plot 2	c Plot 3	d Plot 4	e Plot 5	f Plot 6	g Plot 7	h Plot 8
5.17 Where was the land/house you sold? (circle one)								
1. in the village of interview	1	1	1	1	1	1	1	1
2 in the district/khan of interview	2	2	2	2	2	2	2	2
3 in other district/khan	3	3	3	3	3	3	3	3
4 in peri-urban ares of Phnom Penh	4	4	4	4	4	4	4	4
5 in province nearby the city	5	5	5	5	5	5	5	5
6 in district/provincial town	6	6	6	6	6	6	6	6
7. in rural area	7	7	7	7	7	7	7	7
8. in other place (specify).....	8	8	8	8	8	8	8	8
5.18 What is the location of this plot/unit? (Circle an appropriate code)								
1 = On the side of main paved road	1	1	1	1	1	1	1	1
2 = Two directions accessible for vehicle	2	2	2	2	2	2	2	2
3 = One direction accessible for vehicle	3	3	3	3	3	3	3	3
4 = Accessible only by bicycle or motorbike	4	4	4	4	4	4	4	4
5 = Accessible only by foot	5	5	5	5	5	5	5	5
5. 19 What was the size of the plot you sold? (in sq. m.)								
5.20 What kind of land was the plot? 1- Residential	1	1	1	1	1	1	1	1
2- House/unit	2	2	2	2	2	2	2	2
3- Rice land	3	3	3	3	3	3	3	3
4- Chamkar land	4	4	4	4	4	4	4	4
5- Lake/forest /Apsara zone	5	5	5	5	5	5	5	5
5.21 How much did you sell it for? (in US\$)	.....	.....	.....	.....	.....	.....	.....	.....
5.22 When did you sell it? (year)	.....	.....	.....	.....	.....	.....	.....	.....
5.23 How did you document your transaction?								
1. change name with receipt at the village level	1	1	1	1	1	1	1	1
2. change name with receipt at the commune level	2	2	2	2	2	2	2	2
3. change name with receipt at the district level	3	3	3	3	3	3	3	3
4. change name on title at provincial level	4	4	4	4	4	4	4	4
5. change name of ownership by making title at the MLUPC	5	5	5	5	5	5	5	5
6. Agreement between buyer and seller	6	6	6	6	6	6	6	6
5.24 Who paid for this document? 1=Seller 2=Buyer 3=both								
5.25 How much was that? (in USD)								

5.26 Why did you sell it? (select the one main reason)	1	1	1	1	1	1	1	1
1 = need cash for business/for profit	2	2	2	2	2	2	2	2
2 = pay for health treatment	3	3	3	3	3	3	3	3
3 = need cash for food	4	4	4	4	4	4	4	4
4 = pay off debts/for children's education	5	5	5	5	5	5	5	5
5 = funeral for family member	6	6	6	6	6	6	6	6
6 = too small for profitable farming	7	7	7	7	7	7	7	7
7 = emigrate	8	8	8	8	8	8	8	8
8 = find job/change occupation	9	9	9	9	9	9	9	9
9 = poor soil/none productive.	10	10	10	10	10	10	10	10
10 = pressure from rich/powerful men/no path	11	11	11	11	11	11	11	11
11 = flooded	12	12	12	12	12	12	12	12
12 = too distant	13	13	13	13	13	13	13	13
13 = changing the place of residence	14	14	14	14	14	14	14	14
14 = built house/purchased means of transport								

Land Conflicts

5.27 Have you ever had conflicts over land or other property since the national election of 2003?

1 = Yes 2 = No (go to Section VI Credit Market)

5.28 When did it happen? In what year.....

5.29 The conflict occurred over which land ?

1 = Residential land 2 = Agricultural land 3 = Commercial land
4 = Mixed use land 5 = Condominium property (flat/shop)

5.30 How much land/property was in conflict?sq metres.

5.31 What was the type of the land conflict? (can be multiple answers)

1 = the land was grabbed by private individuals
2 = the land was grabbed by private company
3 = the land was grabbed by soldiers/armed officials
4 = the land was grabbed by officials
5 = the land was taken/reclaimed by state authorities
6 = boundary conflict with neighbours, others
7 = ownership conflict with non-relatives
8 = ownership conflict with relatives
9 = other (specify)

If you had a land conflict, where and/or who did you first go to for solving the conflict?

