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“Not a rule of laws, but a rule of man”

Tenure security and water accessibility in urban Cambodia

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Abstract

This thesis discusses water supply and the impacts of tenure policy in an urban context in a developing country, particularly the relationship between tenure status and access to water. The relationship between tenure security and poverty reduction has been vividly debated among many researchers over several decades. Recent research on water supply has highlighted the linkage to tenure and suggested that tenure security is a prerequisite to increase water coverage levels (Sjöstedt 2011).

As opposed to previous published research on tenure security and water accessibility, this study adopts a qualitative approach including semi-structured interviews with representatives from the public water authority, non-governmental organization and households of informal as well as formal tenure status. Case study approach was adopted in order to gain in-depth insight about the context specific issues of the urban informal settlements in the Boeung Kak Lake area in Phnom Penh, Cambodia.

The result indicates that geographical proximity and arbitrary decisions by the public water authority appears to influence water accessibility to a larger extent than actual tenure status. Clear and consistent information on the tenure system as well as coherent tenure praxis is necessary in order to increase the tenure security and thus avoid a situation where access to safe and affordable water depends on different authorities' arbitrary judgment.

Key words: Tenure security, water accessibility, tenure policy, Cambodia, Boeung Kak Lake

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1. Introduction

Cambodia has undergone a rapid urbanization in the aftermath of the Khmer Rouge rule 1975 to 1979. During the Khmer Rouge an estimated 2 million Cambodians were killed and many families forcibly displaced. Private land ownership was banned and all land was declared as state property (The Inspection Panel 2010:15). The capital Phnom Penh with its current 1.5 million inhabitants (Phnom Penh City) was emptied and the urban population was placed in rural labor camps. When the terror ended in 1979 and people returned to the city they settled relatively freely in unoccupied spaces and vacant houses, with the connivance of the government (The Inspection Panel 2010:21).

Cambodia's urban population continues to grow. By 2020, the urban population is expected to double (The Inspection Panel 2010:20) which is likely to increase disputes over urban land. Local communities, especially low-income and marginalized groups, are already experiencing difficulties resulting from land conflicts, development initiatives and land grabbing by the powerful and monetized elite (Mgbako et al. 2010, Gorvett 2011-03-29, Amnesty International 2008). In the municipality of Phnom Penh land titles are increasingly being released to private developers which often results in forced evictions and relocations of poor communities to sites in the fringes of the city, far away from jobs and other livelihood opportunities.

The case of Boeung Kak Lake

In 2007 the municipality of Phnom Penh granted a 99-year lease contract of a 133 hectare area in Boeung Kak Lake (BKL) to the private company Shukaku Inc. for commercial development (The Inspection Panel 2010:28, Amnesty International 2011). Consequently, as of November 2010 approximately 1200 families had been evicted and another 2000 families (The Inspection Panel 2010:31) were at risk of forced evictions and subject of threats to accept inadequate compensation and relocation to a site 20 kilometers outside the city. Offers that the residents have declined since they feel it would jeopardize the families' survival.

Evictions can be seen as a serious threat against the livelihoods of the BKL residents. Access to public services, such as electricity, health care and water is to a large extent depending on the household's tenure status (Choguill C and Choguill M. 1996:87-89, Sjöstedt 2011, UNHabitat 2003:107). Access to clean water is critical for sustainable urban livelihoods for poor people and research indicates that relocated families suffer from inadequate water, sanitation and sewerage services as well as reduced opportunities of income generation (Heinonen 2008:98). Relocated families are forced to spend a larger proportion of

time and money to buy drinking water of poor quality, using resources that otherwise could have been used for investing into income opportunities.

1.1 Aim of the study, research questions and limitations

The evictions of the residents in the BKL area can be seen as a direct manifestation of the negative side of rapid urbanization and a failure of direct or indirect private or public development of urban areas.

As cities grow and the competition for land increases, poor people without secure tenure, often found in informal settlements, are at risk of not accessing their basic human rights such as clean drinking water. Local authorities face a great challenge in designing planning regulations and tenure policies that secure informal settlers' accessibility to public goods such as infrastructure for electricity, health services, education, transportation and water. However, this thesis will limit its attention to water accessibility. The aim of this thesis is to explore the relationship between access to water and tenure security which one can assume is affected by planning activities such as tenure policy-making.

The issue of rapid urbanization in developing countries and its consequences regarding water provision for poor people in informal settlements will be explored by studying the informal settlements in the Boeung Kak Lake area in Phnom Penh, Cambodia. As a human geographer and a student in Development Studies my intention is to better understand the impact of city planning processes with special reference to availability and accessibility to water in a developing community context. The research questions are as follows:

- What are the impacts of tenure status on informal settlements in the Boeung Kak Lake area regarding access to safe potable water?
- How do tenure and water policies affect the Boeung Kak Lake households' application of livelihood strategies in order to access drinking water?

2. Theoretical framework

2.1 Urbanization

Urbanization is rapidly growing all over the world and particularly dramatically in developing countries. The phenomenon is due to natural population growth as well as rural to urban migration (Baker 2008:1). By 2008, for the first time in human history, the number of people living in cities and towns exceeded the number of people living in rural areas (Satterthwaite 2008, Cohen 2006). The next 30 years of world population growth, is expected to take place in urban areas in developing countries and two thirds of the world's population is expected to be living in urban areas within 50 years (SIDA 2012-05-05). The most intense urbanization takes place in Africa and Asia with millions of people migrating to cities and towns in search for a better life.

Urbanization trends over the last century have resulted in an increased number and size of large cities as well as a shift in the location of these population clusters. One hundred years ago there were only 16 cities worldwide with a population of one million or more, most of them situated in industrial countries (Cohen 2006:64). Today that ratio has changed dramatically with about 400 cities containing a million people or more and about 70 percent of them situated in developing countries (Ibid). In addition, the average size of the world's 100 largest cities has increased by 5 800 000 over the last 200 years (Satterthwaite 2008:237).

Life in the city

As Barney Cohen (2006) highlights, cities can be seen as focal points for economic growth, innovation and employment. Public spending on infrastructure and services are more economically efficient as high urban densities reduce transaction costs and promote the production and diffusion of knowledge, factors which can enhance economic growth. Further, access to public services such as education and health care, electricity, water and sanitation are usually better than in rural areas.

However, as the city grows, governance becomes central in order to handle the ever expanding volumes of people seeking better life opportunities in urban areas. Social and economic development as well as sustainable management of the environment depends on how well the decision-makers manage to provide adequate services to the citizens while minimizing human imprints on the ecosystem. Rapid urbanization may imply increasing stress on the environment (Cohen 2006:64). Further, it may affect people's health and threaten community solidarity and the rights of individuals.

Urban poverty

Urban poverty imposes a significant challenge to city planners in the world's poorest nations as it is estimated that the proportion of urban poor increases faster than the overall rate of urban population growth (UNHabitat 2004:104-106). It is expected that the level of global urban poverty will increase from 30 to 45 or 50 percent by 2020 and almost exclusively take place in the developing world, leading to considerable increase in the global incidence of urban slums. The trend is towards an "urbanization of poverty" since the pace of poverty decline is slower in the cities than in the rural areas (Baker 2008:3). The urban poor often have to struggle with overcrowding and expensive housing due to higher land values in the cities (Ibid:5-8). Lack of adequate city planning and ability to absorb the increasing urban population often results in poor migrants ending up in deprived slum areas with limited access to essentials such as clean water. Urban poverty and its consequences are therefore important issues to bring attention to in order to reduce overall poverty.

Urban poverty and housing problems

As we have seen above urban poverty is often linked to inadequate housing and informal settlements and slums are common phenomena in the urban landscape in many developing countries (Cohen 2006:64). Almost one billion people worldwide lived in slums in 2009 and according to UNHabitat, 70 percent of the urban population in the least developed countries were slum dwellers in the same year (SIDA 2012-05-05). In South-central Asia the proportion of urban residents living in slums in 2001 was 58 percent, sub-Saharan-Africa had the largest proportion of 71.9 percent compared to Oceania who had the lowest (24.1 percent) (UNHabitat 2003:xxv).

According to UN Habitat (2003) slums are multidimensional in nature but share some common characteristics such as lack of basic services and insecure tenure status. *"Slums are neglected parts of cities where housing and living conditions are appallingly poor. Slums range from high-density, squalid central city tenements to spontaneous squatter settlements without legal recognition or rights, sprawling at the edge of cities"* (Cities Alliances Action Plan in UNHabitat 2003:10). An UN Expert Group Meeting in 2002 defined a slum household as "a group of individuals living under the same roof lacking one or more of the" following conditions:

- access to improved water;
- access to improved sanitation facilities;
- sufficient-living area,
- not overcrowded (three or more persons per room);

- structural quality and durability of dwellings,
- and security of tenure (UNHabitat 2003:18, Baker 2008:6).

Urban governments commonly view slums as illegal because the land has been occupied and because buildings violate planning regulations since they lack certain infrastructure or because the homes lack properly registered title deeds (Gilbert 2008:258-259). Thus, informal settlements and illegal housing are linked to issues of ownership of land and tenure policies. Land on which slum dwellers have settled has often been occupied with the connivance of the authorities. According to Gilbert (2008), illegality of land and tenure insecurity are matters of definition and political will and can in most cases be solved through provision of title deeds, supply of public services or by modifying planning regulations.

The concept of slums and squatter or informal settlements are often used interchangeably but there is a difference. Slum can be defined as “*housing which falls below a certain level which is necessary to contribute to human development*”, while squatter settlements indicates illegal occupation or unauthorized development of housing (Aldrich and Sandhu 1995:19). Both slums and squatter settlements can be viewed as indicators of urban poverty.

The link between urban poverty and tenure status will be discussed further later in this chapter but first we will look into the concept of tenure security and different types of tenure.

2.2 Tenure

Tenure rights are legal rules that describe what residents may or may not do with their property (Pacione 2009:527). Security of tenure means that households are protected by the state, under international law, against involuntary removal “*except in exceptional circumstances, and in such case only by an objective, legal procedure*” (Ibid, UNHabitat 2011:xii). Secure tenure has been described as a stabilizing component in the society, encouraging investment in housing and home-based economic activities as well as reducing social exclusion and improving access to urban services (Pacione 2009: 527-529). However, as we will see later in this chapter, this perspective on tenure security has been questioned.

Types of tenure

Countries apply a range of land tenure and property right systems and beside formal rights there may be various types of informal tenure that may differ between different levels within one country. Therefore the concept of tenure

continuum perhaps better describes how the essence of tenure (de facto status of tenure security) many times is more relevant than form (de jure tenure security) (UNHabitat 2011:6). Tenure continuum stresses incremental provision of tenure without denying the de facto situation on the ground.

Leasehold or freehold

Provision of legal tenure in the form of leasehold or freehold are the most expensive and time-consuming tenure types due to complex procedures and administration costs (Pacione 2009:528, Augustinus and Benschop 2003:3). Regularization of informal settlements in order to provide legal tenure status and individual freehold is many times complicated by corruption and missing land ownership data. Another common problem is that poor households cannot afford the increased housing expenses that follow improved titling, such as increased rents and service fees for water and sanitation. As the value of titled property increases, gentrification often takes place where low-income groups choose to sell off to higher income groups. Protective measures which ensure equal land rights are therefore crucial to avoid increasing landlessness (Augustinus and Benschop 2003:3).

Documented but unregistered rights

These types of tenure focus on user rights rather than ownership (Pacione 2009:528). Examples of documented but unregistered rights are unregistered lease or leaseholds, rentals, occupancy rights, user rights such as sub-lease, sub-rental, co-tenancy and co-occupancy rights which all are often administrated by local authorities (Augustinus and Benschop 2003:3). The level of tenure security depends on what evidence the residents can provide and the flexibility of local authorities (Durand-Lasserve 2007, Augustinus and Benschop 2003:3). The benefits of this type of tenure are that it is both cheaper and easier to handle and that it can be gradually upgraded. Gradual tenure upgrading within this category, lessens market pressures on settlements and gives the communities time to consolidate settlements and solve land disputes (Pacione 2009:528). However, the system requires good lessor-lessee relationships and partnerships, a user-friendly justice system and well-informed NGOs (Augustinus and Benschop 2003:3).

Group tenure

Benefits of group tenure are that it is cheaper to administrate compared to individual tenure and it may be easier to access credit as a group than as an individual (Augustinus and Benschop 2003:4). Land, buildings or an area can be the unit of group registration and individual occupation rights are granted through the cooperative, community land trust or housing association. The group negotiates conditions such a lease length, inheritance rights, decision-making

process and so on. Augustinus and Benschop (2003) highlight the importance of strong social cohesion of the group, cooperation between the community; the local authority; NGOs and landowners as well as regulated transfer of the development on land to safeguard the group against market pressures. Further, women's interests should be protected through special measures such as specifying women on records and consent of spouse before individual rights can be transferred.

Informal tenure types

Among the range of tenure types, de facto recognition of occupation is the most common form of tenure in slums and informal settlements (Augustinus and Benschop 2003:4). In the absence of formal rights residents may rely on political patronage, informally recognized customary rights, perceived secure tenure, oral evidence, proof of payment of utility, bills or similar documents with lower value than real rights or leaseholds to claim their quasi-ownership (Ibid 2003:4, Durand-Lasserve 2007). The extent of tenure security within informal tenure types depends on local circumstances and if they are combined with protection against forced evictions. In case of eviction, it may be difficult for informal settlers lacking a legal tenure status to claim fair compensation for replacement costs (Durand-Lasserve 2007). Local authorities can assert that the eviction process is legal and the settlers are illegal occupants but Durand-Lasserve (2007) argues that many evictions are not carried out according to legal procedures. De facto recognition of dwelling in combination with ability to mobilize resources to protect their interests usually means that informal settlers can benefit from a better position when negotiating for compensation or other alternatives. Thus, as Durand-Lasserve (2007) points out income, ethnicity, access to information, social status, and prevailing political environment are factors that influence the level of tenure security in informal settlements.

