

**EVALUATION AND REDESIGN OF  
URBAN GOVERNANCE  
INTERVENTION STRATEGIES TO  
ATTAIN LAND TENURE SECURITY  
FOR SQUATTERS:  
A CASE STUDY IN KATHMANDU,  
NEPAL**

MAS BAMBANG AGUS WIJAYA

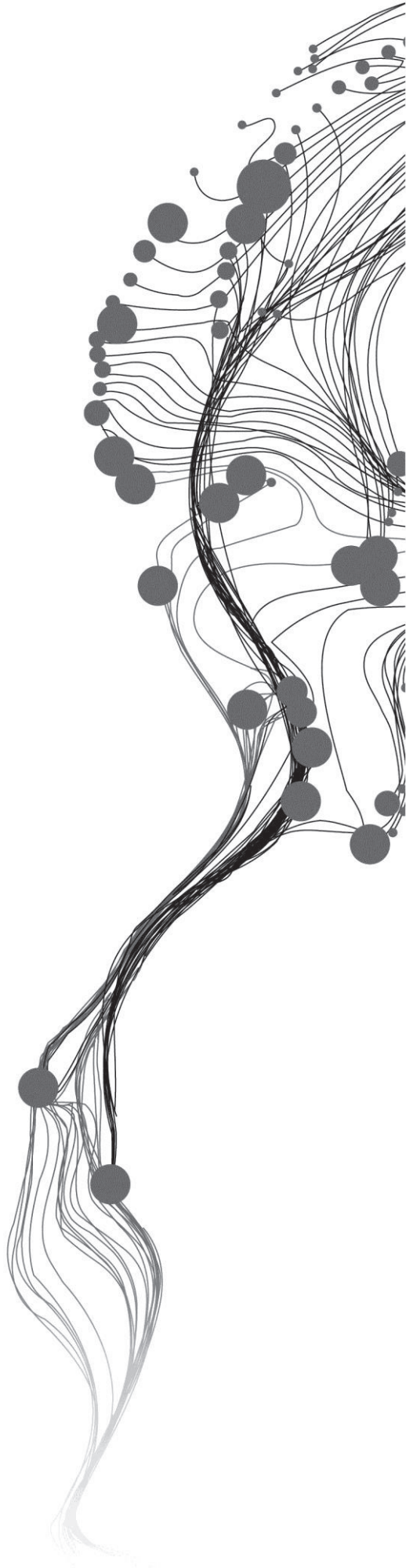
March, 2014

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# ABSTRACT

High population growth in Kathmandu, the capital of Nepal has generated a high level of demand for housing. This situation further creates an imbalance between housing need and housing supply and leads to the growth of squatter settlements coupled with the absence of land tenure security for the squatters. Therefore, an important challenge is for policy makers to address the issues of land tenure security for the squatters.

This research aims to evaluate and redesign urban governance intervention strategies to attain land tenure security for squatters. For the purpose of this research, the choice of Bansighat area in Kathmandu was informed by the rapid growth rate of squatter settlements over the years. Data for the research was collected by interviewing major stakeholders in urban governance intervention strategies for secure land tenure, collection of aerial photograph and satellite images of the Bansighat between 1992 and 2013.

Results from interview responses indicate the deteriorating situation of squatter settlement in Bansighat from the viewpoints of squatters and government. In addition, image indicating the growth rate and pattern of squatter settlement between 1992 and 2013 were visualized and digitized. Furthermore, narrative analysis of interviews led to an evaluation of divergence between existing government intervention strategies and squatters' priority of the indicators of these intervention strategies. "SWOT" analysis was implemented towards harmonizing the existing intervention strategies with priority of squatters for the indicators of these strategies. Outcome of this analysis was the development of 12 new intervention strategies that can be regarded as the core of this research.

To conclude, this research has successfully evaluated and redesigned the existing urban governance intervention strategies for the purpose of enabling squatters in Bansighat area of Kathmandu to access secure land tenure. Recommendations put forward in this research include the need for a related study geared towards validating the results of this research and generate new findings capable of supporting programmes for land tenure security for squatters. Finally, further modification of the "SWOT" analysis is recommended for similar studies of land tenure security for squatters especially when the need to balance government policy with expectations of squatters becomes crucial.

**Keywords:** Urban governance, Intervention strategies, Land tenure security, Squatters, Nepal

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# 1. GENERAL INTRODUCTION

## 1.1. Introduction

Urban growth in many developing countries is usually associated with the emergence of squatter settlements (Garba & Al-Mubaiyedh, 1999). The cause of this trend is that rural people tend to migrate to urban area attracted by better infrastructure and job opportunities. With respect to Kathmandu, the capital of Nepal, high population growth generates a high level of demand for housing such that there is an imbalance between housing need and housing supply which leads to the growth of squatter settlements.

Given the relative demand inelasticity for land and the limited availability of formal settlements, the prices of land and housing tend to be escalated (de Souza, 1998). With little financial resources, skills or access to formal settlements, poor people illegally occupy land to build low quality shelters (Srinivas, 1999), irrespective of who owns the land and notwithstanding the environmental hazards arising from the development of shelters along flood plains or riverbanks (Rashid, 2009; Shrestha, 2013). Furthermore, there are semi-permanent houses without any facility such as tube-well, electricity and neighbourhood infrastructure among which include schools and health care centres (Rashid, 2009).

Squatter settlements are predominantly characterized by urban poverty, although not all squatters are actually poor (Roy, 2005). A challenge for policy makers in most developing countries is how to address issues of shelter and security of tenure for the urban poor (de Souza, 1998). Interventions by non-governmental organizations (NGOs) towards improving the livelihood of squatters had been directed towards certain poverty reduction programs and provision of facilities such as primary school, drinking water, public toilet, and provided electricity supply (Karki, 2004). Irrespective of these NGO interventions toward provision of social amenities, the land tenure problem arising from illegal occupation of land for squatter settlement development has lingered on to date because NGOs alone do not have authority to confer secure land rights on squatters.

The emergence of squatter settlements in Kathmandu, Nepal has dynamic implications for the squatters, the NGOs, and the government. NGOs have tried to help the squatters to obtain land rights on their land by advocating a land reform which addresses the needs of squatters (Babu, 2008); but the reach of these NGOs is only limited to advocacy as they may not really influence intervention strategies by the government towards granting tenure security to these squatters. There are possibly three intervention options which the government may use to handle this issue. The first option is for the government to evict all squatters without provision of alternative land or shelter (GTZ, 1998; UN-Habitat, 2004). The second option is for the government to design and negotiate relocation of all squatters to alternative site where they will be given secure tenure rights and minimum rehabilitation incentives (UN-Habitat, 2004, 2008). The third option is for the government to relocate squatters residing near vulnerable sites to a more safe location where they can be given secure tenure rights, while giving incentives of more secure tenure to the remaining squatters living far away from such vulnerable areas (Rashid, 2009). Among these options, it is not known which of them is suitable towards handling the situation in Kathmandu.

This research evaluates and identifies the necessary requirements for urban governance intervention strategies, with the specific aim of granting land tenure security for squatters. While the most suitable intervention strategy for granting tenure security to squatters in Kathmandu is not currently known, this

research is undertaken within the perspective of urban governance research, aiming at the perceptions of stakeholders for a suitable intervention strategy.

## 1.2. Problem statement

According to van Gelder (2010), tenure security is difficult to measure. The only acceptable approach of measurement is relying on the perception of squatters, and assessing the strength of their relationship with the land under consideration. Furthermore, the provision of slum clearances and other forms of forced evictions are intervention strategies which tend to create problems which go beyond the capacity of the government to resolve (Garba & Al-Mubaiyedh, 1999), such problems include destruction of property, loss of assets, breakdown of social relations, and loss of access to social infrastructure and amenities (Parsa et al., 2011).

As a result of these negative impacts, a number of studies have been conducted towards developing innovative land tenure systems to afford squatters the possibility of having more secure land rights (Minnery et al., 2013; Parsa et al., 2011; Zevenbergen et al., 2013). The caution with these intervention strategies is that their requirements vary from country to country and as such demands country specific applications (Zevenbergen et al., 2013). It is in view of this development that a unique form of intervention strategy is required for Kathmandu. In order to come up with a feasible strategy for Kathmandu, it is important that acceptability of salient features of successful strategies across the globe should be assessed within the context of squatter settlement.

Although it is known that Government exercises governance intervention strategy to provide land tenure security to its citizens, there are situations whereby squatter settlements development creates a problem of insecure land tenure for squatters as well as complex land management problems for the government. However, it is not known which intervention strategy is feasible towards providing squatters with more secure tenure rights. In addition, it is not known how a chosen intervention strategy contributes to land tenure security for the squatters.

## 1.3. Conceptual framework

This research is based on three fundamental concepts comprising urban governance, intervention strategy, and land tenure security (Figure 1).

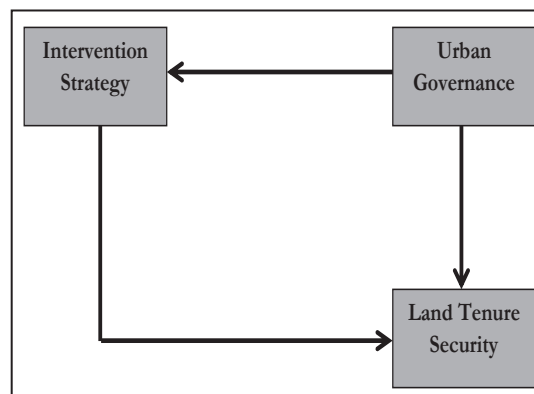


Figure 1: Conceptual Framework

Before explaining urban governance within the context of this research, it is necessary to provide diverging insights into the concept of governance, perspective, and tools of governance in order to better understand how urban governance contributes towards tenure security. World Bank (2013) defines

governance as a process by which an authority is conferred on leaders who in turn use this authority to legislate and regulate activities under their control.

Definition of governance by FAO (2007) is fundamentally a process of governing which encompasses modalities for managing, prioritizing and reconciling the interests of different stakeholders. Within this context, FAO (2007) further primarily concerned with good governance which according to it is the outcome of a properly managed and inclusive public administration.

Governance implies processes and institutions involved in implementing specific programs that achieve a goal (UN-Habitat & TI, 2004). On the other hand, Stoker (1998) proposed five different perception of what constitutes governance to include:

- a. “A collection of institutions and stakeholders including actors outside governmental organizations;
- b. The overlapping scope and duties necessary to address socioeconomic issues;
- c. Recognition of power dependence and relationship among governance institutions;
- d. Autonomy and self-governing capacity of all stakeholders in the governance network; and
- e. Ability of government to employ innovative tools in the process of regulation.”

Among these propositions, the ability of government to employ innovative tools in the process of regulation aligns with the research problem which is to address the knowledge gap concerning intervention strategies for land tenure security for the squatters.

Settlement pattern and structure are defined by the quality of urban governance (Kombe & Kreibich, 2000). Urban governance is defined as mechanisms and tools for decision-making involving civic participation and accountability (UN-Habitat & TI, 2004). Furthermore, the quality of urban governance implies an assessment of the extent to which an urban area is characterized by economic well-being and inclusive policies contrary to impoverishment and social segregation (UN-Habitat & TI, 2004). Within the context of this definition, urban governance is a concept that relates to spatial issues among which is distribution of land rights and tenure security. With respect to the conceptual framework in Figure 1, urban governance implies a convergence of mechanisms and tools from relevant stakeholders necessary to support decision-making that may eventually lead to secure land rights to squatters. The question of mechanism and tools of urban governance used to deliver secure land rights can be addressed using relevant intervention strategies.

Within the context of urban governance for tenure security, intervention strategies are policies and programs implemented by government to regulate access and use of land (GTZ, 1998). This means that intervention strategies are approaches that can be adopted to change or improve an existing situation, which in this case is a transition from lack of tenure security to a more secure tenure for squatters. For the purpose of this research, intervention strategies for tenure security of squatters are examined within the framework of path dependency. The notion of path dependency is desirable considering the alignment of a chosen strategy within specific country context (Couch et al., 2011) and the improvement upon existing intervention programs in a given country.