Conflict at	5.32a Code Who first helped solving the conflict?	5.32b Solved? 1 = Yes 2 = No	5.32c Cost	5.32d Result satisfied? 1 = Yes 2 = No	5.32e Comment, why "yes" or why "no"	5.32f Code Conflict was solved.
Plot 1						
Plot 2						
Plot 3						
Plot 4						
Plot 5						

- Code **5.32a**: 1 = Mutual agreement 2 = neighbour, family/friends 3 = Monk/ Achar
 4 = Village chief 5 = Commune leader
 6 = Dispute Settlement Committee (district)
 7 = Dispute Settlement Committee (province)
 8 = Dispute Settlement Committee (Phnom Penh)
 9 = Court at the province
 10 = Appeal court in Phnom Penh
 11 = At the national court
- Code **5.32f** 1 = Lost some of it 2 = Lost all of it 3 = Didn't lose any land.
 4 = No answer or no idea

VI. CREDIT MARKET

6.1 Have you obtained any loans in cash or gold since the national election of 2003?
 1 = Yes 2 = None (Skip to VII)

6.1a How many loans in total have you had since then? loans

6.2 Of that number, how many outstanding loans do you currently have?
 (number of loans)

Complete the below table for all loans announced in 6.1 a:

N	6.2a Code Type of loan	6.2b When month / year	6.2c Code From whom?	6.2d Amount of loan in US\$	6.2e [code below if less than a month] For how many months (from start to when you promise to pay back)	6.2f Code For what purpose	6.2g Code Collateral to obtain loan	6.2h Interest rate per month (%)	6.2i Both principle and interest to be repaid	6.2j Debt 1=paid off 2=in debt
1					.....month				
2					.....month				
3					.....month				
4					.....month				
5					.....month				
6					.....month				

- Code **6.2a** 1 = Loan in cash or gold (please convert to US\$)
 2 = Loan in paddy/rice need to be repaid in kind
 3 = Loan in rice or fertiliser or cash to be repaid in labour
- Code **6.2c** 1 = relative 2 = friend 3 = moneylender 4 = trader (what.....)
 5 = NGO (name.....) 6 = MFI (name.....) 7 = Aceda 8 = Canadia Bank
- Code **6.2e** 0.7 =20 days 0.5 =15 days 0.2 = 6 days 999 = No fixed date

Code **6.2f**

- | | |
|---------------------------------------|-----------------------|
| 1 = Farming/raising animals | 9 = Buying land/house |
| 2 = Business start-up/looking for job | 10 = Pay off debt |
| 3 = Business expansion | 11 = Home improvement |
| 4 = Buying input for business | 12 = Ceremony |
| 5 = Food shortage | 13 = Transportation |
| 6 = Health | 14 = Build house |
| 7 = Education | 15 = Other... |
| 8 = Solving hh conflict | |

- Code **6.2g** 1 = no 2 = gold 3 = animal 4 = land receipt
 5 = letter of ownership transferred 6 = land/house title 7 = other assets
 8 = group loan/guarantee 9 = other:....

VII. HOUSEHOLD EXPENDITURES

Since Khmer New Year (April) this year (2005), estimated expenditure on non-food items by all members of household:

Item/Activity	Amount	a Code From which source
7.1 Medical care/health treatment	.....USD	
7.2 Social Ceremony (wedding/funeral/etc)	.....USD	
7.2 a: In the house	.....USD	
7.2 b: Outside the house	.....USD	
7.3 Travel/tourism	.....USD	
7.4 Education		
7.4 a: Husband/Wife	.....USD	
7.4 b: Children (material/school fee/private class)	.....USD	
7.4 c: Other members	.....USD	
7.5 Contributions/fees for public construction	.....USD	
7.6 Purchasing furniture/household appliance	.....USD	
7.7 Modes of transportation (car, motorbike,bike...)	.....USD	
7.8 Other (telephone, .....)	.....USD	

Code **a:** 1 = loan/credit 2 = own sources 3 = gift 4 = mixed

7.9 Total (sum of Q7.1- Q7.8) :USD

Average monthly expenses on (last month's expenses):

Item/Activity	Amount	a Code (From which source)
7.10 Telephone card/service	.....USD	
7.11 Electricity/garbage	.....USD	
7.12 Water	.....USD	
7.13 Cooking (gas, charcoal, chopwood,...)	.....USD	
7.14 Clothes/shoes/make up/soap....	.....USD	
7.15 Pay for servant	.....USD	

Code **a:** 1 = loan/credit 2 = own sources 3 = gift 4 = mixed

7.16 Total (sum of Q7.10- Q7.15):USD

Average weekly expenses on (last week's expenses):