Informal tenure status and policy responses

Uncontrolled settlements imply a great challenge on local authorities to deliver basic services such as potable water and adequate sanitation. An urgent challenge since it is expected that 41 percent of the world's population will live in slums by 2030 (Durand-Lasserve 2007). A wide range of policy approaches have been applied to address the problems of informal settlements but so far there doesn't seem to exist any satisfactory panacea (UNHabitat 2003:128-129). In some cases the issue is ignored in hopes that it is a temporary phenomenon that will be solved as the economy develops. Otherwise three main types of interventions commonly applied in developing countries are in situ upgrading in existing informal settlements, evictions followed by resettlement on sites in the periphery of the city, or provision of housing subsidies or low-cost serviced plots for housing (Durand-Lasserve 2007, Gilbert 2008:260).

In Situ upgrading

During the 1970s democratization processes and an emerging civil society movement brought the right to adequate housing and protection against forced evictions on the political agenda (UNHabitat 2003:128-130, Pacione 2009:539). Informal settlers were recognized as capable of improving their housing if provided public assistance. Based on this aided self-help approach, with particular focus on tenure security and access to land, the World Bank and national governments began to support improvements of existing slum dwellings (UNHabitat 2003:130).

Upgrading interventions mainly refers to the insertion of adequate infrastructure and basic public services (Gilbert 2008:260). *In situ* upgrading implies that the residents can benefit from remaining in their familiar geography and social networks (UNHabitat 2003:130, Pacione 2009:539). However, the success of these types of policies to a large extent depends on the political commitment to maintain investments, improve environmental conditions and support the poor community on a long term basis (Gilbert 2008:260). Without accompanying social and economic measures targeting the poorest households, upgrading policies may lead to gentrification as improved housing leads to increasing housing expenditures which may lead the poor to sell off to higher income groups.

Evictions

Evictions as a policy response to informal settlements have aroused many protests from communities and human rights organizations as they are economically and socially disastrous resulting in fewer livelihood opportunities (Heinonen 2008:98). A common justification for eviction is to develop the land and pave way for more profitable activities in order to enhance economic development and reduce poverty (Pacione 2009:535, The World Bank). According to Durand-Lasserve (2007), current liberalization of land markets in many developing countries along with land titling programmes increase the pressure of market forces on urban low-income settlements. Development initiatives aiming to make more profitable use of the land is the direct or indirect reason behind to so called market-driven evictions (Durand-Lasserve 2007). Durand-Lasserve (2007) argues that even though this mechanism is one of the most common reasons behind forced evictions market-driven evictions are rarely defined as forced evictions because they take place without the use of violence or because evicted households are offered some kind of compensation. Other justifications for evictions can be urban beautification projects or health and environmental reasons (Pacione 2009:535). However, it turns out that evictions do little but move the problems to another location resulting in the creation of new slums.

Subsidies and serviced plots for housing

Housing subsidies to the poor is another policy response applied to stimulate private-sector housing which has generated additional housing as for example in Chile and South Africa (Gilbert 2008: 260). Site and services programmes involve the preparation of land, often in the outskirts of cities, and infrastructure provision in order to sell or lease lots to new residents (Pacione 2009:539). At best, residents benefit from increased tenure security, adequate infrastructure and freedom to decide on how to use their lot and house. However, the implementation of sites and services programmes in developing countries has varied in success (Ibid:540). New housing sites are often situated in the periphery of cities, far away from employment opportunities and social networks which work as safety nets, which risk creating new slums.

Participatory policies

The involvement of local people in development initiatives has been a popular approach since the beginning of the 1980s and is now often a requirement in order to receive support from institutions such as the World Bank. It is assumed that slum dwellers' involvement as well as the involvement of community-based organizations and non-governmental organizations will have positive effects on poverty alleviation (Buckley and Kalarickal 2005:240). This approach is based on the notion of subsidiarity and UNHabitat stresses that the authorities' role is to ensure that communities receive support such as training, organizational assistance, financial help and management advices in order to make efficient decisions at their level (UNHabitat 2003:131).

So far, successful participatory slum improvement has mostly been adopted on smaller scales such as in Sao Paulo where partnerships with local groups has resulted in improved living conditions in 16 000 favelas and in Thailand where poor groups can access low interest rate loans for community development through a fund for poor urban communities (UNHabitat 2003:132). Participatory processes require efficient organization, local goodwill and cohesion as well as political will. Critics question to what extent participatory approaches take into account various interests within one community or promoting an already set agenda by the local government (Cooke and Kothari 2001:6). They fear unequal power relations within communities may be reinforced if only the most influential are heard in the participatory process.

A concluding remark on informal tenure status and policy responses

So far, there is no panacea to the housing problems in developing countries. Housing problems in developing countries are closely linked to urban poverty and policy responses must therefore assume a holistic approach towards poverty

reduction. Planning policies must look beyond the interests of favored groups in the society and ensure the availability of land for low-income housing and credit systems adapted to low-income households (Pacione 2009:540f).

2.3 The link between tenure and water accessibility

Tenure security and its consequences, such as access to public services including water services have been vividly debated among researchers (Payne et al. 2009, Buckley and Kalarickal 2005, De Soto 2000). Secure tenure has been promoted as a means to achieve economic development and overcoming poverty (De Soto 2000). It is often recognized as a prerequisite for access to basic public services, credit and livelihood opportunities (UNHabitat 2003:107). Service providers are less willing to pay for costly infrastructure investments in an area with tenure insecurity indicating that the dwellings are likely to be removed. According to UNHabitat (2003) the availability of potable water in urban areas is far worse in informal settlements (Ibid:113). While about 70 percent of the urban households in developing countries have access to drinking water, the corresponding figure for informal households is 40 percent (Ibid).

Pro-tenure proponents

De Soto (2000) argues that the failure of capitalism in developing countries can be explained by the absence of secure tenure and ascribes the success of capitalism in the developed world as a consequence of gradually improved legal property systems (De Soto 2000:50-53). According to him, property rights provide access to credit markets and thus represent assets that can be turned into usable wealth and produce income (Ibid:46). Property functions as liable locus point for receiving public utility services, such as energy, water, sewage etcetera (Ibid: 49).

Research from squatter settlements in Buenos Aires indicates that land titling had positive impacts on access to mortgage credit and housing investment but not so much on access to other forms of credit (Galiani and Schargrotsky 2010). Research from Jakarta indicates that households without secure tenure are significantly less likely to have a water supply connection (Bakker et al. 2009: 1905). Choguill and Choguill (1996) argue that lack of access to safe water is not primarily due to poverty but due to absence of tenure security which lessens the incentives to invest properly in sustainable water solutions (Choguill and Choguill 1996:87-88). They suggest that security of tenure increases poor urban dwellers' willingness to contribute to their own infrastructure and further that community-based water management can be successful, provided adequate support from local governments and other organizations. These results suggest that lack of property

rights may undermine a household's ability to access improved water source and that titling programmes can lead to a gradual increase in physical and human capital investment which reduces poverty in the long run. Thus, pro-tenure proponents argue that land titles are important instruments to lift people out of poverty.

Criticism of titling programmes

However, the relationship between titling and access to urban infrastructure and public services is not necessarily a straightforward one. Critics question the role of tenure security when it comes to improvement of the situation for slum dwellers and informal settlers (Payne et al. 2009, Buckley and Kalarickal 2005). There seems to be no clear evidence that households with secure tenure enjoy better access to public infrastructure and services than those without (Payne et al. 2009:456). Despite tenure security and available physical infrastructure for water supply, many poor households cannot afford the water but have to rely on self-provision or expensive water from private vendors.

In the wake of recent economic recessions, the promotion of land and home ownership in low and middle income countries has been questioned as poor people are unable to afford repayments of service loans when interest rates increase in times of economic crisis (Payne et al. 2009). It is argued that titling programmes imply a costly process and that financial systems are poorly adapted to ensure credit to the poor or permit realization of title value (Ibid, Buckley and Kalarickal 2005). Based on a Euro-centric development perspective with its roots in private-propertycentred western capitalism formal land titling processes has been imposed on developing countries since the 18th and 19th century and promoted through many international development institutions (UNHabitat 2011:5). The critics question whether the World Bank's and other international institutions' promotion of increased tenure security corresponds to the interests of the key stakeholders (Buckley and Kalarickal 2006 in Payne et al. 2009:445). It is argued that it serves the interests of domestic and international investors to enhance national economic development at the expense of poor people.

Tenure security and water accessibility are complex issues that involve many different aspects. Interventions to increase the tenure security of informal settlements may improve the residents' access to water services provided that the local authorities follow up with installation of networks for these services and provided that the residents can afford the costs associated with the improved housing standard.

2.4 Water provision

It is widely recognized that water is essential in reducing poverty and achieving sustainable development. In year 2000 the world agreed upon the Millennium Development Goals (MDG) among which one target is set to halve the proportion of people living without sustainable access to safe drinking water (The Millennium Development Goals Report 2010). In urban areas in the developing world the drinking water coverage was 94 per cent in 2008 (Ibid:58). Still there are some 140 million urban dwellers around the world that do not have access to clean and affordable water (Water & Sanitation for the Urban Poor 2012-05-05). Slum dwellers often suffer the consequences of governments that are incapable or unwilling to deliver adequate and affordable water services. Construction and maintenance of water infrastructure is costly and many developing countries struggle to finance expansion into economically marginalized areas where the ability to pay for the service is low (Araral 2008:527).

Private or public provision?

Over the past decades it has been vividly debated whether urban public services, including water services, should be provided by private actors or through public provision. Water services have traditionally been viewed as public goods¹, goods which benefit all customers but not profitable enough to attract private investors (Koundori and Kountouris 2008:310, Pacione 2009:356). However, since water services are characterized by economies of scale the result is monopolistic power which could lead to socially inefficient allocations.

Those who argue in favour of private provision of public services base their arguments on the market principle that public goods should be allocated according to people's willingness to pay for them (Pacione 2009:356). Under influences of neoliberalism this approach have had an impact on water management from the 1980s and onwards when water began to be considered as a private good and public-private partnerships emerged as a solution for more responsible and efficient water management (Loftus 2008:543-546). Private operators are assumed to deliver better services than inefficient states unable to cope with the scale of demands and increased competition is expected to lead to lower prices for the customers. While full-cost pricing is assumed to promote sound finances critics argue that the transfer of costs directly to consumers strikes particularly hard against the poor (Ibid:544). Another risk that may result from private provision is failure to extend water networks to poor and non-profitable areas.

¹ Public goods are goods that are nonrival, i.e. one consumer's consumption of the good does not exclude others to consume the same good (Pindyck and Rubinfeld 1998:673). Further, public goods are also non-excludable meaning that people cannot be excluded from consuming them.

Those who argue in favor of public sector provision may base their arguments on a Marxist perspective that public services are instruments to maintain social order and should be provided by a public sector to ensure political legitimation (Pacione 2009:357). For others, the objective of public services distribution is the welfare of the society as a whole. They argue that needs rather than ability to pay should be the starting point. Jeffrey Sachs (2005) argues that public provision is more efficient since many households are unable to access infrastructure services at market prices and that the non-rival nature of infrastructure goods implies that infrastructure should be available for all in order to maximize the social benefit of that infrastructure (Sachs 2005:251-255). The debate on urban water management continues and so far there seems to be no clear evidence of any absolute advantages or disadvantages of public or private water provision.

2.5 Urban planning and water services

From a geographic point of view, water accessibility and availability are important aspects to consider in development contexts. The availability of public services, such as water services, determines the development in an area and influence the spatial direction of development and future patterns of growth (UNHabitat 2009:157). Urban planners therefore have an important task to balance public and private interests to ensure an equitable and sustainable development.

Decisions regarding policy and resource allocation are commonly influenced by the MDG as well as other international and national treaties and conventions aiming to improve the provision of water in a sustainable manner (UNHabitat 2006:114). National decision-makers are challenged to translate the broad goals into action at the local level and combine environmental sustainability goals with meeting the needs of people. Improvement of water provision in slums and informal settlements is seldom a separate goal but rather part of upgrading programmes or titling programmes (Ibid: 83).

Accessibility

Location and accessibility are essential concepts when planning for urban infrastructure. Various aspects such as water quality, physical safety, gender, affordability and equity must be taken into account to ensure access to safe drinking water (UNHabitat 2006:126). Planners normally seek to maximize access to public services at the lowest possible cost by evaluating different combinations of equity and efficiency (Pacione 2009:358f). From the consumers' point of view, accessibility depends on opportunity and choice which in turn depends on

physical ability, laws, rules and customs and temporal limits such as opening hours. While it may be relatively easy for planners to identify the most efficient location, equity in public-service provision is more difficult to determine. According to Pacione (2009) a guideline is that public services are equitably distributed when they promote greater equal living conditions between citizens than before. Price levels significantly impact access to water and therefore price criteria adjusted to local circumstances is important to consider. Connection fees usually increase with the distance from the network which strikes particularly hard to residents living in informal settlements situated in the periphery of cities (Bakker et al. 2009:1895).

Water suppliers

Water services can be provided in many ways and vary from place to place and even within one city (UNHabitat 2006:137f). The suppliers can be public utilities, community organizations or cooperatives, private firms or private vendors. The type of system and scale of operation in one place depends on local and national conditions, policies and traditions.

Water sources

Water provision in urban centers can be divided into different service levels and as such the different levels represent different options to access water. UNHabitat (2006) identifies the following five levels; unimproved water sources such as a well or water from rivers or lakes; public standpipes connected to an urban water supply source; cooperative standpipes shared by a group of people; yard taps and in-house taps (UNHabitat 2006:52). However, many households access their water through other means such as illegal and informal network connections or buying from private vendors. Households may choose to rely on these informal systems due to poor service quality by the official water utility or because of economic constraints which imply that poor households cannot afford to link up to network services (Bayliss 2002:9, Estache et al. 2001:1184f). Ironically, the poor risk ending up paying substantially more per unit for informal provision of water from private vendors. According to the World Bank, buying from water vendors can cost 6-16 times the meter rate (water.worldbank.org 2012-05-05).