A number of governance intervention strategies for squatter settlements have been developed over the years. These include tools for land governance and secure tenure (UN-Habitat et al., 2012), strategies for delivering secure land rights for all (UN-Habitat, 2008), tools to support transparency in Local Governance (UN-Habitat & TI, 2004), guiding principles for land tenure in development cooperation (GTZ, 1998), land tenure considerations for project design and monitoring (FAO, 2002), voluntary

guidelines on the responsible governance of land tenure (FAO & CFS, 2012), innovative financing of slum improvements (FIG, 2008), and social tenure domain model (Lemmen, 2010; Zevenbergen et al., 2013).

Among these intervention strategies, tools for land governance and secure tenure (UN-Habitat et al., 2012), strategies for delivering secure land rights for all (UN-Habitat, 2008) and the social tenure domain model (Lemmen, 2010) are the most appropriate for the research problem and conceptual framework. In other words, this research examines the strategies for ensuring secure tenure for squatters who cannot be granted formal land rights thereby giving rise to the recognition informal rights which are linked to social tenure relationships between people and parcel (Lemmen, 2010). Although one of the overarching goals of urban governance and intervention strategies is to ensure more secure tenure rights for the people, an understanding of tenure security within the context of land rights need to be clarified.

Land tenure is an institution, which is usually constructed by a set of rules developed by a society, for the purpose of regulating practices concerning access, allocation, control and exercise of property rights, responsibilities and restrictions (FAO, 2002). Land rights within this context ranges from formal ownership to social tenure relationships such as right of occupation, tenancy, customary rights, informal rights, and possession (Lemmen, 2010).

There are three concepts of tenure security namely legal tenure security, de facto tenure security, and perceived tenure security (van Gelder, 2010). Within the context of the conceptual framework (Figure 1) for this research, land tenure security is the perception of squatters concerning the strength of their relationship with land (van Gelder, 2010) or their shelter. This is because, security of tenure does not depend so much on conferment of legal rights on land but on experience and reactions of citizens to governance intervention strategies (Payne, 2004).

In the conceptual framework in Figure 1, the arrow from urban governance to land tenure security implies that urban governance is expected to deliver more secure land tenure to citizens. However, the emergence of squatter settlement does not warrant direct relationship between urban governance and land tenure security. Therefore, the chain of arrows from urban governance to intervention strategies and finally to land tenure security implies that while direct link between urban governance and land tenure security may not be feasible in squatter settlements, the development of intervention strategies is required in order to grant more secure tenure for squatters. This is the proposition upon which this research is based.

#### **1.4. Research objectives**

The main objective of this research is to determine urban governance intervention strategy for contributing towards improved land tenure security for squatters in Kathmandu, Nepal.

The following sub-objectives used to address the research problem:

1. To examine the growth of squatter settlement;
2. To identify urban governance intervention strategies for squatter settlement; and
3. To develop an intervention strategy to improve land tenure security in squatter settlement.

#### **1.5. Research questions**

In order to address each sub-objective, the following research questions should to be answered:

Sub-Objective 1: To examine the growth of squatter settlement.

- (a) How did the squatters occupy land in Kathmandu?
- (b) How long have these squatters been there?
- (c) What is the extent of squatter settlement growth over the years?

Sub-Objective 2: To identify urban government's intervention strategies for squatters.

- (a) What are the existing intervention strategies for land tenure security?
- (b) What is the perception of stakeholder towards urban government intervention strategy for land tenure security?
- (c) What intervention strategies are relevant to tenure security for squatters in Kathmandu?

Sub-Objective 3: To develop an intervention strategy to improve land tenure security in squatter settlement.

- (a) What are the elements of an intervention strategy for tenure security?
- (b) What are indicators of an intervention strategy?
- (c) How do squatters prioritize the indicators of an intervention strategy?
- (d) How can the prioritized indicators be used to develop an intervention strategy?

## **1.6. Research methodologies**

The methodologies applied in this research are case study and design research. Yin (2003) stated that case study research is the study of which addresses complicated and real-life situations especially when a research problem is moderately structured. The case study methodology is implemented because the context of squatter settlements management cannot be clearly distinct from the observable interactions between various stakeholders within that context. Data collected during fieldwork phase were presented in quantitative approach such the presentation of distribution tables and qualitative approach by weighting the respondent's preference in purpose to find the rank of preference.

Design research is a combination of theory and practice for the purpose of improving an existing invention or situation (Laurel, 2003). This methodology usually leads to an innovations or development of intervention which are better than the existing versions. In order to develop an intervention strategy for tenure security, this research will use the result of data presentation from the case study method above.

Although design research process commences with the analysis of existing situation and ends with testing and evaluation (Çağdaş & Stubkjær, 2011), limited conduction of a single fieldwork for data collection shall limit the research on the stage of evaluation on existing governance intervention strategies, identification of elements and indicators for the development of an intervention strategy, and the development of an intervention strategy.

The approach of this research include pre-fieldwork phase, fieldwork phase and post-fieldwork phase are presented on the operational plan (Figure 2).



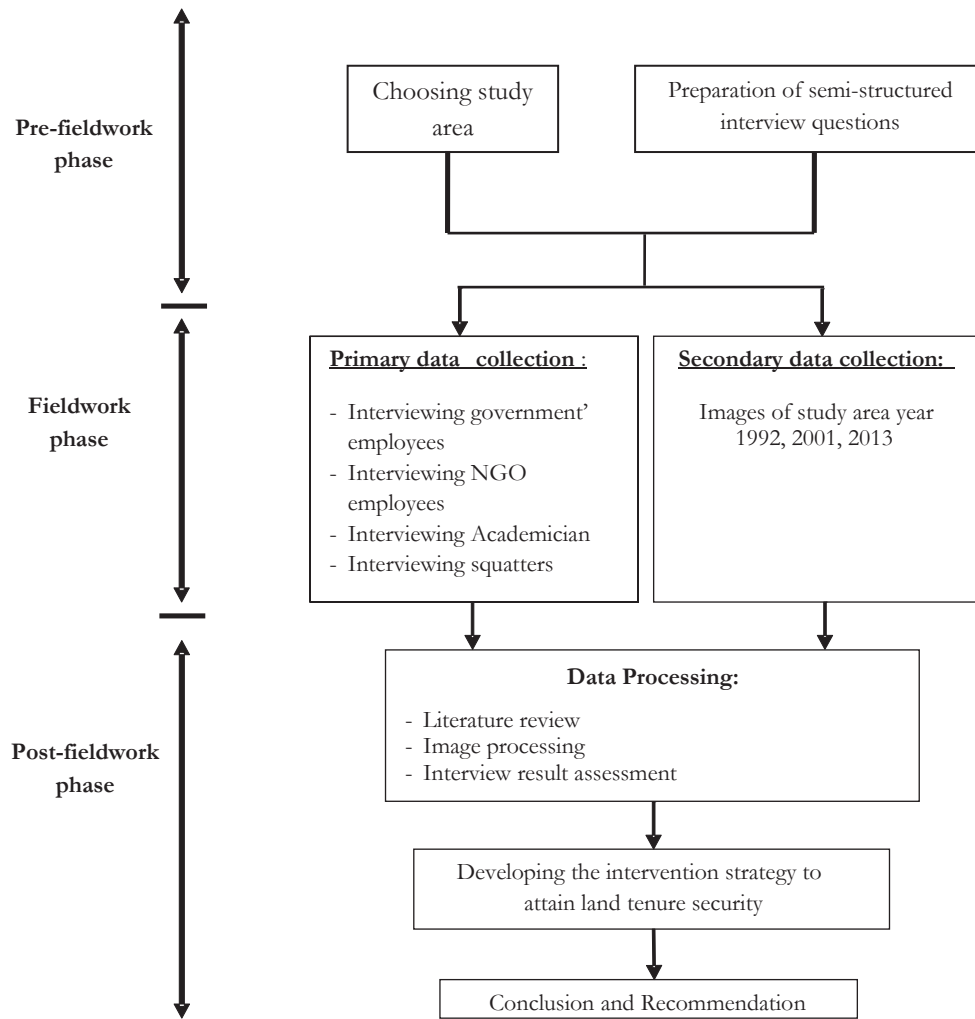


Figure 2: Operational plan

### 1.6.1. Pre-fieldwork phase

As drawn in operational plan (Figure 2), activities during the pre-field work commenced with choosing of study area the preparation of semi-structured interview's questions.

#### a. Study Area

Kathmandu, the capital of Nepal is a political and administrative city which equally serves as an economically strategic location and tourist centre (Thapa & Murayama, 2009). Studies on the city over the years have indicated a high population growth rate which has contributed significantly to the rapid rate of urbanization, land use change and socioeconomic problems (Thapa & Murayama, 2009; Thapa et al., 2008), prominent among which is tenure security for households in informal settlements (Lumanti, 2012; Wily et al., 2008).

For the purpose of this research, Bansighat neighbourhood in Kathmandu was selected (Figure 3). The reason why Bansighat was chosen for this study is not just because it exhibits typical characteristics of informal settlements among which include poor housing standard, limited access to basic amenities, poor sanitary conditions and proximity of houses within unhealthy and hazardous areas (Shrestha, 2013) but because it has a high prevalence of insecurity of tenure rights which is typical of any squatter settlement (van Gelder, 2010).

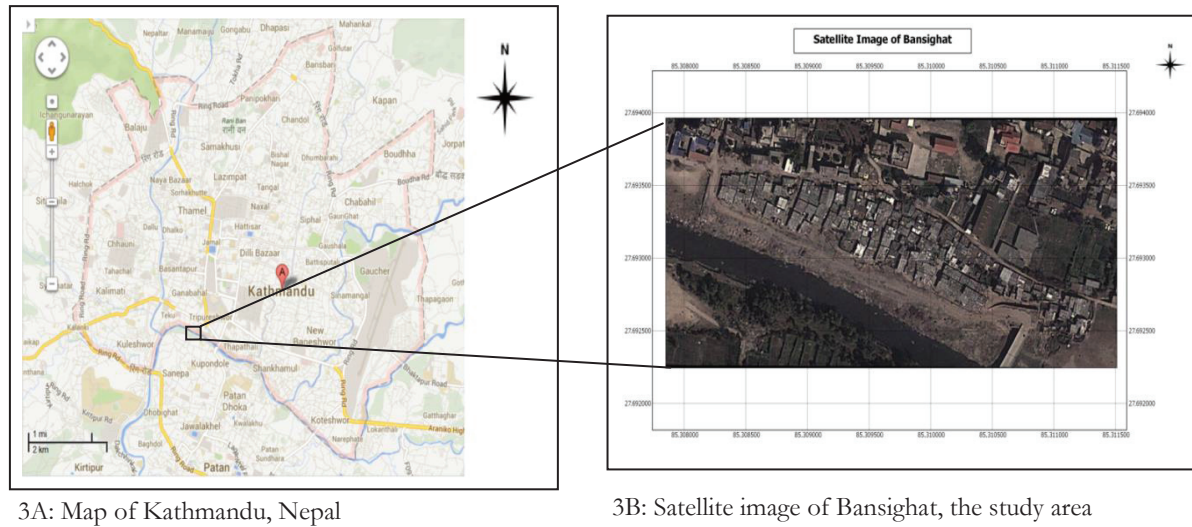


Figure 3: Spatial information of study area

Source: Google Maps. Retrieved 4th September, 2013 from  
<https://maps.google.com/maps?num=50&client=firefox-a&q=kathmandu+nepal&ie=UTF-8&hq=&hnear=0x39eb198a307baabf0xb5137c1bf18db1ea,Kathmandu,+Nepal&ei=sWkmUrDWH8Ly7AaHk4D4BA&ved=0CLcDELYD>

## b. Preparation of semi-structured interview's questions

The development of semi-structure interviews for this research was targeted at collecting primary data from respondents in the field. These interviews were designed after considering the various categories of the respondents and the type of information expected from them. The following sub-section outline respondents for the purpose of this research and the nature of interview questions prepared for them.

### i. Government organization

The semi-structured interviews were prepared for government organizations including ministries and agencies, municipality and district employees with a view to obtain information about intervention strategies for squatter settlements and the implementation of strategies for land tenure security (Appendix 1).

### ii. International agency

The international agency in Nepal currently engaged in urban management and settlement issues is the UN-Habitat. For the course of the fieldwork, there was no special semi-structured interview for this agency. Hence, the interview conducted with staff of this agency was similar to that administered to government organizations.

### iii. Non-government organizations

Non-Governmental organizations chosen for the fieldwork exercise include “Lumanti” and “Mahila Ekta Samaj”. Semi-structured interview prepared for staff of these organizations was aimed at collecting information regarding programs of those organizations with respect to land tenure security for squatter settlements and strategies for the implementation (Appendix 2).