Item/Activity	Amount	a Code From which source
7.17 Entertainment	.....USD	
7.18 Fuel/transportation	.....USD	
7.19 Food/household consumption	.....USD	
7.20 Eat out	.....USD	
7.21 Other (specify).....	.....USD	

Code **a**: 1 = loan/credit 2 = own sources 3 = gift 4 = mixed

7.28 Total (sum of Q7.17 - Q7.21):USD

VIII. SMALL/MEDIUM ENTERPRISES (SMEs) (for commercial and mixed plots)

Background Information about Enterprise

	a Business 1	b Business 2	c Business 3	d Business 4
8.1 Relationship of respondent with owner: 1 = Owner 2 = Family member 3 = Partner				
8.2 Is this establishment managed directly by the owner? 1 = Yes 2 = No				
8.3 What is the gender of the owner/principal owner? 1 = Male 2 = Female				
8.4 Please describe the type of industry/business and the product/services: (Code SMEs)				
8.5 In which year did your production/operation start?				
8.6 Is this business registered? 1 = Yes 2 = No				
8.7 If not, why? (Code): 1 = Not necessary 2 = Too expensive 3 = Too complicated 4 = Will raise attention of authorities 5 = Other/don't know				

Finance and Credit

Sources	8.8 a Sources of finance from (coding below)	8.8 b Amount	8.8 c For what?
Number 1		..... USD	
Number 2		..... USD	
Number 3		..... USD	
Number 4		..... USD	

Code **8.8b** 1 = Own resources/saving 2 = Family money/supplier 3 = Selling land/property
 4 = Selling other assets 5 = Personal borrowing 6 = Moneylender
 7 = Private commercial bank (Give name of institution)
 8 = NGOs /Micro credit organisations (Give name of institution)
 9 = State bank 10 = Partnership/ shares 11 = Pawned goods
 12 = Other (specify)

Code **8.8c** 1 = start a new business 2 = operate the business 3 = expand business

Access to Formal Credit (Commercial Bank, Acleda, MFI)

8.9 Are you looking for credit at present? 1 = Yes (ask q. 8.11) 2 = No (ask q. 8.10)

8.10 I have not sought a loan because: (Code 9.10 a - f): 1 = strongly disagree; 2 = some what disagree; 3 = no comment; 4 = somewhat agree; 5 = strongly agree	
8.10a I am uninformed regarding banking/loan procedures (above coding)	
8.10b The profit from expansion would not be higher than the interest rate (above coding)	
8.10c Getting a loan requires informal payment (above coding)	
8.10d Collateral requirements of bank make it impossible for me to take out a loan (above coding)	
8.10e Bank procedures are too time consuming (above coding)	
8.10f Other (specify)	
I have sought a loan, but was refused because: (Code 9.11 a - f): 1 = strongly disagree; 2 = some what disagree; 3 = no comment; 4 = somewhat agree; 5 = strongly agree	
8.11a I do not have sufficient collateral (above coding)	
8.11b I have an outstanding loan (above coding)	
8.11c I am a first-time borrower (above coding)	
8.11d I improperly or incompletely filled out the application forms (above coding)	
8.11e I do not know why it was rejected (above coding)	
8.11f Other (specify)	

Employment Structure

	A Male	B Female	C Total
How many employees do you have now?			
8.12 Permanent employees			
8.13 Daily wage workers			
8.14 Family members			
How many employees did you have when you started?	A Male	B Female	C Total
8.15 Permanent employees			
8.16 Daily wage workers			
8.17 Family members			

IX: FEELINGS OF PEOPLE ON LAND TITLING AND REGISTRATION

9.1 In your opinion, what are the benefits from land/property titling and registration? Fill in from most to least important.	A	B	C	D

Coding: *(multiple answers permitted)*

- 1 – Having stability in owning the land.
- 2 – End conflict.
- 3 – Ease in borrowing money.
- 4 – Ease in transferring inheritance.
- 5 – Nothing different.
- 6 – No idle land.
- 7 – Ease in selling.