Tenure policies and access to water

The impact of tenure policies on poor people's access to water is an important aspect for policy-makers and urban planners to consider achieving sustainable development. Case studies from southern Africa suggest that tenure reforms are a prerequisite for increasing water coverage levels (Sjöstedt 2011:139). Sjöstedt points to results which indicate that Botswana, as compared to Zambia, has more

successful levels of water coverage due to more active investments in securing citizen's land tenure.

Land use policies to a large extent determine what kind of water source slum dwellers and residents in informal settlements will have access to. Through supply of affordable land and removal of unnecessary regulations as well as simplified administration processes, governments can make land for housing with adequate water provision more accessible to poor households (UNHabitat 2006:89f). It is also important to design policies which protect poor households living in areas of high commercial value to prevent clashes between existing livelihood activities of the locals and private development initiatives. By promoting incremental processes of tenure upgrading and provision of infrastructure and public services communities, poor settlements may become less vulnerable to market forces (Durand-Lasserre 2007).

2.6 Tenure status and water accessibility within The Livelihoods Framework and The Asset Vulnerability Framework

When tenure and water are placed in the context of the livelihoods framework, tenure security and access to water become important parts of informal settlers' survival strategies affecting their living conditions. The livelihood framework is based on the notion that households have a portfolio of assets to access in times of need and to build up in better times (Rakodi 2008:255). In an urban context certain assets may be of particular importance. Rakodi particularly points out; physical assets such as housing, infrastructure and equipment for economic activities; human assets such as labor power, skills and good health; financial assets such as savings and credits; social assets such as belonging to a formal or informal social organization which give access to information, contacts and support; and political assets such as channels of representation and influence (Ibid).

Access to water, land and tenure security represents natural capital assets upon which urban populations directly or indirectly depend for their survival (Rakodi 1999:316). Access to drinking water represents a physical asset which can be applied in a livelihood strategy to improve the income. Water accessibility influences how much time that is freed up for income-earning activities and the quality of that water affects the household's health status which in turn affects the capacity to work. Allocation of resources for adequate water supply therefore directly affects the ability of households to increase their physical capital.

The asset vulnerability framework, a further developed version of the livelihood approach, stresses assets of the urban poor as determinants of urban household's ability to respond to risks, negative changes and opportunities (Moser 1998:1). The vulnerability of a household is determined by their ability to manage their assets in a productive way. Vulnerability better captures the multidimensional process of people moving in and out of poverty (Ibid:3). Households with fewer assets are more vulnerable as they have fewer opportunities to transform assets into income activities.

The asset vulnerability framework identifies labor as the urban poor's most important asset which generates income (Moser 1998:4). Human capital and health status affects the working capacity, the skills and the education, which in turn determine the productivity and return of labor. Household relations, such as trust and collaboration between households, are assets which also affect the income opportunity as well as access to infrastructure, services and political influence in urban communities (Ibid:4). Social capital, in the form of social ties and trust, is an asset which significantly affects the capability to respond to external changes and maintain the social cohesion.

Within the asset vulnerability framework housing is regarded a productive asset. In an urban context, tenure security or housing is particularly important as it can be used to generate income and provide defence in times of hardships. Moser identifies housing ownership as the most important productive asset for the urban poor (Moser 1998:10). Lack of tenure security and legal title prevents the households from using their assets productively and makes families more vulnerable to impoverishment (Ibid:10, Rakodi 2008:255).

2.7 Theoretical framework for the analysis

My thesis deals with the relationship between tenure security and water accessibility. Based on the theoretical framework presented above, the following table has been constructed for the analysis. The y-axis represents tenure status, divided into subcategories based on previous research by Augustinus and Benschop (2003). The x-axis represents access to water, divided into types of water sources based on the classification used by UNHabitat (2006).

Table 1. Tenure Status and Access to Water

Access to water

	Municipal network connections <i>Public stand-pipes, in-house connections</i>	Non-network provision <i>Bulk supply, private vendors, resale of piped water</i>	Informal (illegal) network connections	Self-supply <i>Water from lakes, rivers, wells</i>
Leasehold or freehold				
Documented but unregistered rights				
Group tenure				
Informal tenure types				

Source: Adapted from Augustinus and Benschop (2003) and UNHabitat (2006).

3. Methodology

3.1 Study design

This research seeks to expand the understanding of the relationship between tenure policies and accessibility to clean drinking water in an urban slum context. By accounts of literature reviews on this topic there seems to be a limited number of studies dealing with tenure policies and its impact on water coverage levels in particular. However, Sjöstedt (2011) presents two case studies from Botswana and Zambia where he looks at the impact of secure land tenure on levels of water access in the sub-Saharan Africa. While Sjöstedt's work is based on a quantitative analysis and a comparative review of land policies in two Sub-Saharan countries, this paper adopts a qualitative approach including interviews in order to gain in-depth insight into the context specific issues in the urban setting of Boeung Kak Lake (BKL) area, in Phnom Penh, Cambodia. Interpretivism is the epistemological position in this study applied through interviews with local residents in the area as well as local authority representatives responsible for tenure policies and water provision.

Case study approach was chosen to gain in-depth understanding of how the poor residents in the BKL area are affected by the authorities' tenure policy in terms of water accessibility. Case study design is suitable when the aim is to study a complex phenomenon in real-life situations in a given context (Yin 2003:12-13).

3.2 Case Study selection

To expand the knowledge about the relationship between tenure status and water accessibility, the BKL area in Phnom Penh, Cambodia has been selected. Case study of the chosen area and the unit of analysis within the case are the poor BKL residents represented by four households. Other stakeholders are also included in order to provide better understanding of the issues at hand. Phnom Penh is unique in the sense that the public water supply has been successful in a city located in a developing country (Kjellén 2012). The Phnom Penh Water Supply Authority (PPWSA) has received several international awards for its successful delivery of water supply to the city inhabitants. However, much remains to be done to provide accessible and affordable water for the urban poor. Previous research show that only around 30 per cent of those living in poor settlements in Phnom Penh have a central piped water connection (Heinonen 2008:100) and water coverage levels are worse off in relocation sites in the outskirts of Phnom Penh where many evicted BKL families now reside.

When selecting cases it is important to avoid biased cases, the result of choosing a case in order to achieve certain results (Yin 2003:10). Research indicates that poor tenure status implies poor water coverage levels (Choguill and Choguill 1996, Sjöstedt 2011) but in the case of Phnom Penh this is not necessarily true as PPWSA have set their goal to extend water networks also into poorer areas where many households lack secure tenure. However, it is not known how current tenure policies by the municipality of Phnom Penh affect these intentions and it is therefore difficult to predict the results of this case study.

3.3. Data collection

Data and methodological triangulation will be employed in order to maximize the understanding of the complex issue of tenure security and water accessibility in the BKL area. As Flick points to triangulation is a way to transgress “the (always limited) epistemological potentials of the individual method” (Flick 2009:444). According to Yin (2003) case studies involve the collection of several sources of data in order to grasp the complexity of the case (Yin 2003:13-14). Quantitative aspects such as official water coverage levels will be studied and qualitative aspects such as current policies and the residents’ perception of how the policies affect them in terms of access to water.

Quantitative data in the form of statistics have been collected from PPWSA, the municipality of Phnom Penh, UNHabitat and non-governmental organizations (NGOs) in order to back up statements and provide a broader picture of the overall water accessibility in Phnom Penh.

The qualitative data collection consists of reviews of secondary material such as books, articles, policy documents, published documents, reports, websites and other sources of information on the chosen topic are used to analyze the situation in the BKL area with reference to a global and local context of urbanization and water provision for residents in informal settlements. Further, semi-structured individual interviews with key interviewees have been applied to explore how tenure and water policies affect slum dwellers’ access to water in the BKL area.

Interviews

Interviews are considered suitable for this case study since individual interviews allow for a more in-depth discussion than for example a questionnaire. Semi-structured interviews allow people to express more freely than in the standardized interview but still provide a structure that can be useful to stay within focus (May 2010:123). Interviewees are given room to give their version of the issue by depicting and give account for their livelihood and coping strategies expressing

themselves in their personal way (Valentine 1997:111). Further, it is a useful technique to reveal processes at work in a certain social setting. In accordance with recommendations by Flick (2009:157), the interview guide has been constructed out of the thesis' theoretical framework, covering different topics linked to my research questions.

Selection of interviewees

Key informants for the interviews were selected through purposive sampling to ensure that the informants have the necessary knowledge and experience of the studied issue. The interviewees represent different perspectives on the topic of the thesis. Representatives from the municipality of Phnom Penh and PPWSA were approached in order to explore an authority perspective about the city planning process regarding land use and water provision as well as about the intentions of existing tenure policies. To obtain a non-governmental and a grassroots' perspective on the impacts of tenure policies in terms of water accessibility for the poor, representatives from organizations such as UNHabitat, United Nations Development Programme (UNDP), the Asian Development Bank (ADB), the Center On Housing Rights & Evictions (COHRE), the Housing Rights Task Forces (HRTF) and Solidarity for the Urban Poor Federation were contacted. To get in contact with representatives of informal settlers in the BKL area I had to rely on a so called gatekeeper, a person within an institution that can mediate access to people or settings (Flowerdew and Martin 1997:115f). So called *snowballing* was employed to gain access to potential interviewees among the residents in the area in question. This technique involves the building of layers of contacts by using existing contacts to find new contacts (Valentine 1997:116).

Even though targeting the most appropriate informants in relation to the research question was a guiding criterion I had to accept whatever sources available since it was difficult to access people willing to participate in interviews. To avoid that people declined my request for an interview, based on the feeling that the topic is too sensitive to talk about, I emphasized that the study is for educational purposes only and offered anonymity. Further, by explaining the research project and clarifying the aim of the interviews it was hoped that the informants would feel that they had enough information to decide whether they wished to participate in an interview or not.

Results

It turned out much more difficult than expected to access some potential interviewees. Communication via email did not work out very well and all but one interview had to be arranged through phone calls and personal visits with the assistance of an interpreter. In the end, it was only Phnom Penh Water Supply

Authority (PPWSA) and Housing Rights Task Forces (HRTF) that were available for interviews. Despite repeated attempts to get in contact with the municipality of Phnom Penh by email, phone and personal visits, I did not manage to arrange an interview or establish a written conversation about their tenure policy or master plans. However, the snowballing technique worked out quite well and resulted in four interviewees; two living in the BKL area and two living in the relocation site Damnak Trayeung. It was through HRTF that I got in contact with two village representatives one of whom lived in the BKL area and had recently acquired a land title while the other representative had been evicted to the Damnak Trayeung relocation site. These representatives put me in contact with three other villagers; one family living in the BKL area lacking a legal land title and two evicted families, formerly BKL residents, now living in Damnak Trayeung.

Analysis of data

Based on the theoretical framework a qualitative content analysis will be employed in order to interpret the collected data. Tenure status as well as tenure policies and its impact on access to water and applied coping strategies will be analyzed.

3.3 Validity

Good research quality requires taking validity and reliability into account. In social sciences it is important to account for not only *what* is being produced but *how* it being produced (May 2010:29). By accounting for the research process as explicitly as possible the reliability of the study increases as others can check the data and procedures behind my conclusions and judge the appropriateness of the theory and method employed for this study (Yin 2003:37). In order to ensure good quality this study is based on the use of various sources (Ibid:34-36). To further ensure that I had understood the interviewees correctly I discussed the interviews with my interpreter as well as summarized briefly my findings to the interviewees in order to give them a chance to comment on my interpretations. In one case I conducted a follow-up interview to clarify certain information that the interviewee had provided at the first occasion.

Single case studies are usually criticized for limited generalizability. The context of case studies differs between cases which is why it is difficult to draw general conclusions about a studied phenomenon (Gomm et al. 2000:39). But as Yin (2003) argues the case study should not be seen as a sample and generalization of the results is still possible through the use of a theoretical framework into which particular findings can be generalized (Yin 2003:10,33,37). Due to time and resource constraints, this study centers around a single case. Although it could be

argued that multiple case studies would have been to prefer in order to present a comparative perspective (under the prerequisite of an extended field study), it was assessed that the chosen strategy is beneficial in that it can give more in-depth information. The analysis of the contemporary context specific situation of the residents in the BKL area is based on the theoretical framework developed in the thesis and as such it is hoped to contribute with knowledge that can be used to expand theories on the relationship between tenure status and water accessibility. Even though the results of this study do not hold to be generalized, it is hoped that the findings of this paper could serve as an additional example to refer to when discussing the role of tenure security and improved access to safe water.

Considerations

According to Flick (2009) the quality of recording and documenting data as well as an appropriate interpretation affects the reliability of the research (Flick 2009:386). My intentions have been to document the interviews carefully. To use a Dictaphone may appear as the obvious choice in addition to handwritten notes. However, since the topic is perceived as politically sensitive, a recorder could prevent people from speaking freely if they know what is being said is recorded. In addition, the use of a recorder might be a new experience for them which may evoke feelings of insecurity. Thus, no recorder has been used for the interviews. To further reduce unnecessary stress the interviews were conducted in a familiar setting, i.e. the homes of the interviewees.

Reflections and challenges

Valentine (1997) argues that the researcher should reflect upon his or her positionality as well as influence on the interviewees (Valentine 1997:113). The fact that I am a foreign white woman probably has influenced the way the informants relate to me. As women in a Cambodian context usually are considered to be of lower status than men it may have obstructed my access to male informants. However, as an educated foreign woman who is relatively richer than the grassroots interviewees, I have likely been given a higher status and better opportunities to talk to informants of both sexes. Another aspect to consider is to recognize interviewees living in a poor settlement as social agents and not reduce them to victims of poverty. In relation to informants representing the authorities, it is likely that being a master student I have been placed in a subordinate position, particularly if the authorities did wish to control access to information and influence my research findings (Valentine 1997:114).