#### iv. Academics

There are some academics and teachers of higher education institutions in Nepal who are interested in researches concerning tenure security and squatter settlement issues. Therefore, the opinion concerning land tenure security and squatter settlements as well as intervention strategies from relevant interest groups is vital. To facilitate data collection, this category of a respondent was administered the same questions asked to the government officials.

#### v. Household of Bansighat

At the heart of this research is the preparation of semi-structured interview for households or squatters in squatter settlement of Bansighat in Kathmandu, Nepal (Appendix 3). Among the information required from this category of respondents include their perspective on access to services, land and housing condition, and indicators for the development of intervention strategies to attain land tenure security.

#### 1.6.2. Fieldwork phase

Fieldwork phase is conducted with the purpose to collect primary data and secondary data as drawn in second phase in operational plan (Figure 2). In order to fulfil each sub-objective, the further illustration of fieldwork phase will be presented in Chapter three and four.

#### 1.6.3. Post-fieldwork phase

Data processing includes the analysis of primary and secondary data were done in post-fieldwork phase as drawn in third phase in operational plan (Figure 2). Chapter three, four and five will describe further about the step and the result of data processing.

#### 1.7. Research design matrix

With the aim to get the best achievement of research, a research should be accompanied by a good research design matrix. It can be an arrangement of rows and columns which are contain the components such as data requirement and data collection method fit to the research objective and research questions (Choguill, 2005). Furthermore, a research design matrix can be used as guidance during the research in order to bring the whole process in the research done in a logic step and it link to the anticipated result (Choguill, 2005). The detailed analysis of the relationship between the anticipated results with research questions, data requirement, and data-processing are provided in the research design matrix (Table 1).

Sub-objective	Research Question	Data Required	Data Collection Method	Data Processing Method	Expected output	What the output seek to achieve
To examine the growth of squatter settlement.	How did the squatters occupy land in Kathmandu?	Oral Evidence	Interview with the squatters	Frequency distribution table	List of how squatters occupy land in Bansighat area	This output helps to address examination the growth of squatter settlement
	How long have these squatters been there?	Oral Evidence	Interview with the squatters	Frequency distribution table	Period's occupancy range	Output of data analysis provides answer to the growth of squatter settlement
	What is the extent of squatter settlement growth over the years?	Satellite image of squatter settlement from year 1992-2013	Official request and retrieval of spatial data	Image processing: geo-referencing Image digitizing	Maps show extent of squatter settlement over the years	To examine the growth of squatter settlement

Sub-objective	Research Question	Data Required	Data Collection Method	Data Processing Method	Expected output	What the output seek to achieve
To identify urban government intervention strategies for squatters	What are the existing intervention strategies for land tenure security?	Literature	Literature review	Literature review	A list of intervention strategy	Identifying the content and structure of intervention strategy
	What is the perception of stakeholder towards urban government intervention strategy for land tenure security?	Oral evidence	Interview with government, NGOs, International agency employees and academican	Narrative method	A table of stakeholder's perception	Identifying whether there is trust among stakeholders to the intervention strategy
	What intervention strategies are relevant to tenure security for squatters in Kathmandu?	List of intervention strategies	Interview with government, NGOs, International agency employees and academican	Narrative method	List of relevant intervention strategies	Validating the content and structure of intervention strategy
		Oral evidence				
To develop an intervention strategy to improve land tenure security in squatter settlement	What are the elements of an intervention strategy for tenure security?	Literature	Literature review	Literature review	List of elements of intervention strategies	Identifying the element of intervention strategies
	What are indicators of an intervention strategy?	Literature	Literature review	Literature review	List of indicators of intervention strategies	Identifying the indicators of intervention strategies
	How do squatters prioritize the indicators of an intervention strategy?	Oral evidence	Interview with the squatters	Weighting	Ranking of indicator	Identifying prioritize indicator by squatters
				Mean score calculation		
	How can the prioritized indicators be used to develop an intervention strategy?	Prioritize indicators by squatters	Extracting the prioritize indicators and existing intervention strategies	SWOT analysis	New government intervention strategies for squatters	Improvement of existing intervention strategies
		Existing intervention strategies				

Table 1: Research design matrix

### 1.8. Anticipated results

The anticipated results at the start of this research were:

1. That-with the acquired data in a fieldwork-it were possible to visualize and explain the pattern of squatter settlement growth. This anticipated result is in line with the first sub-objective of this research which is to examine the development of squatter settlement.
2. That on the basis of these results it would be possible to identify and prioritize elements of intervention strategies for more secure land tenure, which is commensurate with the second sub-objective of this research.
3. The third anticipated result was that one could improve the current intervention strategies such that land tenure for squatters would be more secure. This addresses the third sub-objective of this research.

## **1.9. Structure of thesis**

Structure of the thesis comprises six Chapters as follows:

### **1. General introduction**

Content of this Chapter include an introduction of the research, problem statement, conceptual framework, research objectives, research questions, research methodologies, research design matrix, and anticipated result.

### **2. Literature review on urban governance intervention strategies for land tenure security in squatter settlement**

Content of the literature review include a review of scholarly publications relating to squatter settlement, urban governance, elements and indicators of intervention strategies, approaches and options on land tenure security, and the examples of government's intervention strategies for squatter settlement in some developing countries.

### **3. Squatter settlement in Bansighat neighbourhood of Kathmandu**

This Chapter describes the growth of squatter settlement in Kathmandu from the perspective of the households or squatters and the government. In addition, the results of data processing of Bansighat squatter settlement images in three different years are also presented in this Chapter.

### **4. Existing intervention strategies for land tenure security**

This Chapter describes the evaluation of government intervention strategy for squatters in Kathmandu. This Chapter also describes the squatters' prioritize of indicators on the government's intervention strategies.

### **5. Development of intervention strategy to improve land tenure security in squatter settlement**

This Chapter describes the redesign or development of government intervention strategy to attain land tenure security for the squatters.

### **6. Conclusion and recommendation**

This Chapter provides a reflection on each research question and data analysis that helped to provide answers to it. This Chapter also provides recommendations for further research in the light of research limitation and research methodology.

## 2. LITERATURE REVIEW ON URBAN GOVERNANCE INTERVENTION STRATEGIES FOR LAND TENURE SECURITY IN SQUATTER SETTLEMENT

### 2.1. Introduction

Through a review of literatures, this Chapter provides answers to the research question: “*What are the existing intervention strategies for tenure security?*”, “*What are the elements of an intervention strategy for tenure security?*” and “*What are indicators of an intervention strategy?*” In other words, this Chapter describes studies that have been conducted by other researchers regarding the role of government in addressing the problems caused by growth of squatter settlements in urban areas. The content of this Chapter includes definition and characteristics of squatter settlements, notion of urban governance, approaches to land tenure security, and options of intervention strategy especially for developing countries.

### 2.2. Squatter settlement

The growth of residential area without legal rights on the land and permit from the concerned authorities to build on it is interpreted as a squatter settlement (Srinivas, 1999). Urban development authorities usually deny the issuance of building permits on the ground of insufficient infrastructure or primary services in such areas. Srinivas (1999) also explains that the existence of squatter settlement is manifested with following interrelationships among physical, social and legal characteristics:

- The government usually gives little attention to- or even cannot support the provision of public facilities such as water, electricity and roads. The existence of these public facilities is minimal and far from adequate. The absence of these physical characteristics is usually occurring in the settlement without legal land tenure on it.
- Social characteristics that appear in the informal settlements constitute usually of a concentration of low-income tenants who work in the informal economy. However, not all residents are in the low-income range. Other social characteristics are that the informal settlements continue to attract immigrants from other areas who mix with a descendant of tenants who have been living in the area for a long period of time.
- The absence of private land ownership is the key characteristic of informal settlements. Tenants usually settle on a vacant land owned by government or public lands for which emergence of informal developments are closely monitored by the relevant government authorities.

People squat the land for many reasons such as the absence of having collateral assets, a low level of financial capability, the imbalance between expenditure of living cost and the low-level of their earned salary compared to the high cost of acquiring land (Srinivas, 1999). At the beginning, a small amount of families squat on the land and the amount of squatters increases over time especially when there is no serious threat of eviction (Srinivas, 1999). Besides the concentration of squatter community in a given place, squatter settlements emerge when there are some interventions from external organizations that have goals targeted for the development of such settlement (Srinivas, 1999).

### 2.3. Urban governance

The issue of ‘urban governance’ forms a subclass of the issue ‘governance’ (Stoker, 1998). Urban governance is the matter of how to bring the urban situation into the well-organized city with the



appropriate policy (Stoker, 1998). Furthermore, according to Stoker (1998), the five propositions of governance include:

- 1) A collection of institutions and stakeholders including actors outside governmental organizations.  
This proposition illustrates that the government does not work alone. Private sectors also involve providing service and decision. At this point, the government shared its authority with non-government organizations.
- 2) The overlapping scope and duties necessary to address socioeconomic issues.  
The higher complexity of governance requires more attentions into the involvement of non-government organization include citizen on it, which will achieve balance and clarity of responsibilities between the government and outside the government.
- 3) Recognition of power dependence and relationship among governance institutions.  
Relationship among different level of government creates the dominance of decision making even though they depend on each other. This situation should be balanced with the negotiable authority, but straight on the rule of the policy to achieve the goals.
- 4) Autonomy and self-governing capacity of all stakeholders in the governance network.  
Different capability of actors should be mixed by the good formula in the governance system. With the respect of autonomy in the decision making, management capacity by the leader to the lower level partner will affect to the goals.
- 5) The ability of government to employ innovative tools in the process of regulation.  
The complex hierarchy of governance forces the government to learn the suitable tools in system management. However, the failure of governance still stands in front of the goals. Therefore, the additional plan or redesign of tools hopefully will treat the governance failure.

What makes 'urban' governance specific (hence different from general types of governance) is that it refers to urban areas in particular and to the creative regulatory processes aimed at managing spatial and non-spatial changes and their impacts for urban areas (Kearns & Paddison, 2000).

Demands for services, resources and opportunities of citizen in urban area create the relationship of central government, local government and even the neighbourhood government level (Kearns & Paddison, 2000). With reference to training kits for Urban Management Programs organized by UN-Habitat, there are eight main stakeholders in urban governance include individual citizens, community, local government, civic institutions, interest groups, academia, national government and NGOs (Laquian, 2005). Given the nature of squatter settlement in Nepal, there has been active involvement of three of these main parties among which include household (individuals), government, NGOs (Shrestha, 2013); and informal social groups formed by these squatters.

#### **2.4. Elements and indicators of intervention strategies**

Government intervention strategies can be assessed through elements with its indicators derived from relevant information about a phenomenon, verifiable information and also from the expert opinion (Deininger et al., 2012). This section describes some of elements that used to assess urban governance intervention strategies followed by the indicators for land tenure security adopted from the Land Government Assessment Framework (LGAF) (Deininger et al., 2012).

Land rights recognition is the key to land governance. The absence of land rights recognition causes land tenure insecurity which will eventually create an impact on the ineffectiveness of land use and the emergence of illegal transactions in these areas (Deininger et al., 2012).

Another element is the enforcement of land rights. People will try to retain their property without considering the legality or otherwise of the process of acquiring such property. Therefore, each implementation of a government policy that would involve the people's property should consider this issue. In addition, compensation for the people should be sufficient for the continuation of life both socially and economically (Deininger et al., 2012).

Recognition of land rights prioritizes authentic proof of land occupation. However, this condition is very difficult to be implemented for communities that have lived within an area for a long period of time without any real prohibition of government. Long time period of land occupancy can be used as a tool for land rights which is included in the element of governance, although such form of proof may not be necessarily documented (Deininger et al., 2012).

Land use planning in a region that has been transformed into a residential is not only determined by the government, but opinion of the community is needed within the implementation of the new policy because the people would be affected. Furthermore, the transparency of government policy is required implying that government policy is accessible for public (Deininger et al., 2012).

A related element to the preceding issue of transparency is equity. According to Stone (2011), equity is a societal goal targeted at fair distribution of policy without considering any form of preferential treatment to beneficiaries. In the context of this research, the goal of government policy is to give squatters secured land tenure. In pursuit of this goal, government usually formulates city plans and empowers relevant agencies to implement them. In the process of implementing these plans to the benefit of the people, the question of public participation arises. Therefore, people who are expected to gain or lose as a result of the new policy should get adequate attention with a view to ensure that they do not pose as resistance to these policies (Deininger et al., 2012).