Annex B: Villages and Communes Included in the Survey**B1. Urban Areas of Phnom Penh**

District	Commune	Village	N. of HHs		Type of land use							
			Experimental	Control	1	2	3	4	5	6		
Daun Penh	Boeng Reang	Village 1	9		6	0	2	0	1	0		
		Village 2	10		6	0	4	0	0	0		
		Village 5	7		3	0	4	0	0	0		
		Village 6	3		1	0	2	0	0	0		
		Village 7	31		20	0	8	0	0	3		
		Village 8	9		7	0	1	0	0	1		
		Village 9	17		4	0	9	0	2	2		
		Tuol Kork	Boeng Kak 1	Village 1	36		27	0	7	0	1	1
				Village 2	53		45	0	7	0	0	1
Village 7	47				36	0	6	3	0	2		
Village 14	42				27	0	12	0	3	0		
Tuek L'ak 1	Village 1		12		3	0	4	0	3	2		
	Village 2		48		30	0	10	0	1	7		
	Village 3		33		13	0	9	0	5	6		
	Village 4		3		2	0	1	0	0	0		
	Village 6		24		15	0	4	0	1	4		
	Village 10		45		35	0	6	0	0	4		
	Village 13		11		5	1	4	1	0	0		
	Village 14		13		13	0	0	0	0	0		
	Chamkar Mon		Olympic	Village 3	47		27	0	6	0	3	11
				Village 4	48		31	0	9	0	1	7
Village 5		48			22	0	16	0	1	9		
Tonle Basak		Village 7		48	30	0	7	0	2	9		
		Village 9		49	19	0	24	0	4	2		
		Village 16		24	7	1	14	0	1	1		
Boeng Trabaek		Village 2		24	13	0	8	0	0	3		
		Village 3		24	8	0	9	0	3	4		
		Village 4		24	12	0	5	0	0	7		
		Village 5		24	14	0	6	0	0	4		
		Village 6		24	11	0	5	0	2	6		
		Village 8		24	6	0	7	0	5	6		
Experimental			596									
Control				265								
Total			861									

B2. Peri-Urban Areas of Phnom Penh										
District	Commune	Village	No. of HHs		Type of land use					
			Experimental	Control	1	2	3	4	5	6
Meanchey	Prek Pra	Preah Ponlea		60	43	0	11	4	1	1
		Prek Ta Pov		60	50	0	8	2	0	0
Dangkao	Chaom Chau	Chaom Chau	48		13	0	4	0	12	19
		Trapeang Thloeng	48		5	0	4	0	10	29
		Prey Sandaet	48		40	0	7	1	0	0
		Prey Lvea	54		32	0	4	15	2	1
	Cheung Aek	Cheung Aek		60	44	0	14	0	2	0
		Roluos		55	44	0	6	3	2	0
Russey Keo	Khmuonh	Khmuonh	60		46	0	14	0	0	0
		Banla S'et	60		30	0	13	7	5	5
		Anlong Kngan	72		52	0	17	2	1	0
		Trapeang Reang Thmei	60		49	0	10	1	0	0
	Prek Leap	Prek Leap		31	19	0	8	4	0	0
		Khtor		30	9	0	6	3	5	7
		Bak Khaeng		60	13	0	19	18	4	6
	experimental		450							
	control			356						
Total in Peri-Urban Areas			806							

B3. Siem Reap Province										
District	Commune	Village	N. of HHs		Type of land use					
			Experimental	Control	1	2	3	4	5	6
Siem Reap	Siem Reap	Spean Chreav	60		38	0	10	10	2	0
		Pou	60		32	0	19	8	1	0
		Kakranh	60		40	0	6	10	2	2
		Krasang Roleung	30		14	0	4	10	1	1
Siem Reap	Sala Kamreuk	Chonlong		30	20	0	4	4	2	0
		Wat Svay		71	36	0	13	12	8	2
		Ta Vien		42	21	0	9	3	6	3
		Trapeang Traeng		30	9	0	2	16	3	0
		Wat Bour		65	38	0	11	9	4	3
		Wat Damnak		90	36	0	29	6	13	6
					210	328	285		110	92	47	17
Total number in Siem Reap			538							
B4. Serei Saophoan										
District	Commune	Village	N. of HHs		Type of land use					
			Exp	Con	1	2	3	4	5	6
Serei Saophoan	Kompong Svay	Phum 2		108	46	2	34	17	7	2
		Souphi		110	50	0	32	23	3	2
		Kg. Svay		72	31	0	27	8	5	1
Serei Saophoan	Preah Ponlea	Phum 1		72	23	0	31	14	3	1
		Phum 4		36	14	0	21	0	1	0
Serei Saophoan	Ou Ambel	Roung Masin		37	17	0	7	9	2	2
		Ou Ambel		36	14	0	3	15	4	0
		Kourothan		36	16	0	14	3	3	0
				507	211	2	169	89	28	8
Total number in Banteay Meanchey			507							
Note: Type of land uses										
1 = Owner residential only										
2 = Owner commercial only										
3 = Owner residential and commercial										
4 = Owner residential and agricultural										
5 = Mixed (owner residential/commercial/agricultural/rent...)										
6 = Owner residential and rent (for stay or business)										

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