Language and gender norms are other issues which may lead to crucial information being left out or misunderstood. For this reason I have tried to minimize the risk by involving an interpreter with experiences of working with

international researchers. However, the interpreter may also impact the research. Female interviewees may have felt uncomfortable to share certain information due to the fact that my interpreter was male. Further, in the highly hierarchical Cambodian society, it is likely that the interpreter had a higher social status than some of the poor interviewees given that he has a Bachelor of business and enterprise management and being a translation services manager in his own business. This may have affected what information the interviewees chose to share during the interviews and how the interpreter rendered their information.

When it comes to interpretation of the research findings, it is important to be aware that my interpretations are shaped by my own experiences and background. As a woman in her thirties, growing up in a middle class western society based on a Greek humanist worldview, my ways of interpreting things is probably very different from the way Cambodians see things.

4. Case study context

4.1 Urbanization and informal settlements in Phnom Penh

Ranking 139 (UNDP 2011), Cambodia has one of the lowest Human Development Index (HDI) in the world. Poverty has remained high even during times of economic growth such as between 2004 and 2007 when the poverty rate in Cambodia declined only from 34.7 per cent to 30.4 per cent (ADB 2010). Rapid population growth and rising numbers of rural populations moving to Phnom Penh has resulted in increasing demands for land and the emergence of informal settlements. Those who cannot afford adequate housing often end up as squatters in whatever land that is available. In the last two decades migrants have started to settle on non-usable public land in the outskirts of the city hoping to acquire some tenure security if they stay there long enough (Fallavier 2003:3-5). Based on current city growth rates the government estimates a need for approximately 1.1 million new houses by 2030 (General Secretariat of Council for Land Policy 2010).

To understand the urbanization pattern in Phnom Penh, it helps to pay attention to the climate context and the hydraulic landscape (Schneider 2011:5). Phnom Penh is situated on the banks of Ton Le Sap, the Mekong River and the Basac River. Since its foundation in 1434 the city has expanded spatially over the years through a polder system with dikes and draining of wet areas making the city vulnerable to flooding during the rainy season. As the city continues to expand rivers, lakes and water systems are filled in to give room for the growing population. This means that flooded water has to be led to areas outside the city instead of being regulated by the natural system, a solution which has its limitations in terms of long-term sustainability.

A local survey from 1999 identified that around 173 000 people lives in slum dwellings in Phnom Penh, most of them on land in the central parts close to job opportunities (Fallavier 2003:3). The slum dwellers are usually found on public land such as the edges of railways, roads, lakes, rivers, waterways, canals, bridges and on private land living on back streets in better-off areas, in abandoned buildings that the owners intend to sell off for commercial development or on rooftops (HRTF 2011:12, Fallavier 2003:3-4). Since these residents most often lack any kind of legal tenure security they face the threat of being evicted sooner or later.

According to statistics from Centre on Housing Rights and Evictions (COHRE) (2009) and Amnesty International (2008) 133 000 people in Phnom Penh or 11 per cent of the city population was evicted between 1990 and 2008. A survey

conducted in October 2011 shows that 74 communities or 32 440 people in Phnom Penh are currently at risk of being forcefully displaced due to insecure tenure status (HRTF 2011:12).

Table 2. Number of affected communities, households and people in Phnom Penh 2011

Location of the communities	Number of affected communities	Number of affected households or families	Number of affected people
Railway edge	21	2505	8429
Road edge	13	1903	3930
Lake edge	9	2029	6794
River edge	6	670	1927
Waterway edge	5	183	418
Canal edge	4	1815	3015
Public land but onsite development	8	942	1126
State public land	3	966	2362
Beside the Pagoda	2	97	155
Rooftop	2	14	100
Bridge edge	1	798	4184
Total	74	11 922	32 440

Source: Housing Rights Task Forces (HRTF), 2011, Socio Economic Impact of Forced Eviction at the household level in Phnom Penh

The survey shows that both the households that have been forced to move to relocation sites outside the city and those facing the threat of being evicted suffer from negative socio-economic impacts. The livelihoods of the households are affected in terms of poor health, less income opportunities and negative impacts on the children's schooling which altogether further increases their burden of debt (HRTF 2011). While those living in the central city in most cases do have access to clean water in the form of public taps, the situation is far worse in the relocation sites.

4.2 Land ownership and tenure

Land ownership and tenure systems in Cambodia are complex issues and in order to address the problems one needs to understand the historical background. Cambodia's ownership structure was destroyed during the Khmer Rouge regime when the cities were emptied; houses left abandoned and cadastral records were destroyed (Khemro and Payne 2004:182, Törhönen 2001:408, The Inspection Panel 2010:15). After the Khmer Rouge years, people moved back to the cities

and settled wherever they could find space with the connivance of the authorities. In 1985 all occupants in Phnom Penh were provided with family books recognizing them as residents, even though they were still considered as occupants who could be evicted in exchange for compensation (Fallavier 2003:5).

De facto recognition of occupation continued to characterize the property market until 1989 when the government abrogated ownership structures which applied before 1979 and introduced private land rights for residence, business and agrarian purposes with limited success (Khemro and Payne 2004:182, Törhönen 2001:408, Rusell 1997:104). A new land law in 1992 stated the right of Cambodians to possess and use land for housing but due to rapid urbanization and increasing land values in combination with weak institutions, the situation did not improve. As the government realized the necessity to ameliorate the tenure system in order to develop Cambodia, a new land law was approved in 2001. According to this law any Cambodian may claim legal ownership of land which they have used or lived on for at least five years before the approval of the 2001 Land Law (Mgbaku et al. 2010:46, Sokbunthoeun 2010:2). However, many poor families are unaware of this right as well as of the application procedure. Households classified as informal settlements must receive permission from the authorities to be able to apply for a land title. Consequently, land distribution remains highly unequally with 20-30 per cent of landowners holding 70 per cent of Cambodia's land (in 2004) while 45 per cent of the rural families are landless and the poorest 40 per cent occupying only 10 per cent of the land (UNIFEM et al. 2004:60).

Types of land ownership according to the 2001 land law

According to the 2001 Land Law three types of ownership exists:

- state public property (forests, protected areas etc.) for resource conservation,
- state private property for economic and social development and,
- private property (residential or agricultural land),
(The Inspection Panel 2010:17).

According to the 2001 Land Law state public land pertain immovable property belonging to the state and for public use only (MLMUPC Cambodia 2002:5-6). It can be land such as nature reserves, infrastructure for transportation and other public services etcetera. Unlike state private land, state public land is non-transferable to individual ownership. However, it can be reclassified into state private land which is defined as land belonging to individual state institutions (Ibid:6). Private ownership implies the right to use and manage the property in accordance with the law (Ibid:21).

The Cambodian tenure system

Despite attempts to establish a tenure system the housing problems remain in the cities and the government seems to have failed to regulate the land market to create solutions for the urban poor (Khemro and Payne 2004:182). As uncontrolled urbanization continues poor people are forced to move into informal settlements, often situated on state public land. A progressive land market has led to a situation where many informal settlers face the threat of eviction as the government intends to make this land available for private initiatives. According to Khemro and Payne (2004) a common policy response by the governments has been to relocate informal settlers to titled sites outside the city with devastating results as people's livelihood opportunities are severely affected (Ibid:182).

Based on the 2001 Land Law, Khemro and Payne (2004) have developed four types of categories of ownership to better describe types of land on which the urban poor in Phnom Penh reside: state public land, state private land, private land and government concession land intended for relocated squatters (Khemro and Payne 2004:182). These main types of ownership are the basis for legal interpretation on tenure rights. However, it should be noted that different tenure rights may exist within one ownership category and that there is a widespread praxis of different combinations of informal tenure systems. Many Cambodians still abide to traditional customs without the involvement of any formal procedures (Sopha et al. 2001:39).

Thus, it is not easy to get an overview of where the responsibility for administration of land, tenure and property rights in Cambodia lies. In the absence of a centralized ministry with the overall responsibility for land data and due to the lack of complete statistics or clearly demarcated boundaries of different administrative bodies there is still much confusion on land concessions and tenure system (Sopha et al. 2001:8). There is a lack of consistency in the way that issuing of land titles is conducted by different authorities using different approaches. Several institutions are involved and sometimes their responsibilities overlap but the Ministry for land management, Urban planning and Construction (MLMUPC) together with the subordinated General Department of Cadaster and Geography can be considered to have the overall responsibility of land issues (The Inspection Panel 2010:19, Törhönen 2001:409). In addition, different ministries and government agencies as well as local governments also have a say in land administration matters. Finally, a Cadastral Commission and a National Authority for Land Dispute Resolution are intended to handle land disputes (The Inspection Panel 2010:19).

Land affairs in Phnom Penh are handled by the municipality of Phnom Penh under the Land Department and Bureau of Urban Affairs who are obligated to report to the Ministry of the Interior as well as to the Prime Minister (The Inspection Panel 2010:19).

Application procedure for a legal title

According to the formal procedure of sporadic land titling any citizen wishing to register for a legal title shall apply to their commune chief (Sophal et al. 2001:39-41). The application is handled by the commune chief, the village chief, at least one official from the district cadastral office plus one respected older person from the community. Anyone can raise objections to the purpose of the applicant within 10-15 days after the case has been announced. An in-site inspection is carried out by the sub-commission together with the neighboring land holders wishing to have a say about the demarcation process. During the inspection family background, household composition, land use and land acquisition are recorded. If there are no objections to the application of residential land title, a form is signed by the village chief. A recommendation of approval by the cadastral office is then to be approved by the district chief. If approved, the application is further forwarded to the Department of Land Management, Urban Planning, Construction and the Cadastre at the provincial level who in turn to the provincial governor for a final endorsement of issuance of a title. However, the issuing is not finalized until the legality of the whole process has been examined by the provincial cadastral office as well as the central cadastral office. Finally, the case must be registered in the immovable property register by the Central Cadastral Office.

Systematic titling basically follows the same procedure but use more detailed mapping techniques and a more decentralized consulting process and cost less per title (Sophal et al. 2001:41). Despite that 4.5 million applications for both sporadic and systematic titles had been made in Cambodia until year 2000, only around 500 000 titles had been issued by that time (Ibid). The slow pace can probably be partly explained by the many land disputes.

4.3 Water supply in Phnom Penh

Statistics from the municipality of Phnom Penh hold that as of 2010, approximately 81 per cent of the inhabitants in Phnom Penh enjoyed access to tap water and nearly 6 per cent used water wells (Phnom Penh City Notable Data 2010). The water is supplied by Phnom Penh Water Supply Authority (PPWSA) which is a public enterprise operating under commercial law, owned by the Cambodian state, but operating fully autonomous (PPWSA 2010, Kjellén

2012:37). PPWSA has received international recognition for its successful work and leadership personified in General Director Ek Sonn Chan.

With financial help from the World Bank, PPWSA is implementing the Cambodian government's Urban Water Supply Project which has resulted in reliable water supply to 90 per cent of Phnom Penh's inhabitants and this figure is expected to increase to 100 per cent by 2020 (The World Bank, Ministry of Planning Cambodia 2009:50).

In order to meet the challenges of a growing population in Phnom Penh, the government has at repeated occasions expanded the borders of the municipality of Phnom Penh to include new communities and surrounding villages. These expansions have resulted in increasing demands for extended public water provision. The public water suppliers of Phnom Penh, PPWSA plans their work according to the Master Plan of Phnom Penh but Mr. Lin highlights that the company is not always able to keep up with the speed of the rapid urbanization in progress (interview Mr. Lin 2012-03-13). Network expansions into new areas are costly and time consuming and according to Mr. Lin there are two options to meet the challenges. PPWSA can either extend existing networks to the new sites or arrange for trucks to deliver water tanks to the newly incorporated Phnom Penh communities.

PPWSA plays an important role to increase the coverage level of clean drinking water in Cambodia and the government has asked PPWSA to support capacity building of provincial water authorities to ensure sustainable water provision for the whole country (interview Mr. Lin 2012-03-13). At the moment PPWSA are facilitating the training of five provincial water suppliers.