## **2.5. Approaches for land tenure security**

'Land tenure' can be defined as the manner in which land rights is held, land is occupied or how people put the land to productive use (Payne, 1997; Williamson et al., 2010). Furthermore, the common process to hold land rights in most country are land title, land transfer by agreements, land transfer by social events, boundaries determination, land subdivision and consolidation (Williamson et al., 2010). In addition, FAO (2002) defines land tenure as regulating practices concerning access, allocation, control and exercise of property rights, responsibilities and restrictions.

FAO (2002) categorizes land tenure as:

- "Private: the assignment of rights to a private party who may be an individual, a married couple, a group of persons, or a corporate body such as a commercial entity or non-profit organization.
- Communal: a right of commons that may exist within a community where each member has a right to use land independent of community holdings.
- Open access: specific rights are not assigned to anyone and no-one can be excluded. This typically includes marine tenure where access to the high seas is generally open to anyone; it may include rangelands, forests, etc., where there may be free access to the resources for all.
- State: property rights are assigned to some authority in the public sector".



The definition of land tenure alone is however not sufficiently adequate to address the issue associated with squatter settlements (van Gelder, 2010). Therefore, there is a need to scale up and relate land tenure definition to a (formally) perceived benefit for citizens at stake in order to get certainty of land rights recognition and protection (FAO, 2002). This brings us to the concept of 'tenure security'. Tenure security can be examined from three perspective, namely legal tenure security, de facto tenure security, and perceived tenure security (van Gelder, 2010).

Legal tenure security arises when a person can exercise land rights by excluding other parties who do not have the authority to interfere with enjoyment of rights conferred on him. This perspective of tenure security is not suitable towards addressing the security of tenure for squatters because it creates a distinction between formal- (legal) and informal tenure (van Gelder, 2010).

De facto tenure security on the other hand arises when certain actions are implemented towards recognizing land rights even though it may not actually be formal (Payne, 2004; van Gelder, 2010). This type of tenure security can be scaled up over time through provision of infrastructure and civic registration (FIG, 2008; van Gelder, 2010).

The third perspective of tenure security relates to people's perception and experience regarding their tenure situations which can be elicited with respect to a phenomenon that can lead to tenure insecurity such as possibility threatened by competing claims and forced evictions (FAO, 2002; Payne, 2004; van Gelder, 2010).

## **2.6. Options on intervention strategies**

Intervention strategies are generally prescriptive models or tools of how to resolve an existing or perceived problem (Elangovan, 1998). Within the context of urban governance, intervention strategies are policies and programs implemented by government to regulate access and use of land (GTZ, 1998). In other words, intervention strategies are necessary to achieve a goal or improve an existing land tenure, such as granting a more secure tenure for squatters (GTZ, 1998).

With the aim to improve land tenure security, there are variations in the approach, being either proactive or reactive approaches (GTZ, 1998). The proactive approach refers to intervention strategies aimed at preparedness for certain changes in urban areas and how to deal with the impact of such changes (GTZ, 1998). In contrast, reactive approaches are not really concerned with preparedness for adverse changes in urban areas but with emergency plans to deal with negative impacts of changes as they occur in real time (GTZ, 1998). Furthermore, the dimensions of intervention strategies could be institutional, environmental, economic and financial (GTZ, 1998).

Strategies which can be categorized as institutional intervention strategies and directed towards giving citizens more secure tenure rights include tools for land governance and secure tenure (UN-Habitat et al., 2012), strategies for delivering secure land rights for all (UN-Habitat, 2008), and pro-poor/informal land right recordation tools such as the social tenure domain model (Lemmen, 2010; Zevenbergen et al., 2013). Other strategies, such as innovative financing of slum improvements (FIG, 2008) is an intervention strategy concerned with urban poverty alleviation and financial incentives for low income settlements.

In addition, intervention strategies and their goals include guiding principles for land tenure in development cooperation (GTZ, 1998) and land tenure considerations for project design and monitoring (FAO, 2002) both of which address the development of tenure rights in development assisted projects, tools to support transparency in Local Governance (UN-Habitat & TI, 2004), especially in the provision

of services at the municipal level, and voluntary guidelines on the responsible governance of land tenure (FAO & CFS, 2012), which is a soft tool for strategy development applicable to all countries worldwide.

Among these intervention strategies, this research is concerned with strategies directed towards giving citizens more secure tenure rights. This is because while government may not be willing to grant legal tenure rights to households in squatter settlements, it is still possible for the government to provide land tenure security by its intervention strategies which are linked to social tenure relationships between people and parcel (Lemmen, 2010).

## **2.7. Intervention strategies adopted in developing countries**

Across the globe, a number of developing countries have adopted various intervention strategies for the purpose of ensuring more secure tenure rights for households living in informal settlements. In practice, the governments that have concern to the growth of informal settlements could do relocation of the squatters or choose to develop the informal areas itself with the aim of improving the lives of the squatters. This section describes some examples of government policies in some countries in South American-, African-, and Asian continents. The significant problems that occurred in these countries is due to squatters who live in settlement characterized by less adequate public facilities as well as the legal aspects of land tenure.

### **2.7.1. Brazil**

In a study of informal settlements of Recife in Brazil, it was estimated that there are about 600 households in the informal area most of whom purchase their houses or properties through illegal sales contracts (de Souza, 2001). Without legal evidence on the purchase of property, land in informal areas then become one of the subjects of dispute in Law courts, and because those households are occupying public land, they might be confronted with the possibility of eviction either by others contesting parties or the government (de Souza, 2001). On the other hand, these households do not promote legal aspects of their property, but they illustrated their land tenure security in the sense that they have been in good and peaceful relationship with other people in the informal area (de Souza, 2001). Although there is no legal evidence of land tenure in the informal area, it was further observed that the increasing illegal property transactions reinforced the perception of households in their land tenure security (de Souza, 2001).

In order to address the problem of informal settlements, one of the efforts made by the Brazilian government was to establish Recife as a special zone and began to equip the area with public facilities (de Souza, 2001). Furthermore, the government also made regulations concerning the legal aspects of land ownership which aimed to reduce the number of informal land (de Souza, 2001). However, the existence of regulations concerning the legal aspects of land tenure was not a concern for squatters in Recife, so that they remain in the area without having legal evidence of land tenure (de Souza, 2001). For them, the availability of public facilities is enough to be able to continue their lives in that area rather than thinking that their existence should be accompanied by a legal evidence of land ownership (de Souza, 2001).

Concerning the relationship between land tenure security and house improvement, de Souza (2001) concluded that households perceive more tenure security when their basic infrastructural needs such as water, electricity, transport, and waste management are addressed as top priority of the intervention elements rather than granting the legal titles of land.

### **2.7.2. Botswana**

Although Botswana is a country with high rate of urbanization, it did not have national urban development strategy until 1978; the country also did not have housing policy until 1982 (Nkwae &

Dumba, 2010). During these periods, only civil servants (government employees) got attention from the government on issue of housing provision (Nkwae & Dumba, 2010). This situation fuelled the low attention of government towards providing settlements for the urban poor and new migrants, such that emergence of squatter settlements in the centres of cities across Botswana became a major challenge for the government (Nkwae & Dumba, 2010).

The intervention strategy introduced by the government of Botswana to solve the problem of squatter settlements was primarily concerned with giving secure tenure rights to households of squatter settlement through issuance of certificates of land rights especially to lands developed in the early 1970s (Nkwae & Dumba, 2010). Furthermore, the government also built public facility such as earth road, drinking water and toilets (Nkwae & Dumba, 2010). Besides the granting of certificate of rights, Nkwae and Dumba (2010) further advocated for other government intervention strategies namely housing finance, subsidies for land registration costs and inclusion of extremely poor households.

### **2.7.3. Tanzania**

Problems of land and existing informal urban areas, including Tanzania cannot be solved by applying only conventional methods and standards that are difficult to achieved (Kombe & Kreibich, 2000). The complexity of the problems and limitations of the formal aspects can be resolved by integration of the government agencies as well as the support of the people (Kombe & Kreibich, 2000).

With respect to informal land management and regularization, local government has a big role to play (Kombe & Kreibich, 2000). The close interaction between local government and informal neighbourhood helps the state to maintain a balance between land management policy and its application such as determining the minimum area of land parcel (Kombe & Kreibich, 2000). Furthermore, the Tanzanian model recommended by Kombe and Kreibich (2000) for dealing with informal area include:

- Registration of all members of households.
- Resolving various forms of land disputes.
- Implementing environmental sanitation programs.

### **2.7.4. Bangladesh**

Bangladesh is one of the countries with high population density coupled and characterized by rapid urbanization thereby affecting its target to improve the lives of the slum settlers (Rashid, 2009). One of cities with the high amount of squatters who encroached on government land as studied by Rashid (2009) is Dhaka. The squatters live with the less adequate basic services and had a high possibility of being evicted (Rashid, 2009).

It was noted that the Government of Bangladesh implemented some programs to curtail the emergence of squatter settlements such as housing provision for low-income people in alternative sites followed by relocation of these squatters to the houses built for them (Rashid, 2009). In small scale, housing program for low-income people was also further implemented by non-government organization due to the high cost of land in the city (Rashid, 2009). Beside the housing program in the urban area, the government also offered squatters to leave the city and return to their villages with some incentives for their relocation, but it failed to implement this program (Rashid, 2009).

With the aim to support intervention strategies, Rashid (2009) recommended elements which have been design to help reduce urban social exclusion of households living in informal settlements. Elements of this intervention strategy include flood control and drainage, safe water supply and sanitary infrastructure, improving health services, subsidies for access to urban infrastructural services and protection from eviction (Rashid, 2009). In spite of all these intervention elements, Rashid (2009) emphasized that

government of Bangladesh failed to harmonize all these elements into a coordinated strategy thereby making squatters to feel high incidence of social inequality and evictions.

### 2.7.5. India

The less sufficient facilities and less job opportunities in the rural areas of India has contributed to rapid urbanization especially in Delhi (Singh, 1991). High population in Delhi created the emergence of squatter settlement coupled with less social and infrastructural facilities (Singh, 1991).

The lack of sufficient housing for squatters got an attention from the government (Singh, 1991). Eviction by the government had been implemented, but it could not solve the problem of squatter settlement growth because these squatters had returned to occupy the government land (Singh, 1991). In response, the government intervened by accepting these squatters to remain on government lands and further provided public toilet and hydrant for drinking water in the settlement, thereby giving advantages to these squatters because the intervention strategy of upgrading slum environments was preferred to the eviction program (Singh, 1991).

From these examples of government intervention strategies in five developing countries, it illustrates that every country has similar ways of providing some security of land tenure for its citizens ranging from environmental upgrading to relocation which is accompanied with land right the recognition. Table 2 attempts to summarize and compare intervention strategies for squatter settlements across these countries examined in this sub-section.

No	Country	Organization involve	Intervention Strategy
1	Brazil	Government	Infrastructure's development
2	Botswana	Government	Issuing certificate of land rights Infrastructure's development
3	Tanzania	Government	Infrastructure's development
4	Bangladesh	<ul style="list-style-type: none"> <li>• Government</li> <li>• Non-government Organization</li> </ul>	Relocation House program
5	India	Government	Relocation Infrastructure's development

Table 2: Intervention strategies in developing countries

The next section briefly examines government intervention strategies for secure land tenure in Nepal.

## 2.8. Intervention strategies in Nepal

In Nepal, land is classified as *private* land, *public* land, *government* land and *Guthi* (religious) land (Tuladhar, 2004). By their very nature in ownership rights, squatters do not have any of these formal land rights. Hence, land invasion and land holdings without formal land rights have led to trespass of property rights, tenure dispute (de Souza, 2001), and poor incentives for credit seekers hoping to invest land (Zevenbergen, 2002).