SERVICE COVERAGE & EXPANSION PLAN 2011-2020

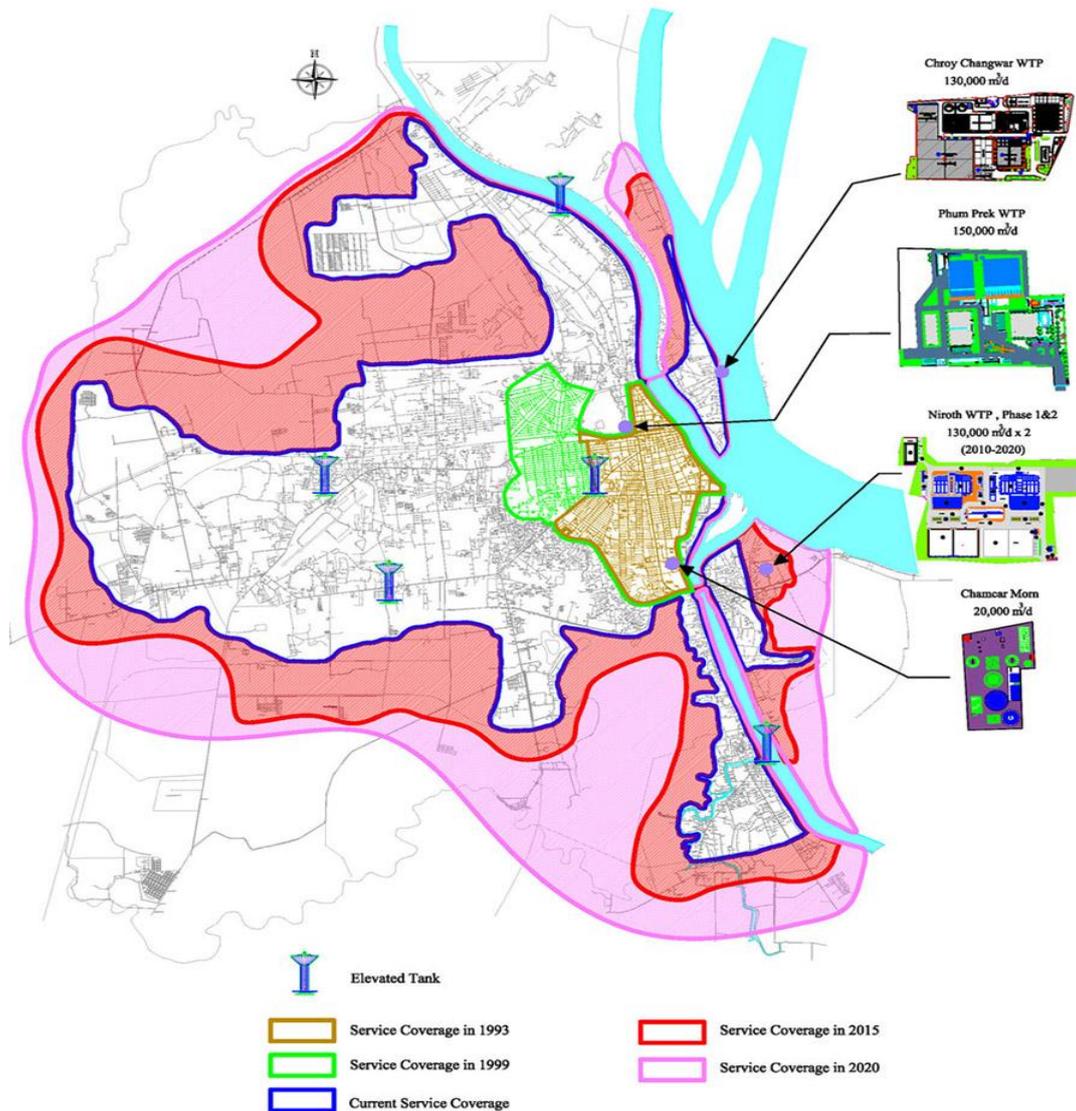


Figure 1. PPWSA Service Coverage & Expansion Plan 2011-2020

Source: Phnom Penh Water Supply Authority

Clean Water for the Poor programme

To support the government's poverty reduction goals, PPWSA introduced a new water policy in 1998 within the Urban Water Supply Project aiming to provide clean water to the poor inhabitants of Phnom Penh (PPWSA 2010:1). The policy is implemented through the Clean Water for the Poor programme partly financed through grants from the World Bank, the Asian Development Bank and the Mairie de Paris (PPWSA 2010, Kjellén 2012:36). The policy objective to extend the water network into poor areas is financed through cross-subsidization between different customers.

Through a discount programme poor households can access clean water to a cheaper per meter price (500 riel/m³) than if buying water from private vendors who often charge 3000-4000 riel/m³ (interview Mr. Lin 2012-03-13). The supplied water is to be of good quality, meaning that it should be drinkable directly from the tap and available 24 hours every day. Subsidies are applied to ensure that poor households can afford to pay the connection fee that comes with the installment of an in-door water pipe. The subsidies range from 30 per cent and up to 100 per cent depending on the poverty status of the household (PPWSA 2010:1). Based on their financial capability, consumers repay the installment within 10, 15 or 20 months. Over and above that, the households pay user fees for the amount of consumed water.

PPWSAs water policy

Those wishing to be connected to the public water network make a request to PPWSA that applies a criteria system to assess which discount rate the family is entitled to (PPWSA 2010:13). According to PPWSA, the programme intends to also target families in housing of very poor quality, as long as the dwellings are not temporary. Their water policy do not permit installment of in-door taps into communities that are likely to be removed within a short period of time (interview Mr. Lin 2012-03-13 PPWSA 2010:6f). Further, a household must also “*register at the Municipality and have a clear and definite address*” (PPWSA 2010:6-7).

However, informal settlements lacking long-term tenure security can still be provided with temporary water supply through a community representative (interview Mr. Lin 2012-03-13). A temporary tap is installed into the representative’s house whose role is to resell the tap-water to the rest of the community and bring the payments back to PPWSA. In collaboration with local authorities and the poor communities, the Clean Water for the Poor programme also carries out a broadcast program to raise awareness of the programme and how to obtain clean water (PPWSA 2010:3).

5. Case Study: Boeung Kak Lake

In the wake of rapid urbanization and increased land value the BKL area, situated in the Sras Chok commune in Phnom Penh, has gradually gone from a disowned place to a highly attractive area due to its central location in the city. From being an area of little interest to the government BKL is now considered suitable for commercial development and other beautification projects. This chapter starts with a presentation of the BKL area and its land use (section 5.1), primarily based on secondary data, before I go on to present the empirical results of my research (section 5.2 – 5.5).

5.1. Introduction - BKL land use

The BKL area was mainly an unused area before the Khmer Rouge period, but by 1991 most of the land had been completely occupied by families claiming different tenure status (The Inspection Panel, 2010:xv). In 2001, the lake along with its surroundings was declared as state-public land not allowed for individual ownership in accordance with the 2001 Land Law (The Inspection Panel 2010:26). Parts of the area are traversed by defunct railway lines and other parts are declared state parks. The riverbanks are defined as state-private land which means tenants may be entitled to formal tenure rights. Prior to 2007, about 4250 families were living around the lake, many had lived there for more than 10 years, some even up to 30 years, occupying the land with the connivance of the authorities and their tenure status was regulated by the use of family books approved by the official village chiefs (Bridges Across Borders Cambodia 2012-05-05, Schneider 2011, HRTF 2011, Interviewee 1 BKL 2012-03-14). The families survived by growing vegetables, fisheries and small businesses along the shore. The lake attracted foreign tourists and many families earned a living by running guest houses and other tourist related services which also stimulated the local economy (The Inspection Panel 2010:25-26).

Tenure reforms?

In 2003 the Prime Minister Hun Sen announced that the government would implement a 5 year in-situ upgrading programme in 500 of the city's informal settlements including parts of the BKL area (Amnesty International 2012-05-05, Bridges Across Borders Cambodia 2012-05-05, The Inspection Panel 2010). There are no specifics of boundaries of the park or the pattern of settlements and in the absence of State land registrations the area was subjected to an adjudication process to investigate the competing claims by the state, existing possessors and other claimants. In March 2006, the Municipality of Phnom Penh pronounced Sras Chok commune to be subject to systematic titling under the Land

Management and Administration Project (LMAP), a titling programme supported by the World Bank (The Inspection Panel 2010:xv). During the programme it turned out that many BKL households were excluded from the land registration process even though they possessed evidence proving their legal rights to the land (Bridges Across Borders Cambodia 2012-05-05). Others who made claims for land rights were rejected by the government which referred to the 2001 Land Law which holds that state-public land cannot be transferred to private ownership (Sokbunthoeun 2010:2).

Change of course

In February 2007 there was a sudden change of course when the government pronounced BKL to be a development zone on state-private land and granted a 99-year lease concession to the private developer Shukaku Inc. for \$79 million dollar (The Inspection Panel 2010:xv, Bridges Across Borders Cambodia 2012-05-05, interview Mr. Phearum 2012-03-10). However, it is estimated that the real market value for the 133 hectare real estate is 25 times higher (Schneider 2011:8). This change of course affected the tenure security of 4,000 families living in the area as the residents were classified as illegal squatters and issued with eviction orders.

It has been argued that strong ties between Cambodia's Prime Minister Hun Sen and the owner of the private developer, ruling party Senator Lao Meng Khin, also a major donor to the ruling Cambodian People's Party, is a poignant reason behind the sudden re-reclassification of land (Schneider 2011:8, Bridges Across Borders Cambodia 2012-05-05). In December 2010 the government approved a re-registration of the lease concession, confirming a joint venture between Shukaku Inc. and the Chinese firm Erdos Hong Jun Investment Co., Ltd of Inner Mongolia. The private developers continue the transformation of BKL into a place for luxury homes, commerce and tourism.

Community resistance

The development initiative aroused massive protests from the informal residents in BKL. National as well as international housing rights organizations have called for attention to the government's unsatisfactory handling of the BKL case. The re-classification of the area into a state-private land should have implied that the residents have the right to claim land titles for their private property use, but after the conclusion with Shukaku Inc. the area was designed into a development zone all other private property claims were restricted (Schneider 2011:8). An alternative proposal for an in-situ upgrading on 12 per cent of the development zone was put forward by the BKL residents in February 2011 but the government rejected the initiative. In response to the eviction orders, the residents have been

protesting and in different ways stressing their dissatisfaction with the development initiative. Several human rights organizations have reported about threats and arrests in connection to the eviction orders as well as excessive use of force by the authorities (Amnesty International 2008, Bridges Across Borders Cambodia 2012-05-05).

World Bank investigation

In 2009, the Centre for Housing Rights and Evictions (COHRE) filed a request to the World Bank for an investigation of the LMAP, claiming that the residents had been denied their right to a transparent and proper adjudication process (The Inspection Panel 2010). The BKL residents felt that they had been denied protection according to the LMAP Resettlement Policy Framework which is based on World Bank social safeguards and regulates the procedure for resettlement and compensation (Bridges Across Borders Cambodia 2012-05-05). The World Bank investigation resulted in an urge to stop the evictions. However, it was not until the bank announced that it would stop providing loans to Cambodia that the government took action in August 2011 and issued a 12.44 hectare to be cut out of the development area to provide formal land titles to the remaining families (Bridges Across Borders Cambodia 2012-05-05, The World Bank 2011). As of February 2012, 73 out of 194 families living in “Village 22” in BKL have received land titles by the local authorities (Save Boueng Kak Campaign 2012-05-05). Despite these measures, it is still unclear what tenure security the residents can expect as the 12.44 hectare set aside for those residents who have refused to move, has not been clearly marked by the authorities (interview Mr. Phearum 2012-03-10, Interviewee 2 BKL 2012-03-14, Khouth 2012-02-21). The residents complain about extended issuing processes of the land titles and poor drainage system that cause regular flooding.



Figure 2. Aerial photo of Boeung Kak Lake taken in 2006
 Source: Mann, Lim 2006 in World Bank Inspection Panel 2010:24



Figure 3. Aerial photo of Boeung Kak Lake taken in June 2011
 Source: Phnom Penh City, <http://www.phnompenh.gov.kh/news-road-r6-boeung-kak-to-access-soon-1390.html>

5.2. Tenure security?

To identify the tenure status of the households in BKL is not an easy task. The settlement emerged as the families settled with de facto recognition of occupation after the Khmer Rouge regime 1979 (The Inspection Panel 2010: xvii). According to the residents, they are legally entitled to stay despite that parts of the area was declared as state-public land in 2001 (Interviewees 1 and 2 BKL 2012-03-14, Interviewees 1 and 2 Damnak Trayeung, 2012-03-15). They rely on documents certified at district, commune or village levels such as bill of sales, family books and other documents verifying the numbers of residential years (Sopha et al. 2001:39, The Inspection Panel 2010: xvii). Considering the 2001 Land Law which holds that land rights can be claimed after five years of on-site dwelling, their reasoning is logical. However, the residents seem unaware of the clause stating that informal settlements have to seek permission from the authorities before they are allowed to apply for a land title (Mgbaku et al. 2010:46). Land holding without proper documentation is common (Sokbunthoeun 2010:2) and the interviews confirm the widespread application of informal tenure praxis.

“We have our family books that tell about our identity, status of living and how many people that live in the house. We bought the house from the former private owner who had no legal title but the village chief signed the purchase agreement. No one cared about land titles at that time since we had the family books. The village chief agreed to this even though we did not have a legal title because he knew that we had been living here for a long time and that we had bought the house”

(Interviewee 1 BKL 2012-03-14)

“I have no legal title from the City Hall, but I have the family book proving that we have lived here for a long time and I also have the receipt from when I bought the house. It is a purchase and sales letter signed by the Village Chief. But the government says my house is situated outside the 12.44 hectare boundary which according to the authorities means that this land belongs to the private development company”

(Interviewee 2 BKL 2012-03-14)

“In Boeung Kak Lake, our housing rights were defined in the family book. We owned it since we bought it from another family that lived there before us. But according to the government our house was situated on land belonging to the private company so they forced us to move.”

(Interviewee 2 Damnak Trayeung 2012-03-15)

Even among the relocated residents there seems to be confusion about legal documents and it is uncertain if the tenure security has increased compared to living in the informal settlements of BKL:

“I have a legal title but it is not a title from the authorities. It is a transfer document from the private developer, stating that I have agreed to transfer my house in Boeung Kak Lake to this house in this relocation site. I accepted the transfer because I had no other option. I had to move since my house was filled with sand and when the lake dried out, I lost my source of income”
(Interviewee 1 Damnak Trayeung 2012-03-15)

“This is not a transfer house but we have a document saying that we have the right to stay in this house. It is a purchase and sales letter. We accepted compensation from the private developer in the form of money so that we could buy this house here”
(Interviewee 2 Damnak Trayeung 2012-03-15)

It seems that the frequent application of informal customs and failure to disseminate information about tenure rights implies that many of the BKL residents were not even aware of the informal or illegal character of the praxis until the eviction orders were issued. The employment of informal documents is so common that it seems that people perceive their family books and purchase and sales letters as equal to a legal land title. This perception is further reinforced as the local government administration, in the form of village chiefs, are involved in the informal tenure procedure through their approval of certain documents.

Despite that the government stresses the importance of tenure security to enhance development and the national economy (General Secretariat of Council for Land Policy 2010:11), it seems that clarity of the tenure status of the evicted residents who were convinced or forced to move to relocation sites outside central Phnom Penh has not been prioritized. Research show that due to corruption and confusion on information resettled families commonly are withheld from government-issued receipts which specify possessory rights and contains information necessary to apply for a land title after five years of possession in accordance with the 2001 Land Law (Mgbaku et al. 2010:48).

Does the national housing policy apply in BKL?

Increased tenure security in informal communities is an explicit objective in the national housing policy (General Secretariat of Council for Land Policy 2010:5). According to the housing policy squatting can be allowed for a limited period of time. Evictions are not to be carried out without a proper investigation. Relocation is pronounced as a last option to be applied in accordance with the principles of

participation, transparency, accountability and sustainability. Further, the government highlights the need for effective enforcement of the existing legal framework parallel to development of forms of tenure security for poor and low-income households. However, confusion and uncertainty about the titling system make people reluctant to abide to the formal registration process (General Secretariat of Council for Land Policy 2010:5, interview Mr. Phearum 2012-03-10, Interviewee 1 BKL 2012-03-21).

Mr. Phearum, director of the Housing Rights Task Force (HRTF) which is a local NGO cooperating with both national and international organizations to prevent forced evictions and promote adequate housing in Cambodia, says that land ownership is a sensitive issue in Cambodia which prevents a transparent and open titling procedure (interview Mr. Phearum 2012-03-10). According to him, the Municipality of Phnom Penh's tenure policy regarding the BKL area discriminates poor people and does not respect basic human rights. Increasing land values has led to expensive urban land titles which are unaffordable for the low-income residents in BKL. Mr. Phearum argues that the government prioritizes development projects in order to embellish the city rather than housing rights of low-income citizens. Further, the government has failed to disseminate information regarding the development plans of BKL as well as the options and legal rights of the informal residents. Limited freedom of expression and fear of harassments impedes the BKL residents from claiming their rights. Mr. Phearum's experience is that the government often ignores the law which regulates land ownership and housing rights in order to achieve their own purposes.

"It is not a rule of laws but a rule of man"
(Interview Mr. Phearum 2012-03-10)

A fair land management?

Research suggests that tenure insecurity in Cambodia to a large extent can be explained by the personalized and politicized nature of the Cambodian state. It is argued that land tenure conflicts result from a weak bureaucracy and a land policy reform implemented by "*a politicized and personalized bureaucracy characterized by patron-client relationships*" (Sokbunthoeun 2010)". This implies widespread corruption and broken promises which affect people's trust in the government and the land management institutions.

"People do not have much knowledge about the process and people are afraid of the procedure. They don't understand why the authority comes to measure the house and asks for our thumbprints. We don't trust anyone but our nearest family and friends since we have lost our trust in authorities and officers of the

government. They are corrupt and just seek to satisfy their own interests”
(Interviewee 1 BKL 2012-03-14)

Lack of trust in the tenure system contributes to increasing tenure insecurity and the credibility of official statements is low. One of my interviewees recalls when the Prime Minister of Cambodia declared that the BKL residents were entitled to land titles:

“Our Prime Minister Hun Sen announced that families which have lived on their land for more than 5 years were legally entitled the ownership of the land. But still there are families who have lived here for more than 5 to 10 years, at the same place, who are forced to move. So we cannot trust him”
(Interviewee 1 BKL 2012-03-14)

Despite the national policy which highlights the need for institutional coordination and stakeholder’s participation (General Secretariat of Council for Land Policy 2010:6), it seems that the authorities are unwilling to discuss the BKL case with the civil society organizations or the international community. Organizations such as HRTF and the UN have unsuccessfully tried to advocate the rights of the BKL residents (interview Mr. Phearum 2012-03-10, phone consultation Mr. Vanna Sok 2012-03-14).

“We have tried to communicate with the government about the unlawful evictions but they refuse to speak with us or reply our letters”
(Interview Mr. Phearum 2012-03-10)

As long as the government maintains its deprecatory attitude the possibilities for change are small. Evictees living in the relocation site as well as residents in BKL testify of a desperate situation:

“We have requested the UNHabitat and the World Bank to intervene and conduct an investigation about our situation but the UN and the World Bank cannot do anything as long as the government do not approve”
(Interviewee 1 Damnak Trayeung 2012-03-15)

“We have applied to the World Bank and the UN for help. They want to help us but they can’t unless they get the green light from the government which they haven’t so far”
(Interviewee 1 BKL 2012-03-14)

According to the UNHabitat Manager in Phnom Penh, Mr. Vanna Sok, UNHabitat no longer run housing programmes in Cambodia but awaits the Cambodian government to take initiative and seek co-operation in these kinds of projects

(phone consultation Mr. Vanna Sok 2012-03-14). An official letter from UNHabitat to the local housing rights group in Boeung Kak state that:

“...the primary focus necessarily shifted to gauging the level of the commitment from the Municipality of Phnom Penh and to explore the nature of technical assistance UNHabitat could provide. Unless commitment is attained from the Royal Government of Cambodia, our assistance will not result in satisfactory outcomes”

(Letter by UNHabitat dated 2012-03-07 to the Members of the Boeung Kak Lake Working Group)

Hope of a fair future?

It seems that the fulfillment of a fair and transparent procedure of the BKL case depends on the arbitrary actions by the Cambodian state. Since land rights are sensitive issues in Cambodia, it has been difficult to access information on the current tenure policy as well as the Master Plan regarding Phnom Penh. In the draft of the national housing policy the government stresses the importance of engaging affected communities and the civil society in an open participatory process to resolve housing issues (General Secretariat of Council for Land Policy 2010). However, the interviewees have not been invited to participate in any information meetings or negotiations on land use and the potential for the civil society to influence the situation seems small unless significant donors put pressure on the government to comply with national and international laws. It was after the World Bank had announced that they would not provide new loans to Cambodia until the government had solved the BKL case that the Prime Minister acted to have 12.44 hectare cut out of the development project and land titles issued to the families living inside. Despite this measure some obscurity remains which impedes the BKL resident's tenure security:

“Before I got the title I had no tenure security and was threatened by eviction of the developers company. It took us 5 years of protests to get this title. I'm very happy now. But we want the government to clearly demarcate the 12.44 ha area which they have cut from the development project to be set aside for the families living inside it...”

(Interviewee 1 BKL 2012-03-14)

Thus, the struggle to obtain tenure security continues. It seems that the matter is not yet settled, not even for those BKL residents that have been granted legal titles. As long as the government fails to follow up their actions and define the bounds for the 12.44 hectare area, the tenure of the BKL residents cannot be considered secured.

5.3 Access to water?

Despite the lack of legal land titles, the informal settlements in BKL seem to be well equipped with in-door taps through municipal network connections which supply them with clean water. According to PPWSA, the BKL settlements are considered as “established” due to the fact that people have resided there for a “long” time (interview Mr. Lin 2012-03-13), which is why the households have been provided with water by the PPWSA at least during the last 10 years (Interviewee 1 BKL 2012-03-14, Interviewee 2 BKL 2012-03-14).

“Our house has an in-door tap for water. The water is supplied by the PPWSA and we have enjoyed this service for more than 10 years. Our neighbors and all residents in BKL have got in-door taps in their houses, even those households who are threatened by eviction”
(Interviewee 1 BKL 2012-03-14)

At the time when PPWSA installed the pipes into the houses the residents faced no immediate threats of eviction. Informal tenure security through the connivance of the authorities appears to have worked to secure access to safe water through in-door taps, except for some household that according to HRTF still lack in-door taps and have to rely on public taps (interview Mr. Phearum 2012-03-10). However BKL may be an exception since PPWSA’s water policy states this kind of water service is not supplied to communities which are likely to be removed or resettled (interview Mr. Lin 2012-03-13, PPWSA 2010:1).

Regardless if the water comes from in-door or public taps, one can conclude that access to clean water through the municipal network connection is a reality for the households in BKL. It seems that this holds true regardless of tenure status. The biggest issue in terms of water is flooding caused by drainage of the lake as Shukaku Inc. develops the area (interview Mr. Phearum 2012-03-10). According to Mr. Phearum, property damages and health problems derived from these interventions are seldom adequately compensated.

The impact of evictions

A survey by HRTF shows that access to clean water is significantly worse in the relocation sites where access to public services including water services often is very poor (HRTF 2011, interview Mr. Phearum 2012-03-10). Untreated wells and poor water quality often causes health problems and are difficult to elude as the poor families cannot afford to buy expensive water provided by private vendors. According to Mr. Phearum, a dilemma is that NGOs involved in advocacy work and awareness raising of the housing rights of the evictees living in the relocation sites without proper access to water, electricity, affordable transportations or schools for the children have to consider their role carefully. They have to balance

their support to these families so that they contribute to social development without taking over the government's responsibilities. HRTF has noticed a tendency by the government to refer relocated families to different NGOs for provision of their needs when the families complain about the lack of clean water and public services.

Geographic proximity seems to be significant for water accessibility. Distance and scattered dwellings are the two biggest constraints to connect poor communities to the municipal water network (interview Mr. Lin 2012-03-13). Since many relocation areas are situated in the fringes of Phnom Penh, some more than 20 kilometers from the central city, water supply to these areas requires costly network constructions of new pipes. This is the situation despite the government's housing policy stating that relocation sites should be situated near city areas in order to ease investments of adequate and affordable public services (General Secretariat of Council for Land Policy 2010:9). The policy also stresses the importance of appropriate location of the relocation site from the perspective of the residents.

“People or communities legally occupying the settlements that are relocated shall have the right to land and housing in compliance with the criteria of adequate living; shall have tenure security; the relocation site shall be appropriately situated, with access to employment and basic services such as health, education, and other social infrastructures, and technical infrastructures like fresh water supply, sewage systems, sanitation, and electricity.”

(General Secretariat of Council for Land Policy 2010:5)

Water accessibility in Damnak Trayeung

Despite the above intentions it was not until recently that the evicted BKL residents who ended up in the Damnak Trayeung relocation site were provided with in-door taps. Before the community was connected to the municipal water network, they had to rely on self-supply of well water which implied both a time consuming and expensive procedure. There was only one well in the area and the relocated families had to buy water from a reseller who made a business opportunity out of people's need for water (Interviewee 1 Damnak Trayeung 2012-03-15, Interviewee 2 Damnak Trayeung 2012-03-15).

“Our house has in-door tap since less than 1 year. Before that we bought water from the only existing well in the area through a private re-seller”

(Interviewee 2 Damnak Trayeung 2012-03-15)

“We bought it and stored it in a large jar outside our house. There was only 1 well in the whole area and I had to buy from the only person reselling the water.”

It took several days from when I first requested to buy water until it was delivered to me”

(Interviewee 1 Damnak Trayeung 2012-03-15)

Besides being expensive, the water was of poor quality causing health problems among the consumers.

“It was clear when you looked at it first. But when you drank it gave pain to your stomach... Since I had to work, I had no time to boil the water. Sometimes I borrowed water from my neighbors who were kind enough to give it for free to me many times”

(Interviewee 1 Damnak Trayeung 2012-03-15)

The delay of public water services in the relocation sites can probably partly be explained by failure to disseminate information regarding the Water for the Clean programme. According to one interviewee living in Damnak Trayeung the biggest obstacle to access clean and affordable water from the municipal network was that the families did not know about the formal application procedure (Interviewee 1 Damnak Trayeung 2012-03-15). Once the community learnt about the programme, they made a request to PPWSA for installation of in-door taps which resulted in access to public water supply and significantly improved living conditions. Thus, it seems that the PPWSA discount programme which is targeted at poor households has been effective in the sense that it allows evicted families to access improved water source.

5.4 Tenure status and its impact on the BKL residents' livelihood strategies

Access to water: livelihood implications

As we have seen in the previous section it seems that most BKL families enjoy convenient access to clean water through municipal network connections regardless their tenure status. Therefore, at least one of their physical assets is secured which releases time for income-earning activities. Further, as the access to improved water quality leads to improved health it seems reasonable to assume that the household's human capital is improved as well.

However, as have been shown in this study, connections to the municipal water network, has been (and still is in many relocation sites where evicted families reside) significantly lower for the evicted BKL families. Until recently they were forced to spend a larger share of time and money to satisfy their water needs which affected their income opportunities (HRTF 2011, CDRI 2007). An applied coping strategy to save time for work was to skip necessary treatment of water

from the well (Interviewee 1 Damnak Trayeung 2012-03-15), a risky strategy which may affect the health negatively and thus the ability to work.

Tenure and its impact on income opportunities

The employment market is limited in Damnak Trayeung and other relocation sites despite that the national housing policy states that the location of resettlements should facilitate access to job opportunities (General Secretariat of Council for Land Policy 2010:8). Situated far from the city's locations of economic activities many relocated families are stuck in a poverty trap as they cannot afford transportation to markets where they can offer their products and services or to companies where they can find employment (Interviewee 1 Damnak Trayeung 2012-03-15, Interviewee 2 Damnak Trayeung 2012-03-15, interview Mr. Phearum 2012-03-10). To sell products at the local market in Damnak Trayeung is problematic since there are more sellers than buyers. Another problem is that the former BKL residents skilled to make a living out of different water related pursuits, find it difficult to find new ways of earn a living since there is no lake or suitable water retention in the relocation site.

It seems that increased tenure security has not changed access to the employment market after the titling for those living in the BKL area and earn a living from low-income jobs outside their homes (Interviewee 1 BKL 2012-03-14, Interviewee 2 BKL 2012-03-14). However, for those who run small enterprises based in their homes, tenure security is decisive for their long term income opportunities. Sand filling of the lake, has seriously impacted the BKL residents' access to their productive asset which was an important source of income. Some of the BKL villages have been entirely wiped out as the sand have filled the houses and forced the residents to move.



Figure 4. Homes of Boeung Kak's Village 1 residents submerged in mud by Shukaku Inc. in November 2010

Source: Bridges Across Borders Cambodia

“Village 1 has been severely affected as their houses now are filled with sand above the roofs. They had to move and without receiving any compensation. Since the company started to fill the area with sand it took two days until the houses were covered and gone under the sand. Some families did not have time to move their possessions that are now buried in the sand”

(Interviewee 1 BKL 2012-03-14)

Access to credits

The legal titles have improved the BKL residents' access to credits (Interviewee 1 BKL 2012-03-14). BKL households without titles commonly borrow money from private lenders, loans which they have to repay with high interest rates. Without legal titles, the families could not access large bank loans but with the new tenure security the bank assesses the stability of their income and repayment ability differently (Ibid). It seems that the reasons for improved access to credit after the tenure security has improved, is not primary strengthened housing rights, but the increased labor and productive assets that follows with the tenure upgrading.