The government of Nepal does not have a direct intervention scheme to grant tenure security to squatters, but it has rolled out a number of programs for poverty alleviation originally designed to increase access to water and sanitation (Shrestha, 2013). However, this program has not really gone a long way to increase tenure security and improve the quality of housing in squatter settlements (Shrestha, 2013). In view of the failure of existing intervention strategies of the government of Nepal to solve existing problems of tenure security in informal settlements, Shrestha (2013) recommended some elements of intervention such as

granting a variety of land rights including certificates of temporary occupation, recognition and registration of households, property tax incentives, micro-credits for housing development and settlement improvement, economic empowerment through capacity building and sustainable livelihood, relocation of vulnerable squatters, and a coordinated partnership between all stakeholders in urban governance. Notwithstanding, an attempt was made in this research to re-design these and other existing strategies in order to explore how to grant secure land tenure to squatters in Kathmandu city of Nepal.

## 2.9. Concluding remarks

The review of literatures described above has led to the following conclusions: Firstly, there are evidences to show that growth of squatter settlements in urban areas is a challenge for the government. Although the government attempts to grant land tenure security to its citizens, available intervention strategies needed to achieve this goal could not be totally realized. It is because either the squatters have difficulties in adaptation of the strategies or the government finds that it is difficult to take control of its own intervention schemes.

Although there are differences in the context and implementation of intervention strategies from some of the country cases described above, a common problem among these countries is how to deal with squatter settlements, especially with regard to the grant of secure land tenure. The difference in these country cases of intervention strategies arises from the variation in content and dimensions of the elements of urban intervention where they have more emphasis.

Addressed in this Chapter are the research questions: “*What are the existing intervention strategies for tenure security?*”, “*What are the elements of an intervention strategy for tenure security?*”, and “*What are indicators of an intervention strategy?*” The various developing country cases examined in sections 2.7 and 2.8 (including Nepal) indicate that existing intervention strategies for secure land tenure comprise registration of all members of squatters, relocation of squatters, infrastructure’s development, issuing certificate of land rights, and housing provision. Government's experiences of the implementation of these strategies have required some legal and institutional changes as well as participation from the squatters who are beneficiaries of the policy changes. Not left out in the process of strategy formulation and implementation across these country cases highlighted above include the squatters (citizens), community leaders, local government, civic institutions, interest groups, national government and NGOs.

Secondly, the elements of intervention strategy for tenure security were identified based on a review of literature Land Government Assessment Framework (LGAF) to include recognition of land right, right enforcement, tool for rights, transparency, and equity.

Finally, indicators identified to be associated with these elements of land governance assessment framework include recognition of settlement, grant of land use rights, settlement rehabilitation for improved land tenure security, integrated relocation and compensation policy, grant of secure tenure on condition of long time occupancy, attention to input from the public concerning urban planning, and participatory urban planning.

While answers to these research questions have provided insights into the re-design of intervention strategy for secure land tenure for squatters in Kathmandu. Therefore, Chapter 3 examines the characteristics of Bansighat neighbourhood in Kathmandu for which the re-design of an intervention strategy is required.



### 3. SQUATTER SETTLEMENT IN BANSIGHAT NEIGHBOURHOOD OF KATHMANDU

#### 3.1. Introduction

The previous Chapter (Chapter 2) has explored the criteria of a squatter settlement and urban governance intervention strategies adopted by some developing countries to attain land tenure security for its residents. Referring to the criteria of the squatter settlement (Chapter 2), and in accordance with the purpose of selecting an area of study as described in the general introduction (Chapter 1), this Chapter illustrates the condition of Bansighat squatter settlements in Kathmandu. The result of this Chapter is the foundation to extract more about the desire of squatters concerning to the land tenure security for them and how the government addresses the existence of this squatter settlement that will be discussed in the next Chapter.

Furthermore, another purpose of this Chapter is answering the research questions include “*How did the squatters occupy land in Kathmandu?*”, “*How long have these squatters been there?*” and “*What is the extent of squatter settlement growth over the years?*” In addition, answers to these questions lead to fulfil the examination of squatter settlement growth.

#### 3.2. Data collection methods

Data collection method chosen to illustrate the situation and living conditions in the Bansighat squatter settlement is by collection of primary data and secondary data which has been done in the fieldwork phase as a part of research approach which has been drawn in Figure 2. The main study population is households in squatter settlement of Kathmandu, Nepal. Census information about squatter settlements along Bagmati River in Kathmandu indicates that 153 households reside in Bansighat area (NEST (P) Ltd, 2010).

With the aim to collect primary data, 47 respondents from Bansighat squatter settlement (Appendix 8) were interviewed during the fieldwork. The random sampling technique is used during the fieldwork (Teddlie & Yu, 2007). The strategy adopted during the fieldwork is interviewing one squatter randomly in every 3 or 4 houses with the purpose to get equal chance or represent to all population (Teddlie & Yu, 2007). This sample size is considered adequate for the purpose of this research given the limited time frame for fieldwork. The interview was conducted systematically and it afforded squatter settlers the opportunity to express their opinion concerning the land occupancy. In addition, to strength the information about the emergence of Bansighat squatter settlement, interview also has been conducted with the government employees (Appendix 4) with the purpose to illustrate their perspective (Czarniawska-Joerges, 2004) concerning to the emergence of Bansighat squatter settlement.

The secondary data which has been collected include images of Kathmandu in three different years. The first image is aerial photograph of Kathmandu year 1992 provided by Department of Survey, Nepal. The second image is IKONOS image of Kathmandu year 2001 provided by Genesis Consultancy Pvt, Ltd. The third image is Kathmandu's image year 2013 extracted from “Google Maps” within “URL” address: <https://maps.google.com/maps?num=50&client=firefox-a&q=kathmandu+nepal&ie=UTF-8&hq=&hnear=0x39eb198a307baabf:0xb5137c1bf18db1ea,Kathmandu,+Nepal&ei=sWkmUrDWH8Ly7AaHk>

4D4BA&ved=0CLcDELYD. Then, referring to the study area, Bansighat area was picked up from those images. In addition, the use of these maps is only for the purpose of this research.

### 3.3. Data presentation

This section presents the results of data that has been collected during the fieldwork phase. This section is a part of post-fieldwork phase which has been drawn in Figure 2. Frequency distribution table is used to present answers or opinions from the households collected within the questionnaire (Appendix 8). With respect to Appendix 4, narration was used to gather important points from semi-structured interview of respondents (Czarniawska-Joerges, 2004). Other data presentation in this section is presenting the result of data digitizing and overlaying of the maps that have been collected in the fieldwork phase.

#### 3.3.1. Squatter settlement from the household perspectives

This sub-section describes the opinions of squatters concerning how do the squatters occupy their land and how long have the squatters been in the Bansighat squatter settlement. For the introductory, this sub-section illustrates that Bansighat squatter settlement does not have sufficient public facilities in access road and clean water. This illustration is based on observations obtained in the field which suggests that the access road in the area is mostly a dirt road and another part only hardened with inadequate material (Figure 4). The availability of clean water in the area is also very limited. Figure 4 below also shows the squatters in this settlement rely on public tanks with limited water supplies to meet the need for water.



Figure 4: Road access and water facilities in Bansighat

Kathmandu, the capital of Nepal with the better public facilities and job opportunities has attracted people migrate from their hometown (Shrestha, 2013). As well as in Bansighat area, it is noted from the interview with the squatters that the squatters were come from many areas of Nepal such as Kathmandu, Lalitpur and any other areas. Furthermore, from 47 respondents (Appendix 8), 19 respondents stated that they actually have properties in their hometown, 26 respondents stated that they do not have any properties in their hometown and 2 respondents did not answer (Figure 5).

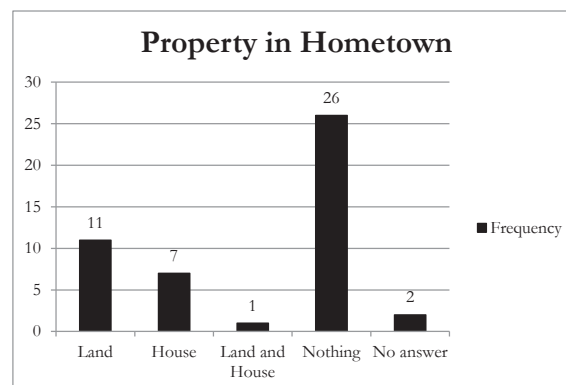


Figure 5: Property in hometown

In the socio-economic and legal aspects, questions that asked to the respondents include education, job, reason of land occupancy, way of occupation, safety life and land dispute experience. From the educational and job viewpoints, the result of interview indicates that almost all of squatters who live in Bansighat area only have lower levels of education, and even some of them are not educated at all. Moreover, to fulfil the needs, the squatters describe that they work in the informal sector such as wage labours or have small businesses.

For the “*reason of occupancy*” question, interview with the squatters indicates that 22 of 47 respondents cannot afford the rent cost in Kathmandu (Figure 6). The other 23 respondents have reason such as search for job, better facilities, marriage and do not have work. In addition, 2 respondents did not answer.

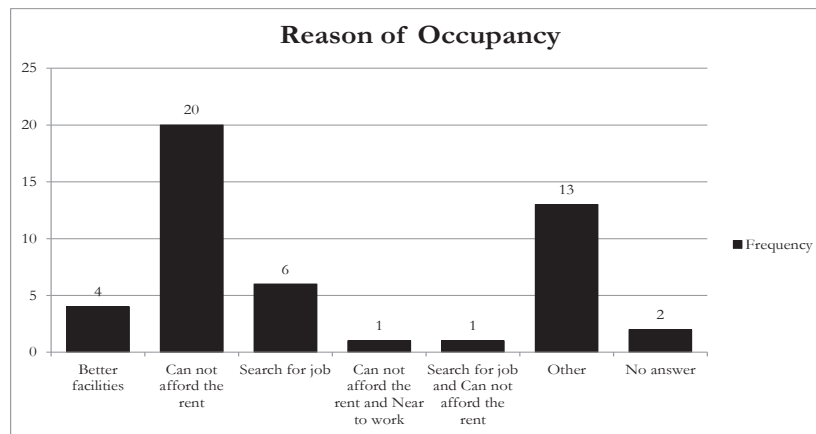


Figure 6: Reason of occupancy

With the respect of “*way of occupation*” question, 21 of 47 respondents indicated that they found an available land that not used by other squatter for building in Bansighat area by their own and start to occupy the land (Figure 7). Furthermore, Figure 7 also shows that 5 respondents bought their property from other people without legal evidence and 4 respondents state that their property was given by their parents, while 17 respondents stated that they got information about Bansighat area from friend, relation and due to the marriage.

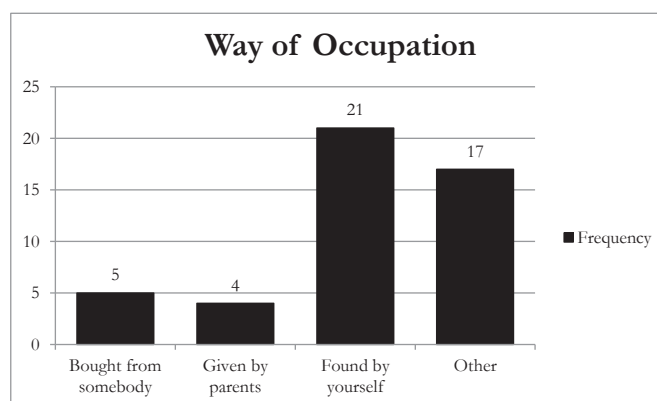


Figure 7: Way of occupancy

In addition, after occupied the land, squatters started to build the house fund by their own money or loan from others. However, not all of the squatters stay in their own house. It is noted that some of squatters only rent the house from other people.



On the safety life viewpoint, land which is located near the river usually vulnerable such as from flood and erosion by the river flow. With the purpose to relate this assumption with the reality on the field, interview was conducted to gain information about the squatters' feel to the safety of their living environment. The interview with 47 respondents in Bansighat squatter settlement indicates that 30 respondents live in safe and do not feel worry that their house will be destructed by flood and the rest (17 respondents) feel worry about their environment's condition.

Occupying the land without any legal evidence usually creates the possibility of land dispute between the occupants. In relation with this assumption, the results of interviews with 47 squatters in Bansighat squatter settlement shows that only 7 respondents who stated they had a land dispute against the neighbours, especially on issues of land boundary. On the other hand, 38 respondents stated that they never have land dispute against the neighbours and 2 respondents did not give any answer.

The interview was also conducted to know about time period of land occupancy in Bansighat area. The results describes that 34 of 47 respondents claimed that they have occupied the land for more than 20 years, 6 respondents claimed between "15 – 20" years, 4 respondents claimed between "10 – 15" years and 3 respondents claimed that they have occupied the land between "5 – 10" years (Figure 8).