Households in the relocation site often have to borrow money to meet their daily needs, such as transportation to job opportunities, for water, food and electricity (Interviewee 1 Damnak Trayeung 2012-03-15, Interviewee 2 Damnak Trayeung 2012-03-15, HRTF 2011:13f.). As research shows, compensation to evicted BKL

families hardly covers expenses for the new house in the relocation site or additional costs linked to the relocation (HRTF 2011:13f, Bridges Across Borders Cambodia, CDRI 2007, Interviewee 1 Damnak Trayeung 2012-03-15, Interviewee 2 Damnak Trayeung 2012-03-15). The relocated families' access to bank loans does not seem to depend on whether the family live in a transfer house or if they have bought the house as long as they put their house in pledge. The risk of accessing credit this way is high. Due to difficult circumstances in the relocation site many families are at risk of losing their homes and become impoverished since they cannot afford to repay the bank loan.

Impact on other assets

The possibility to enhance human assets deteriorated when the BKL families moved to the relocation site. The fact that Damnak Trayeung, where many evicted BKL residents end up, lack public services such as health care and secondary schools imposes additional costs. Some relocated families have tried to arrange the children's schooling by renting a room in central Phnom Penh to enable their children to attend school there (Interviewee 1 Damnak Trayeung 2012-03-15). In BKL many NGO's provide access to health care in the nearby hospitals and medical services (Mgbako et al. 2010:60). Damnak Trayeung's nearest hospital is located near Phnom Penh's international airport, about 10 kilometers away (Interviewee 2 Damnak Trayeung 2012-03-15). Further, it seems that access to household relations and social capital has also deteriorated among the evicted families. They feel that they have lost an important coping strategy since the neighbor relations are different compared to how it used to be in BKL:

“We live close together as you can see. We help each other if we can. But since everyone is poor, it is difficult to help. We miss our neighbors in BKL that still live there”

(Interviewee 2 Damnak Trayeung 2012-03-15)

In fact many relocated families abandon the site and prefer to move back to uncertain conditions in Phnom Penh since they are unable to earn a living in Damnak Trayeung (Interviewee 1 Damnak Trayeung 2012-03-15, Mgbaku et al. 2010).

In BKL the residents support each other in times of need through private loans to ensure each other's survival (Interviewee 1 BKL 2012-03-14). Thus, it seems that tenure status and tenure policies influence the ability to apply different copying strategies. It seems that tenure policies which implies that the informal settlers can remain in the BKL area provides better possibilities for the families to improve their portfolio of assets which hopefully will help them to escape poverty and achieve improved living conditions.

However the major benefit of increased tenure security is perhaps improved mental well-being:

“The biggest change is mental. The five years of protesting when we tried to convince the government about our rights was hard. I suffered from insomnia and bad sleeping because I was so worried all the time. I lost my role as a mother because I had to go out and protest. Sometimes I asked myself “Do I have a life?”

...my children performed badly at school because we had these problems with the threat of eviction and they were worried about me when I was out protesting. Now that we have the titles and do not need to protest their studies are going so much better”

(Interviewee 1 BKL 2012-03-14)

5.5 Future tenure security for the BKL residents?

It is difficult to predict the long term tenure security in the absence of an official and clearly marked master plan and zoning regulation. This is particularly true regarding the 12.44 hectare area within which the government has announced that the remaining informal households will be issued with legal titles. Despite that the 12.44 hectare zone has not been clearly demarcated, the authorities have rejected title applications of 58 BKL families based on the argument that these families live outside the zone (Phnom Penh City 2012-05-05, Save Boeung Kak Campaign 2012-05-05, Bridges Across Borders Cambodia 2012-05-05). The residents refuse to accept this and demand clear demarcations of the zone along with installation of a sewage system in order to avoid inundations following the drainage of the lake.

An uncertain future?

Researchers warn that without proper land use plans, the development of Phnom Penh becomes haphazard which may pave way for future land use disputes (CDRI 2007:32). They argue that public property has been sold illegally and that the government has failed to allocate sufficient land for future infrastructure and public utilities. Further, that land speculations for commercial land, high unofficial fees for legal land certificates and unavailable master plans to the public, indicate that the development of Phnom Penh is controlled by private interests. In the light of the Cambodian government's habit of making concessions in favor of the private sector at the expense of public interests, BKL residents fear that their recently issued titles will prove useless if the government consider the land suitable for future development initiatives:

“...we are concerned about the future. They plan to build many modern buildings here, near our houses. Maybe the government is going to accuse us for bringing disorder to the area because of our houses that looks very simple compared to the modern buildings around us and therefore ask us again to move in order to give room for beautification projects”

(Interviewee 1 BKL 2012-03-14)

The content of the master plan and the government's future housing policy?

Since land use is a sensitive topic in Cambodia the government is unwilling to make development plans available to the public (email Mr. Phearum 2012-04-21). However secondary sources, such as the 2010 report by The Inspection Panel, reveals that the initial development plan regarding the BKL area emphasized the importance of the lake's role as an ecological zone (The Inspection Panel 2010:27-28). This direction was abandoned when the government decided to redevelop BKL together with the private developer Shukaku Inc. which resulted in the filling of the lake. According to other secondary sources commenting on a draft of Phnom Penh's development plan through 2020, indicates that the municipality sees the peri-urban districts of the city as important locations to absorb the expected increase of the urban population, envisioning satellite cities around the urban centre and that infrastructure expansion into these peri-urban areas is consequently an important strategy to develop the city (CDRI 2007:33, sithi.org).

Increasing demands for water supply?

It seems that the municipality of Phnom Penh intends to encourage poor communities to rehabilitate their dwellings through reformation of the banking system and affordable loans (sithi.org 2012-05-05). The housing policy seems to be to encourage development of rental units and facilitate other investments into housing for poor people. Another policy objective seems to be the implementation of land reforms, social land concessions, land sharing and relocation in partnership with private partners (sithi.org 2012-05-05). If the master plan objectives are followed through, particularly plans that involve the relocation of poor people to new suburbs, it will imply a challenge to extend existing water coverage levels. According to PPWSA, 20 - 30 per cent of the city's poor households are still waiting to be connected to the public water supply system (interview Mr. Lin 2012-03-13). PPWSA intend to continue the provision of connections to poor communities and are optimistic about their possibilities to reach the goal thanks to international donors such as the World Bank. During 2011 around 2000 out of 5241 installations were made in so called relocation sites.

It is never easy to predict the future. However the future tenure security of the BKL residents does not become less uncertain as long as the government continues to oppose a transparent process and avoids seeking the public's participation in the city development. What one perhaps can say with certainty is that it certainly hampers the perceived long term sustainability of the newly improved tenure security of the BKL residents.

6. Conclusions and policy implications

When land titles were granted to the remaining 800 families within the 12.44 hectare area cut out from the developing zone in BKL, it aroused hope of increased security of tenure and removal of the immediate threat of eviction and thus the risk of impoverishment. This study indicates that there are significant differences in the outcomes between different tenure policies. Evictions are often socially and economically disastrous as they result in fewer livelihood opportunities. Comparing households in BKL and Damnak Trayeung as representatives of two types of implemented tenure policies, it becomes clear that households in the BKL area enjoy a better position to access public services such as water infrastructure, job markets and other income opportunities.

Tenure status and livelihood strategies

Empirical results of this study indicate that improved tenure status entails a number of positive effects which strengthens the informal households' ability to seize income opportunities and build up their portfolio of assets. This is particularly true when it comes to labor assets and those BKL households that run small enterprises based in their homes. The result is in line with research by Moser (1998) and De Soto (2000) who argue that secure tenure is an important asset that can be used to release capital and thus reduce the vulnerability of the household. My study shows that those BKL families who lack secure tenure were subject to evictions and relocation to Damnak Trayeung where they now face difficult circumstances. The risk of impoverishment is imminent due to the fact that the relocation site is located far from livelihood opportunities, social networks and basic public services. In addition, transportation to reach these is both expensive and time consuming.

The study shows that the BKL residents experience easier access to larger bank loans after the issuance of legal titles, which would be in accordance with research results from Buenos Aires (Galiani and Schargrotsky 2010). It seems that the tenure upgrading has led to improved credit worthiness, and that the probability of default as a borrower is assessed differently. That the immediate threat of eviction has been averted also means that the possibility to apply profitable livelihood strategies has improved. Mental well-being seems to be the greatest gain among the favorable effects resulting from improved tenure security. The constant worrying about threats of eviction is eliminated and with that the negative effects on health and the feeling of disempowerment. This positive gain impacts human assets in the form of increased working capacity and ability to perform in school. Tenure security seems to reduce the vulnerability of the household as it increases the families' opportunities to manage a broader portfolio of assets.

The relationship between tenure status and access to water

However, the link between improved tenure security and improved access to assets is not always straightforward and obvious. When it comes to the relationship between tenure status and water accessibility it seems that tenure status does not necessarily determine the families' access to water. My study indicates that geographical proximity may influence water accessibility more than tenure status do. This result suggests that the overriding objective for Phnom Penh's city development is efficiency rather than equity. While evicted BKL families, now residing in relocation sites provided by the government, did lack access to safe water until recently, most informal settlers in the BKL area lacking formal tenure status have enjoyed access to water for a relatively long time. The results show no difference in access to water between those households in BKL that now enjoy formal tenure status and those that still have informal tenure status.

It seems that the informal BKL settlers enjoy better access to water than relocated families living in the fringes of the city. This indicates that the water accessibility in informal settlements is better in urban centers than in relocation sites, a result which is well in line with reports from HRTF (2011) as well as research by Khemro and Payne (2004). A probable explanation for these results is that in the central parts costly water infrastructure is already in place or extensions are reachable within affordable distance as opposed to distant relocation sites where water network provisions are costly and more cumbersome.

It is clear that the impact of tenure status on access to water involves many different aspects. A legal title may represent a guarantee to secure housing which, as De Soto (2000) argues, can be seen as a locus point for receiving public services such as water supply. This holds true to the extent that there is affordable infrastructure available for such supply. In addition, the relationship between tenure status and water coverage levels regarding the BKL households, as will be discussed in the next section, is further affected by water policies and arbitrary measures by the authorities which derive from the lack of consistency and clarity regarding the tenure system. This creates a confused situation that turns people's right to clean drinking water into a game which could have dire consequences.

The impact of water policies and tenure policies

As Rakodi (1999) argues, access to adequate safe water plays an important role in improving the living conditions of the urban poor. This study shows that the living conditions improved significantly when the relocated families were connected to the municipal water network. Prior to that, the families in Damnak Trayeung suffered negative effects on their health resulting from the lack of adequate water access. The water provided by the private vendor was of poor quality and had to

be treated before it was safe to drink. The water was expensive and the families felt they had to spend a large proportion of their income on water; a result conforming to research suggesting that private provision of water can be an inferior solution for poor households (Loftus 2008, Bayliss 2002).

This study also confirms that lack of adequate access to clean water constrains the household's ability to spend time on income-earning activities. A coping strategy that was applied by the evicted BKL residents to meet this challenge was to skip the water treatment in order to save time for work, a strategy that sometimes backfired on the families' health. In this sense, one can argue that tenure policies matter. As the study shows; eviction policies can result in inadequate access to water adding to the household's expenditures in terms of time and money and decreasing the disposable income. One can conclude that this tenure policy do not facilitate an equitable distribution of potable water in the sense that it promotes more equal living conditions between the citizens than before (Pacione 2009).

The widespread confusion on the land use plans in Phnom Penh and the tenure system has created a situation where different policies do not match. For those families still living in the BKL area, the impact of the Phnom Penh municipality's tenure policy which classifies many residents as illegal squatters, seems to have limited effect on water accessibility. PPWSA supplies in-door water to the informal settlements despite that PPWSA's water policy, which is based on and is formulated in line with the municipality's tenure policy, states that installations are not made into households likely to be removed (PPWSA 2010). According to PPWSA the exception is due to the fact that the BKL families have been living in the area for a relatively long time (interview Mr. Lin 2012-03-13). One can assume that this approach contributes to the widespread confusion around the tenure system and what housing rights that applies to different tenure status. The lack of consistency between policy statements and practice, as well lack of consistency between different authorities, suggests that informal settlers' access to water depends on the arbitrary measures of the public water authority. In some cases this imply that the water coverage level is increased and peoples' needs are met while it in other cases means that people are denied their right to adequate water access and have to rely on NGOs to fill the gap where the government fails to take their responsibility.

Finally, the results of this study suggest that the risk of excludability following improved tenure security, an aspect which has been highlighted by researchers, does not seem to apply to the households in BKL. It has been suggested that poor households could become excluded from adequate access to water as they cannot afford the increasing costs associated with improved housing, including costs for

improved access to water (Payne et al. 2009, Buckley and Kalarickal 2005). This study indicates that BKL households, both of formal and informal tenure status benefit from PPWSA's discount programme ensuring them affordable access to the municipal water network. Lately this also applies for evicted BKL families now residing in Damnak Trayeung who recently have been connected to the municipal water network. Thus in this case PPWSA's benevolent ambitions as well as exception from the water policy serve to meet the water needs of the BKL families. Since a considerable part of the discount programme is realized through the support of international donors it would be interesting to conduct a future study on the role of the international community and their impact on the local outcome of water coverage levels.

Policy implications

This study has shown that the linkage between water accessibility, tenure status, tenure policy and water policy is complex in the informal settlements of BKL. In line with previous research (Khemro and Payne 2004) my study shows that location and arbitrary decisions to a large extent seem to be a determinant factor of the families' sustainable livelihoods. Access to water, as well as access to other assets, affects the household's ability to manage their assets in a productive way (Moser 1998).