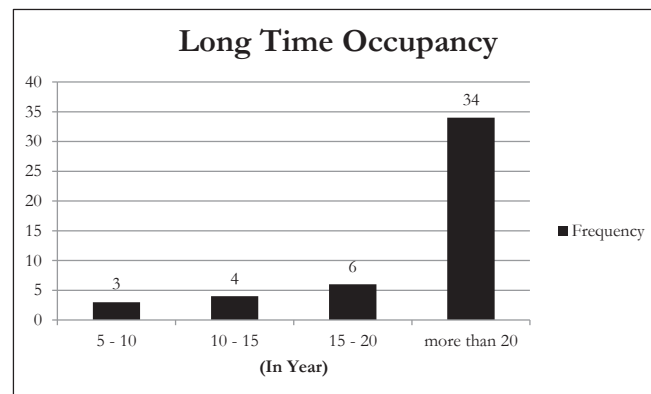


Figure 8: Long-time occupancy

The next sub-section will describe the emergence of squatter settlement from the government's perspective.

### 3.3.2. Squatter settlement from the government perspectives

This sub-section describes the government's perspective concerning to the emergence of Bansighat squatter settlement. From the economic viewpoint, the land around the Baghmati River usually became a place to stay for migrants who do not have sufficient financial for renting house in Kathmandu. This information obtained from interviews with government employees who deal with land and its management either in central or local level. Other perspective, in correlation with the law, respondents indicate that the land occupied by squatters is land which is owned by the government. In addition, there is a testimony from one of the government officials from Ministry of Urban development indicates that the government does not have proper manner to protect the land near the Baghmati River, so land encroachment by the people is occurred. The action from the government is only monitoring and collecting information about the situation.

From the safety life standpoint, there are two different views obtained from the respondents. Some respondents' opinion indicates that the land which is now transformed into a squatter settlement is not suitable for a residence. It is because the area is close to the river, so it is prone of flood or erosion.

Furthermore, most of the buildings in Bansighat area are not sufficient for housing, so it is easy to be swap by the flood. On other hand, some other respondents did not consider that Bansighat squatter settlement is a dangerous area because the reality on the ground shows that the squatter settlement is still exists.

### 3.3.3. Existence of Bansighat squatter settlement

This sub-section describes the growth of this settlement from the spatial data viewpoint. As introduced in Chapter 1, the study area of this research is Bansighat squatter settlement in Kathmandu, Nepal. This squatter settlement is located beside the Baghmata River. Images of Bansighat area in three different years include year 1992, 2001 and 2013 have been processed by digitizing. Figure 9 below is the map as the result of Kathmandu aerial photograph's digitization of the year 1992.



Figure 9: Existence of squatter settlement in Bansighat area in year 1992

(Source: Department of Survey, Nepal for CDRMP (Comprehensive Disaster Risk Management Plan) project)

The red colour's boundary in the map above indicates the buildings have been built on the land of the study area (Figure 9). Area covered by those building is about 604 m<sup>2</sup>. In correlation with public facilities, the road access between each building is difficult to be identified.

The amount of squatter settlement is increasing for many years. Such as in Bansighat area's map year 2001 below, the green colour's boundary in this map illustrates that the amount of buildings in this Bansighat area were increased (Figure 10). The area covered by the buildings is about 7975 m<sup>2</sup>. In this stage, the road access can be identified on the map through the gap between each building.

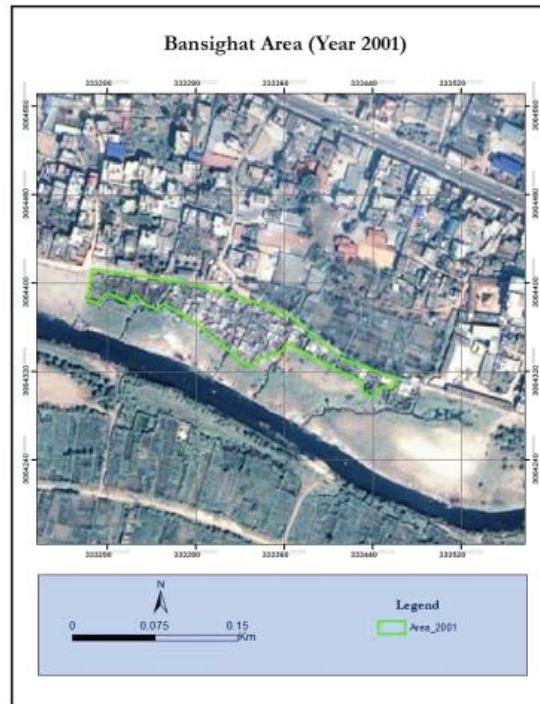


Figure 10: Existence of squatter settlement in Bansighat area in year 2001

(Source: Source: Genesis Consultancy Pvt. Ltd)

Furthermore, the growth of squatter settlement did not stop in year 2001. The land which is transformed into building in year 2013 is become wider than in year 2001 as illustrated by the blue colour's boundary in the map below (Figure 11). The area covered by the buildings is about 13289 m<sup>2</sup>. Map of Bansighat area in year 2013 also illustrates that the amount of building is also increase especially it spreads on the rest of land around the existing squatter settlement.

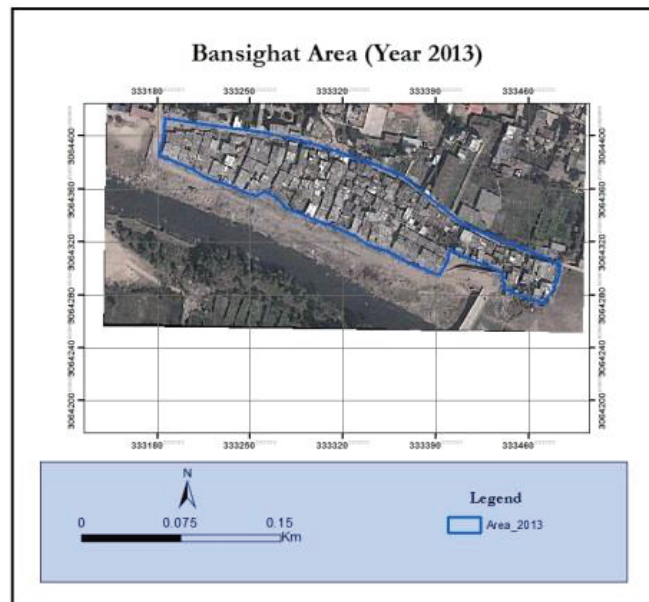


Figure 11: Existence of squatter settlement in Bansighat area in year 2013

(Source: Google Maps. Retrieved 4th September, 2013 from

<https://maps.google.com/maps?num=50&client=firefox-a&q=kathmandu+nepal&ie=UTF-8&hq=&hnear=0x39eb198a307baabf:0xb5137c1bf18db1ea,Kathmandu,+Nepal&ei=sWkmUrDWH8Ly7AaHk4D4BA&ved=0CLcDELYD>)

With the purpose to illustrate the trend of Bansighat squatter settlement's growth, these three different maps have been overlay with result as shown in Figure 12.

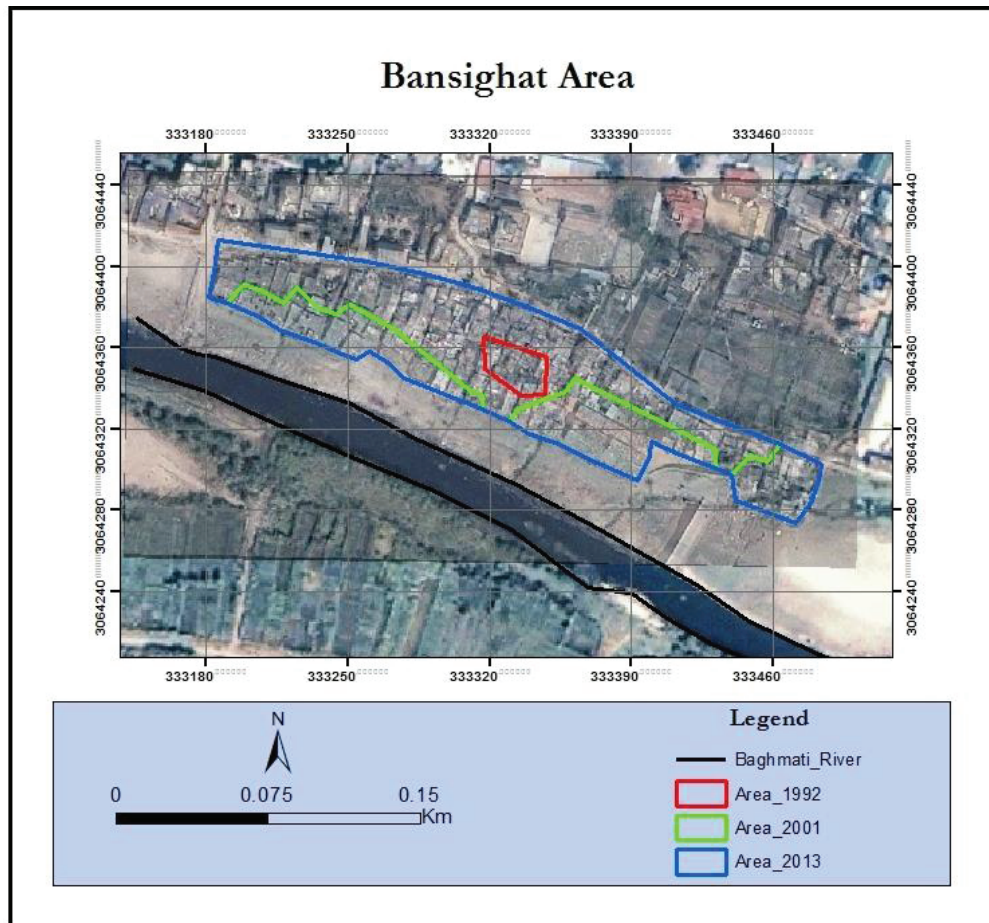


Figure 12: Existence of squatter settlement in Bansighat area

The map above illustrates that the squatter settlement in Bansighat area was growth during the year 1992 to 2013 following the available land in this area. In addition, the percentage of this Bansighat area's growth has been calculated using formula:

$$\text{Percentage\_change} = \frac{(\text{Area}(2) - \text{Area}(1))}{\text{Area}(1)} \times 100\% \quad \dots\dots\dots (1)$$

% Growth (1992-2001)	% Growth (2001-2013)	% Growth (1992-2013)
1219.4	66.6	2098.7

Table 3: The growth of Bansighat squatter settlement

Table 3 above indicates that the land in Bansighat area that encroached by the squatters in 21 years (from 1992 to 2013) is increase for about 21 times wider.

### 3.4. Discussion on the results

This section describes further discussion of important findings which is derived from the presentation of the growth of squatter settlements in the Bansighat area. Furthermore, the discussion focuses on the existence of squatter settlement from legal and socio-economic standpoint.



For the beginning, there is an interesting finding from the survey results on long time period of land occupancy. According to the map of Bansighat squatter settlement in the year 1992, it was only small number of buildings existed in the area. Surprisingly, 34 of 47 respondents claimed that they have live in the Bansighat area for more than 20 years. The un-accordance answer from the respondents to the fact might be because they want a recognition that they have lived for long time in that area. Another reason is the lack of control in the implementation of the survey on the field. The image of Bansighat area in year 1992 was collected after the interview with the squatters, so it did not used as a guide in the formulation of questionnaire on the "*long-time occupancy*" question.

In addition, according to the map of Bansighat area in year 2001, there are many building that can be identified in Bansighat squatter settlements. Therefore, with the respect of comparing the answer from respondents with the map of Bansighat area in year 2001, at least some squatters have been live in that area more than 10 years or even more than 15 years.

In the socio-economic standpoint, analysis derived from the results of the interview with the squatters indicates that less educational background and financial followed by the high value of the property such as house purchasing as well as renting the house in Kathmandu finally urged the squatters choose to live in squatter settlements such as on the land near the Baghmati River. With the limited-capability, they settled and become a community in Bansighat area.

From the legal point of view, the result of interview indicates there were some illegal properties transactions on the land belong to the government even though the squatters did not mention the details of the transaction. It indicates that Bansighat is a suitable area for the squatters to settle and they ignore the legal aspects on the property transactions. Furthermore, the illegal transaction has created the emergence of some land disputes experienced by squatters in Bansighat. However, additional information obtained from respondents who had experienced on a land dispute with a neighbour indicates that the land dispute between squatters does not mean anything because they realize that they live on the land belongs to the government.