Therefore, in cases where policies of evictions and subsidies and serviced plots for housing are applied, a policy implication is to carefully consider the location of the plots and relocation sites. Spatial planning should allow for the households to apply different livelihood strategies. City planning should take into account the importance of affordable transportation to facilitate relocated families access to job markets and other locations offering income generating opportunities.

Further, instead of ad hoc solutions, city planners should ensure that adequate infrastructure access to the municipality water network is in place before the arrival of the evicted families. These measures should be accompanied by information on available discount programmes for the urban poor households including information on the application procedure. However, there are promising signs that PPWSA is addressing these issues as they run information campaigns to raise awareness about the clean water supply and enhance poor people's access to water.

In order to enhance peoples' knowledge of and willingness to abide to the legal tenure system it is necessary that actions by different authorities and institutions on different levels confirm consistent information regarding the tenure system as well as the essence of tenure (de facto status of tenure security) (UNHabitat 2011:6). Lack of clear information about the municipality's development plans,

lack of coherent information about the tenure system as well as lack of transparency could threaten the tenure rights of the BKL residents. These shortcomings also pose a potential threat to the long term tenure security for the households recently issued with legal titles. This in turn may impede access to credits and other assets as well as prevent investments in housing improvements which all are important factors contributing to the improvement of the households' as well as the overall economy.

A policy recommendation is therefore to clarify the different authorities' administrative responsibilities and the application procedure to acquire legal titles. This should be done in order to avoid confusion and a situation where the resident's tenure security and provision of public services are in the hands of different authorities' arbitrary judgment. Since policies and development interventions are underpinned by ideologies reflecting the historical and political context (Nederveen 2001:7), it calls for a critical evaluation of planning processes and a transparent discussion about the stakeholders' agenda behind different development initiatives in order to ensure a sustainable development. Master plans and zoning regulations to a large extent determine the land use and another policy recommendation is therefore to make these available to the public. Residents should be invited to influence the development plans in order to reduce the risk of land speculations as well as time consuming and costly land disputes.

Normally, one would perhaps assume that the better tenure status, the better access to water and vice versa; the poorer tenure status, the more inadequate access to water. However, the study results indicate that lack of coherent praxis in relation to the tenure system as well as neglected infrastructure development in certain areas implies that this is not always the case. As new migrants keep arriving to Phnom Penh, adding up to an already increasing native city population, the demand for land will increase which requires a clear and consistent tenure policy that meets the needs of the citizens and ensures that their rights are fulfilled.

If the city fails to provide adequate accommodation and services to the residents, poverty and the issues associated with informal settlements could become permanent. As Gilbert (2008) points to, the issue of poor housing is closely linked to poverty and therefore cannot be treated as an isolated problem. A holistic approach, including allocation of sufficient resources and efficient governance, is necessary to create sustainable living conditions and livelihood opportunities which enable people to escape poverty.

Further research

Due to time constraints and difficulties in applying purposive sampling, this study has not focused so much on policy responses such as *in situ* upgrading and participatory approaches. Part of the explanation is also that these kinds of policy responses have not been widely applied among the informal settlements of BKL. Further research on the impacts of these kinds of policy responses in terms of water coverage levels could reveal more about the relationship between tenure policies and access to water.

An in-depth investigation of the intentions of the municipality's tenure policies in combination with an analysis of the institutional arrangements for land management, could give us further valuable information about informal settlers' access to water. In addition, an analysis of the coherency between PPWSA's water policies and the municipality's city development plans, could give us further clues concerning the impact of geographical proximity versus tenure status.

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Appendix 1: List of interviewees

Name	Position	Date of interview
Mr. Sia Phearum	Director of HRTF	2012-03-10
Mr. Sim Kheng Lin	Director of Commercial Department, PPWSA	2012-03-13
Interviewee 1 BKL	Household with legal title in the BKL area	2012-03-14
Interviewee 2 BKL	Household without legal title in the BKL area	2012-03-14
Interviewee 1 Damnak Trayeung	Evicted BKL family residing in the relocation site of Damnak Trayeung	2012-03-15
Interviewee 2 Damnak Trayeung	Evicted BKL family residing in the relocation site of Damnak Trayeung	2012-03-15

Appendix 2: Interview guides

Interview questions for the Municipality of Phnom Penh:

Who has the overall responsibility for water management in the city of Phnom Penh?

Does the city have a policy regarding water accessibility?
If yes, what are the objectives etc.?

What are the main constraints for the inhabitants to access water?
(Lack of financial/other resources, vandalism, cultural traditions...)

Are there certain groups in the city that experience more difficulties in accessing water?

Does the city currently keep any statistics regarding water coverage level in the informal settlements by the Municipality of PP?

Is there a target of water coverage levels for informal settlements?

What do you think is necessary to improve the access to water for the poor?

Who has the overall responsibility for urban land and tenure management in the city of Phnom Penh?

How is the regulatory power administrated?

Does the city have a policy regarding tenure administration?
If yes, what are the objectives etc.?

Are there any differences in policy responses depending on if it is state or private land?

Please describe the procedure to obtain land and tenure.
Who grants titles? (Representativity? What geographic areas are represented?
Consultations?)
Which tenure levels are there?

Is there any statistics on the number of informal settlers in Phnom Penh?
Particularly in the Boeung Kak Lake area?

Does the city have a policy regarding informal settlements?
Under which conditions can expropriation take place? (Legal framework, compensation)

What tenure programmes exist today for informal settlers in the city of Phnom Penh?
How effective are they and how are they financed?

Interview questions for the Phnom Penh Water Supply Authority:

Does PPWSA have a policy regarding water accessibility?
If yes, what are the objectives etc.?

What are the main constraints for providing water to all?
(Lack of financial/other resources, vandalism, cultural traditions...)

Are there certain groups in the city that experience more difficulties in accessing water?

Does PPWSA keep any statistics regarding water coverage level in the informal settlements?
Do PPWSA collect information about the location of poor households with no access to water?

Is there a target of water coverage levels for informal settlements?

What are the criteria for “a community of the poor”?

How does “Clean Water for the poor programme” work? What is done to improve the access to water for the poor?

What are the options of water provision for the poor?

What are the requirements for a household that wish to be connected to the PPWSA water network? (Formal address, legal documents such as registration, proof of land ownership, boundaries of plot, receipt for payment of property tax etc.?)

Does tenure status affect PPWSA investments in poor areas/informal settlements? Does tenure status affect the water accessibility for the poor?

Does PPWSA have a policy regarding cooperation with the private sector or private vendors?

What do you think is necessary to improve the access to water for the poor?

Interview questions for the household residents in Boeung Kak Lake:

Sex of the interviewee?

What is your name?

Where are you from?

How old are you?

How long have you been living here?

How many members in the household?

Are you married/divorced/single?

How many children do you have? How many are living in your household?

What is your highest level of education?

What is your main occupation?

Does your household have access to clean water?

How do you access the water?

(Self-supply, municipal supply, alternative non-network suppliers, informal networks)

What is the main source of clean water for your household? (bottled water, boil water, tap, rain water collection, pond, well, other)

Are you accessing sufficient water levels?

How much water on average does your household consume per day?

How much is the price of clean water in riel?

How much does your household spend on water on average per week?

How much time is spent on accessing water?

What are the main obstacles for your access to as much water as you would need/want?

(Distance, fees, lack of security, poor quality, overcrowded public taps, time)

Have you experienced any troubles with your water supply?

(Interruptions, diseases, quality, seasonal flooding or drought)

If too expensive – have you been offered any subsidiary or financial help from the local authorities or PPWSA or other?

Does your household have to fulfill any requirements in order to access water or for network connections?

Where do you get the permission from/who makes the decision?

Can you influence the water accessibility?

Can you influence fees?

What is your tenure status/legal status of dwelling?

If you own the place – how did you acquire it?

Do you cooperate with your neighbors to improve your tenure status?

Does your tenure status affect your access to water?

How is your tenure status affecting your ability to support your household?

Does it makes it easier or harder to find an employment?

Starting your own business?

Relationship to your neighbors?

Access to infrastructure and public services such as education and health services?

Access to credits and loans?

Does your household have any debts/any loans?

Where did your household access the loan? (relative/friends, private money lenders, credit program/bank, other)

What is the reason for taking loans?

How do you handle the situation? What are your coping strategies when you cannot access clean water or experience problems to access the above assets?

What do you think is necessary to improve your water access?

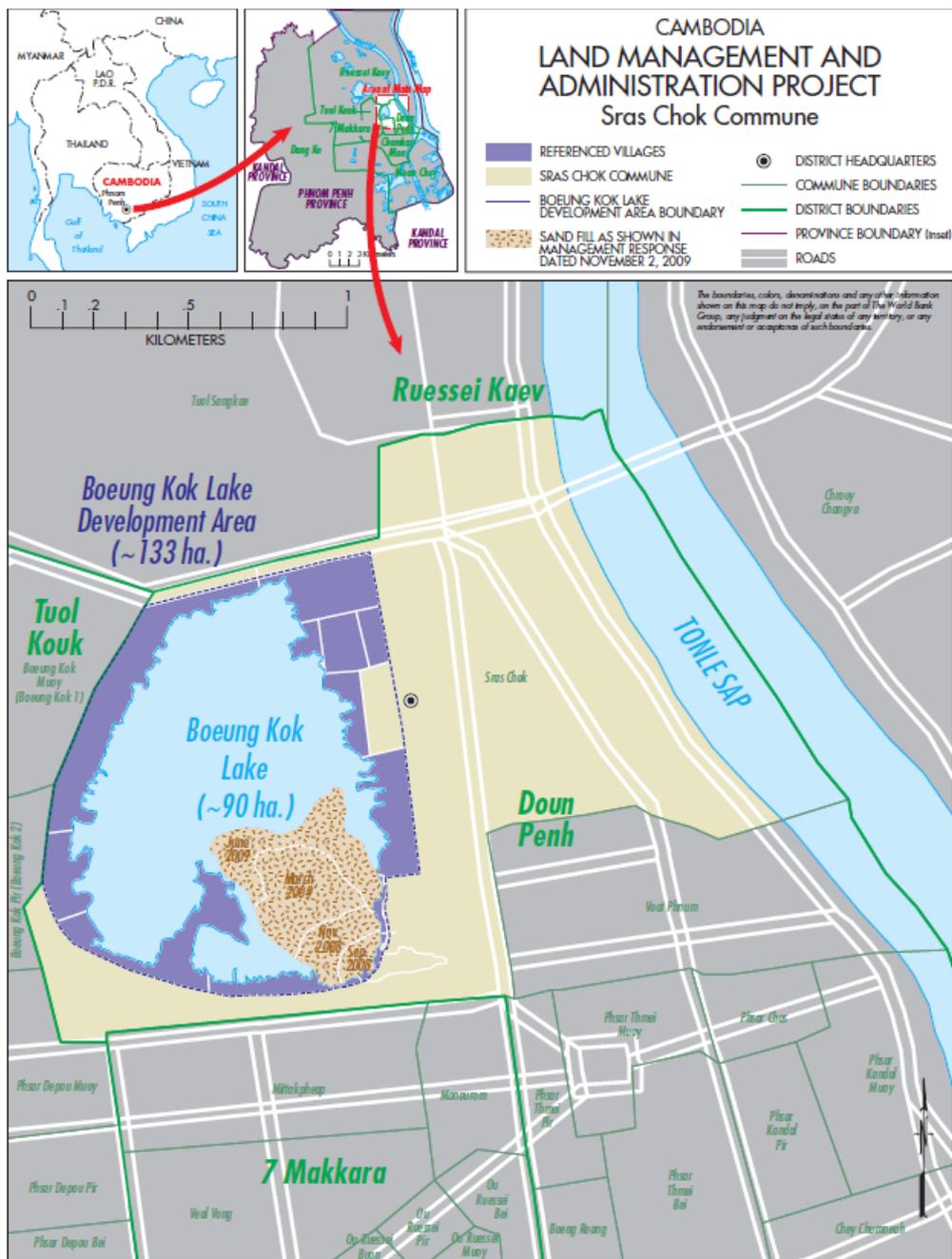


Figure 6. Land Management and Administration Project – Boeung Kak Lake
 Source: World Bank Inspection Panel 2010:88

Appendix 4: Field Study Programme

Table 3. Field Study Programme in Phnom Penh, 7 March – 23 March 2012

Time	Activities	Address	Notes
Wednesday 7 March	Arrival		
Thursday 8 March	Swedish Embassy	10th floor, Phnom Penh Tower 445, Monivong Blvd,	Registration
Friday 9 March			
10:30am	David Ouk, Enjoy life Translation	Jars of Clay, Toul Tompoung	Schedule planning. Phone calls to potential interviewees
Saturday 10 March			
10:00am	Mr. Sia Phearum, director of Housing Rights Task Force	#2A, St. 271 Sangkat Boeng Tompon,	Interview
Monday 12 March	Municipality of Phnom Penh	Capital Hall # 69, Preah Monivong Blvd.	Data collection
Tuesday 13 March			
2:00pm	Mr. Sim Kheng Lin, director of Commercial Department, Phnom Penh Water Supply Authority (PPWSA)	No 45, St. 106, Sangkat Srah Chark, Khan Daun Penh	Interview
Wednesday 14 March			
9:00am – 2:30pm	Household 1 & 2	Boeung Kak Lake	Interviews
3pm	Mr. Vanna Sok, Habitat Programmeme Manager for Cambodia	Tel: +855 12 850 571	Phone consultation
Thursday 15 March			
8:00am-12:00am	Household 1 & 2	Damnak Trayeng	Interviews
Tuesday 20 March	Municipality of Phnom Penh	Capital Hall # 69, Preah Monivong Blvd.	Data collection
Wednesday 21 March			
10:00am	Household 1	Boeung Kak Lake	Follow-up interview
Friday 23 March	Cambodia's Development Policy Research Institute	#56, St. 315, Toul Kork	Data collection