On the safety life viewpoint, even Bansighat is located near the river, but more squatters feel safe during stay in their house rather than squatters who worrying due to the flood experience in the past. Due to the need of housing, the safety aspect has been ignored by the squatters.

### **3.5. Concluding remarks**

The examination of the growth of squatter settlement which is the first sub-objective of this research has been achieved by this Chapter. The questions which are following the sub-objective had been answered by finding results include:

- a. Bansighat squatter settlement is located near a river coupled by the lack of public facilities;
- b. Squatters occupy the government's land illegally either through illegal transactions or other ways;
- c. Bansighat area is inhabited by some squatters for more than 10 years, strengthened by the illustration of Bansighat area's images; and
- d. The high growth has occurred in Bansighat squatter settlement in the extent period of 21 years.

In addition, these answers have described that squatters in Bansighat squatter settlement do not have land tenure security. This concluding remark escorts the Chapter 4 that will describe the existing of government intervention strategies and squatters' prioritize on the indicators of government's intervention strategies to attain land tenure security.

## 4. EXISTING INTERVENTION STRATEGIES FOR LAND TENURE SECURITY

### 4.1. Introduction

This Chapter aims at answering the following research questions: *“What is the perception of stakeholder towards urban governance intervention strategy for land tenure security?”* and *“What intervention strategies are relevant to tenure security for squatters in Kathmandu?”* Answers to these questions lead to the identification of the content and structure of urban governance intervention strategies for tenure security in the study area, and evaluation of the extent to which stakeholders trust the ability of these strategies to grant secure land tenure.

Other aim is answering the research question: *“How do squatters prioritize the indicators of an intervention strategy?”* Answer to this question describes an evaluation of the priority of urban governance intervention strategies for tenure security.

### 4.2. Data collection methods

Data collection method used in this Chapter includes primary data collection from government organizations, international agency, non-governmental organization, academician and households. With the aim to illustrate the existing intervention strategies for land tenure security, these data were collected from government organizations, international agency, non-governmental organization, and academician during the fieldwork phase using semi-structured interviews (Appendix 1 and Appendix 2). The information from the respondents was kept in the recording tool in the purpose of protecting the primary data.

With the aim to evaluate the squatters' priority on the government's intervention strategies for tenure security, other type of data in the questionnaire (Appendix 3) with the households in Bansighat squatter settlement has been collected during the fieldwork phase.

#### 4.2.1. Government organizations

With the aim to search for information about government's intervention strategies for squatter settlements and its implementation, semi-structured interviews have been conducted with the employees of various government organizations that have competence in dealing with the city problem during the fieldwork phase. Organizations have been visited include:

- a. Ministry of Land Reform and Management;
- b. Ministry of urban development;
- c. High Powered Committee for Integrated Development of Baghmati Civilization;
- d. Kathmandu Municipality; and
- e. Lalitpur Development Committee

With respect to the Ministry of Land Reform and Management, employees have been interviewed were works in:

- a. Survey Department;
- b. National Land Use Project; and
- c. Land Management Training Centre

Employees of the Ministry of urban development who were interviewed in the course of the fieldwork include:

- a. Kathmandu Valley Development Authority; and
- b. Department of Urban Development and Building Construction

In addition, the interview also has been conducted with the governments' employees at the district level, includes:

- a. District Survey Office; and
- b. District Land Revenue Office

A total of 16 government staffs were interviewed in the course of fieldwork phase. Interviews of all government employees were conducted on an individual basis (Appendix 4).

#### **4.2.2. International agency**

The issue of the human's rights is also a concern of the international organization, and it is included in the UN-Habitat program (Appendix 5). Therefore, the head of programs of UN-Habitat in Kathmandu, Nepal was treated to a semi-structured interview during the fieldwork phase. The purpose is getting information about the involvement extension of international organizations in addressing urban management and squatter settlements in Nepal. Only one interview was conducted for this agency.

#### **4.2.3. Non-governmental organizations**

Semi-structured interviews were conducted with the representative of "Lumanti", and "Mahila Ekta Samaj" (Appendix 6). These Non-governmental organizations provided insights into their programs and activities for squatter settlement and tenure security. A total of 2 respondents were interviewed under this category of respondents.

#### **4.2.4. Academician**

Only one Faculty member of the Kathmandu University was interviewed in connection with this research (Appendix 7). He provided useful information regarding experience and knowledge of behaviour and reactions of squatter settlers and government programs of slum management and security of tenure.

### **4.3. Data analysis**

This section describes the analysis of data that has been collected in fieldwork phase. Data analysis method applied in this Chapter includes two types of analysis.

#### **4.3.1. Stakeholders' perception towards urban governance intervention strategy for land tenure security**

First method is describing the perspective of government's employees regarding existing government intervention strategy to attain land tenure security in Kathmandu. According to Czarniawska-Joerges (2004) and Golsteijn and Wright (2013), narrative method can be applied to the collection of interview data by engaging respondents in a conversation from which a story about a subject or phenomena can be derived. Narration of the important points from the semi-structured interview with the stakeholders' respondents was used in this sub-section. With respect to the tables in Appendix 4, narration of responses from interviewees were captured in the form of stories about their experiences of intervention strategies and other related subjects of secure land tenure for squatters in the study area.

The important points obtained from respondents indicate that local government of Kathmandu has a list of existing program or programs' plan for squatters include:

- a. Resettlement plan which encourages squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River.

- b. Relocation of squatters who live in areas that is vulnerable to natural disasters such as floods to safer place (implemented last year, but not in Bansighat area).
- c. Resettlement program of low cost building apartment for about 250 families in Kathmandu (on progress).
- d. Integrated land redevelopment's plan comprising slum clearance, road construction, and protection of ecosystems around Baghmati River through the construction of a natural park.

In addition, the remark derived from the contains of interviews to the respondents (Appendix 4, Appendix 5, Appendix 6, and Appendix 7) to show the stakeholders' perception towards urban governance intervention strategy for land tenure security are presented within Table 4.

Category of Respondent	Perspective on existing intervention strategies
Central government	<ol style="list-style-type: none"> <li>1. Relocation of squatters living in areas those are vulnerable to natural disasters (e.g. floods) to safer place.</li> <li>2. Improvement of physical facilities including road access, electricity and water in squatter settlements that are not vulnerable to natural disasters with a view to make squatters live comfortably.</li> <li>3. Improve the status of land tenure through grant of land title (in the past) especially to residents who occupied land without legal evidence on the condition that the land is fit for settlement.</li> <li>4. Stop further growth of squatter settlements and protect ecosystems around Baghmati River through the construction of a natural park.</li> <li>5. Land use change through slum clearance in Bansighat area to pave way for a road connecting Kathmandu to other neighbourhoods.</li> <li>6. Build the low-cost apartment for the squatter with the purpose of optimization on limited land in Kathmandu</li> </ol>
Local government	<ol style="list-style-type: none"> <li>1. Although the local government plans to relocate squatters (more than 400 families) from areas surrounding the Baghmati River and relocating them to an alternative place, it has not been implemented because it questions the political credibility of government.</li> <li>2. Discuss with other government organizations over the provision of secure land title to squatters.</li> <li>3. Resettlement program of low cost building apartment for about 250 families in Kathmandu (on progress).</li> <li>4. No existing relocation plan for squatters in the current year (2013) due to the experience of poor success in previous year (in other area in Kathmandu) where some relocated and compensated squatters returned and occupied land near Baghmati River.</li> </ol>
Non-governmental organization and International agency	<ol style="list-style-type: none"> <li>1. Provide services cutting across domestic water supply, health care, and sanitation in squatter settlements.</li> <li>2. Discuss with government over the provision of secure land title to squatters.</li> <li>3. Support the government to relocate squatters living near Baghmati River to other regions in order to guard against adverse health impacts arising from pollution of that river.</li> <li>4. Government's announcement of its intention to cut supply of electricity and water in squatter settlements in order to force squatters to relocate to the alternative site prepared for them.</li> </ol>
Academician	Implementation of resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River.

Table 4: Stakeholders' perspective on existing intervention strategies



#### 4.3.2. Relevant intervention strategies to land tenure security for squatters in Kathmandu

Harmonization of stakeholders' perspective (Table 4) is applied in order to find the relevant intervention strategies to attain land tenure security for squatters. This stage has identified that the relevant intervention strategies include:

- Implementation of resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River.
- Relocation of squatters living in areas those are vulnerable to natural disasters (e.g. floods) to safer place.
- Build the low-cost apartment for the squatter with the purpose of optimization on limited availability land in Kathmandu.
- Implement the integrated land redevelopment activities comprising slum clearance, road construction, and protection of ecosystems around Baghmati River through the construction of a natural park.

#### 4.3.3. Squatters prioritize on the indicators of an intervention strategy

Squatters' prioritize on the indicators of an intervention strategy is ranked by the preference of squatters to answer the questions which follow the indicators. The indicators itself adapted from the elements and indicators of urban governance intervention strategies for secure land tenure proposed by the Land Governance Assessment Framework (LGAF) as mention in Chapter 2 include urban governance for rights recognition, rights enforcement, tool for rights, transparency and equity (Deininger et al., 2012). Applying the Likert approach to the "agree-disagree" scale for the acceptance of indicators of intervention strategies, a calculation and ranking were performed to identify preference of squatters.

Responses by 47 respondents (squatters) to those seven questions which follow the indicators (Appendix 9) were converted into weighted scales for the purpose on the basis of calculated mean score (Table 5). The scales and their response codes for the question no.1 to question no.6 include: 5 = "Strongly agree"; 4 = "Agree"; 3 = "Neither agree nor disagree"; 2 = "Disagree"; 1 = "Strongly disagree"; and 0 = "No answer".

Contrary to the scaling of responses to other questions above, the responses for question no.7 which is following the indicator of equity ("Do you agree if the government made any decision on your land without the community participation will be success?") was scaled in reverse order commencing as follows: 0 = "No answer"; 1 = "Strongly agree"; 2 = "Agree"; 3 = "Neither agree nor disagree"; 4 = "Disagree"; and 5 = "Strongly disagree". The reverse order ranking of responses to this question is because of the negative format in which the leading question on the subject of equity was put forward to respondents.

Mean score for the squatters' prioritize on indicators of intervention strategies has been calculated using formula:

$$Mean\_score = \frac{\sum fX}{\sum f} = \frac{(5 \times f_5) + (4 \times f_4) + (3 \times f_3) + (2 \times f_2) + (1 \times f_1) + (0 \times f_0)}{f_5 + f_4 + f_3 + f_2 + f_1 + f_0} \dots\dots\dots (2)$$

Where  $\sum$  stands for summation,  $f$  symbolizes frequency of observation,  $X$  symbolizes the weights ranging from 5 to 0, and  $f_5$  to  $f_0$  stands for frequencies of respondents whose answers correspond with the allocated weight for a given answer to the question posed.

Elements	Indicators	Score and value(X)	Strongly agree					Neither agree nor disagree	Disagree	Strongly disagree	No answer	Stat.	Values	Mean	Rank
			5	4	3	2	1	0							
Recognition of land right	Recognition of settlement	<i>Freq (f)</i>	28	5	6	2	6	0	Σf	47			47	4.000	2
		<i>fx</i>	140	20	18	4	6	0	Σfx	188					
	Grant of land use rights	<i>Freq (f)</i>	6	27	6	2	5	1	Σf	47			47	3.511	3
		<i>fx</i>	30	108	18	4	5	0	Σfx	165			165		
Right enforcement	Settlement rehabilitation for improved land tenure security	<i>Freq (f)</i>	6	14	15	5	5	2	Σf	47			47	3.106	6
		<i>fx</i>	30	56	45	10	5	0	Σfx	146			146		
	Integrated relocation and compensation policy	<i>Freq (f)</i>	1	8	3	16	14	5	Σf	47			47	1.957	7
		<i>fx</i>	5	32	9	32	14	0	Σfx	92			92		
Tool for rights	Grant of secure tenure on condition of long time occupancy	<i>Freq (f)</i>	17	15	4	1	2	8	Σf	47			47	3.426	4
		<i>fx</i>	85	60	12	2	2	0	Σfx	161			161		
Transparency	Attention to input from the public concerning urban planning	<i>Freq (f)</i>	8	23	7	3	0	6	Σf	47			47	3.383	5
		<i>fx</i>	40	92	21	6	0	0	Σfx	159			159		
Elements	Indicators	Score and value(X)	Strongly agree					Neither agree nor disagree	Disagree	Strongly disagree	No answer	Stat.	Values	Mean	Rank
			0	1	2	3	4	5							
Equity	Participatory urban planning	<i>Freq (f)</i>	2	2	1	3	12	27	Σf	47			47	4.170	1
		<i>fx</i>	0	2	2	2	9	48	135	Σfx	196		196		

Table 5: Squatters' prioritize of indicators on government intervention strategies

Ranking of indicators of intervention strategy was carried out in descending order of the mean score. Ranks in Table 5 indicate preferences of squatters towards the outcome of governance intervention strategies for secure land tenure. Indicator with highest mean score is the participatory urban planning. Rank second in Table 5 is government's recognition of the squatter settlement. The grant of land use right on the existing squatter settlement is rank third following an analysis of the perception of squatters. Rank fourth is the grant of secure tenure on condition of long term occupancy followed by rank fifth which is the attention to input from the public concerning urban planning. Then, due to the low mean score has been achieved on the matters of settlement rehabilitation for improved land tenure security and integrated relocation and compensation policy, it indicates that squatters place those two indicators as the sixth and seventh ranks.

#### 4.4. Discussion on the results

This section describes the further discussion on the two results of data analysis of this Chapter. Firstly, the analysis indicates that there are four relevant intervention strategies to attain land tenure security for squatter are possible to be implemented in Kathmandu.

- a. Implementation of resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River.

Information gathered from the government organizations, non-governmental organization and academic respondents describe that there was a failure experiences in the relocation program (in other area in Kathmandu). This is because un-prepared of the relocation program's plan. Therefore, the government actions that could be carried forward such as:

- Set up a new area that is suitable for settlement;
- Set up of public infrastructure in new areas such as road access, electricity and clean water;
- Socialize the relocation plan to the squatters; and
- Socialize of law enforcement and supervision in order to avoid re-acquisition of land by squatters.

- b. Relocation of squatters living in areas those are vulnerable to natural disasters (e.g. floods) to safer place.

Perceptions by the government's respondents indicate that the land around the river is not appropriate to be used as settlement. The most feared dangers of floods occur when water flowing in the river exceeds the capabilities of the river. The flood can damage property which is located in surrounding the watershed. Furthermore, as the structure of the building owned by squatters along the river usually is not strong, then the impact is particularly vulnerable when the flood comes. The losses will be worst if it was not just a building damaged by flooding, but the possibility of lives could be lost because of the floods could come at any time. For that, the intervention of the government that might be fit is the relocation of squatters who live in disaster-prone areas to safer places.

- c. Build the low-cost apartment for the squatter with the purpose of optimization on limited availability land in Kathmandu.

Statements by the government's respondents indicate that the availability of land in Kathmandu is limit coupled by the high price. This condition causes the local government of Kathmandu may not provide lands for the all residents of Kathmandu including squatters. Therefore, to overcome the situation, the government should maximize the availability of land in Kathmandu through the development of low cost apartments. The purpose is to give the opportunity to the low-economic level residents and the squatters to live more feasible in the apartment. The advantage of this program is a lot of household can be accommodated in apartments and easy support on providing facilities such as electricity and water for

each household. In addition, information gathered from the government's respondents tells that the government has a low-cost Kathmandu apartment's program that can accommodate about 250 households.

d. Implement integrated land redevelopment activities comprising slum clearance, road construction, and protection of ecosystems around Baghmati River through the construction of a natural park.

This relevant intervention strategy indicates that implementation of relocation's program should be accompanied by the implementation of the rehabilitation of ex-squatter settlement. The land should be clean of buildings and then changes the land use immediately. Information obtained from the government's respondents illustrates that the land use in Bansighat squatter settlement will be changed into a natural park and there will be road access along the river. The land rehabilitation hopefully will avoid the next land encroachment by squatters.

The second discussion is about squatters' prioritizing on indicators of intervention strategies (Table 5). Ranks first to fifth include participatory urban planning, recognition of settlement, grant of land use rights, grant of secure tenure on condition of long time occupancy and attention to input from the public concerning urban planning indicate that the squatters want to be recognized by the government as same as other citizens in the involvement of government intervention strategies' implementation followed by the hope on the granting of land tenure rights. While rank sixth and seventh include settlement rehabilitation for improved land tenure security and integrated relocation and compensation policy indicate that the squatter only see a less chance of better infrastructures' provision by the government, but they do not want to be relocated to other area.

The third discussion is focusing on the match of existing governance intervention strategies with the rank of intervention strategies' indicator by the squatters as presented in Table 6. Rank first, fifth and seventh in Table 5 match with two existing intervention strategies. Rank third follows the rank first and seventh in other existing intervention strategy. Table 6 further indicates that combination of rank first, third, fifth and seventh match with two other existing intervention strategies.

Existing governance intervention strategies	Related indicators expected by squatters	Ranking by squatters
Resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati river.	Grant of land use rights	3
	Integrated relocation and compensation policy	7
	Participatory urban planning	1
Relocation of squatters who live in areas that is vulnerable to natural disasters such as floods to safer place (implemented last year, but not in Bansighat area).	Attention to input from the public concerning urban planning	5
	Participatory urban planning	1
Resettlement program of low cost building apartment for about 250 families in Kathmandu.	Attention to input from the public concerning urban planning	5
	Integrated relocation and compensation policy	7
	Participatory urban planning	1
Integrated land redevelopment's plan comprising slum clearance, road construction, and protection of ecosystems around Baghmati river through the construction of a natural park.	Attention to input from the public concerning urban planning	5
	Integrated relocation and compensation policy	7
	Participatory urban planning	1

Table 6: Matching of existing intervention strategies with their ranked indicators

Rank second in Table 5 might not be a feasible indicator for the implementation of the intervention strategies given the intention of government to control the ecological problems arising from the squatter settlement development along Baghmati River. Furthermore, since the government is not prepared to allow squatters to remain within Bansighat area, inference can be drawn that rank fourth does not match any existing intervention strategy from the government.

In other words, no existing governance intervention strategy might be channelled into granting of secure tenure for squatters on condition of long term occupancy because of the vulnerability of that area to ecological disasters like flooding let alone the attendant cost of relief which might be borne by government in the event of occurrence of these disasters. This reason also applies to the rank sixth of indicator of settlement rehabilitation for improved land tenure security.

In addition, the development of feasible urban governance intervention strategies to attain secure land tenure for squatters should strike a balance between squatters' preference of governance indicators and existing intervention strategies put in place by the government to bring about tenure security for these squatters while ensuring their safety.

#### **4.5. Concluding remarks**

This Chapter addressed three research questions. The first question is “*What is the perception of stakeholder towards urban governance intervention strategy for land tenure security?*” With reference to Table 4, the perception of respondents show that intervention strategies for land tenure security in Kathmandu still in stage of planning program such as plan for relocation, low-cost apartment’s program (on progress), and rehabilitation on the ex-squatter settlement. It also indicates that in the past, there is a failure in implementation of relocation program (in other area) in Kathmandu.

The second research question is “*What intervention strategies are relevant to tenure security for squatters in Kathmandu?*” With reference to Table 4, harmonized views of respondents show that intervention strategies relevant to tenure security in Kathmandu include implementation of resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River, relocation of squatters living in areas those are vulnerable to natural disasters (e.g. floods) to safer place, build the low-cost apartment for the squatter with the purpose of optimization on limited land in Kathmandu, and implement the integrated land redevelopment activities comprising slum clearance, road construction, and protection of ecosystems around Baghmati River through the construction of a natural park.

The third research question is “*How do squatters prioritize the indicators of an intervention strategy?*” With reference to Table 5, rank first to fifth of responses to questions in the semi-structured interview administered to squatters in Bansighat area indicate the hope on the recognizing by the government as same as other citizens in the involvement of government intervention strategies’ implementation followed by the granting of land tenure rights. By looking at the less chance of better infrastructures’ provision by the government and the hope of continuing life in Bansighat area, those squatters put the indicators of settlement rehabilitation for improved land tenure security and integrated relocation and compensation policy on the sixth and seventh ranks.

The findings concerning the existing government’s intervention strategies, relevant intervention strategies and the indicators’ priority by squatters indicates that there is a possibility to combine those government’s intervention strategies with the expectation of squatters. Therefore, those intervention strategies and the squatters' priority on the intervention strategies will be used to examine the development of intervention strategy geared towards improving land tenure security for the squatters in Chapter 5.

## 5. DEVELOPMENT OF INTERVENTION STRATEGY TO IMPROVE LAND TENURE SECURITY IN SQUATTER SETTLEMENT

### 5.1. Introduction

The preceding Chapter examined stakeholders' perception of intervention strategies for land tenure security for squatters in Kathmandu. Furthermore, a harmonized view of probable intervention strategies has been identified from stakeholder's views. Chapter 4 also has been described the squatters' prioritize on the indicators of intervention strategies.

This Chapter seeks to combine these harmonized views with the squatters' prioritize on the indicators of intervention strategies in the purpose of redesigning feasible government's intervention strategies to attain land tenure security for the squatters. In order to achieve this redesign of feasible intervention strategies, this Chapter provides answers to the research question *"How can the prioritized indicators be used to develop an intervention strategy?"* Outcome of this Chapter is new list of urban governance intervention strategies that suitable to attain land tenure security for squatters in the study area.

### 5.2. Data collection method

With the aim of developing intervention strategies to attain land tenure security for squatters in Kathmandu, data need were derived from the existing intervention strategies and squatters' prioritize on the indicators of intervention strategies as resulted in Chapter 4.

### 5.3. Data analysis

Data analysis method applied in this Chapter is using SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis method to accommodate the intervention strategies already exist and squatters' prioritize on the indicators of intervention strategies for land tenure security.

The SWOT analysis which is a type of qualitative multi-criteria decisions analysis was used with the purpose of development of elements for intervention strategy for tenure security in the study area. SWOT analysis has been used and grown as a key tool to carry out researches and decision making improvement of complex strategic situations (Helms & Nixon, 2010) within the management domain by determining the internal (strengths and weaknesses) and external (opportunities and threats) components (Novicevic et al., 2004). The strengths and weaknesses of the government intervention strategies were generated from combining of the practical knowledge and views of stakeholders and the opportunities and threats were generated from the households' perspective of increasing the standard of life (Vonk et al., 2007).

Interview data from central government, local government, NGOs, and academics presented in Chapter 4 was used to identify common opinions regarding perspectives of existing intervention strategies as well as failures emanating from the implementation of these strategies. Furthermore, relevant intervention strategies for the study area were adopted in this research as strength areas of urban governance, while the failures from this strategy implementation were adopted as weaknesses of these strategies respectively.



While the strength and weaknesses areas using the viewpoints of central government, local government, NGOs, and academics, the ranked preferences by the squatters were matched with feasible intervention strategies of government in order to identify areas of opportunities and threats. Concluding this stage was an outline of strengths, weaknesses, opportunities and threats to the existing urban governance intervention strategies for secure tenure of squatters.

The outline of strengths, weaknesses, opportunities and threats to the existing intervention strategies was used to develop alternative intervention strategy for land tenure security which is likely to be more feasible compared to the existing strategy. In other words, a better strategy capable of ensuring secure land tenure for squatters in Bansighat was developed using interaction between Strength-Opportunities; Weaknesses-Opportunities; Strength-Threats; and Weaknesses-Threats of the existing intervention strategies.

#### 5.4. Development of intervention strategies

This section addresses the development of intervention strategies for tenure security of squatters by SWOT analysis method using data of existing intervention strategies and the priority of squatters for indicators of a feasible intervention strategy.

<div>Internal Factors</div> <div>External Factors</div>	Strengths (S)	Weaknesses (W)
	<ol style="list-style-type: none"> <li>1. Safe resettlement of squatters</li> <li>2. Construction of low cost building</li> <li>3. Economic development of alternative sites</li> <li>4. Land rehabilitation through slum clearance</li> <li>5. Land rehabilitation through construction of a natural park and roads</li> <li>6. Land use regulation and restrictions</li> </ol>	<ol style="list-style-type: none"> <li>1. Return and occupation of land by squatters who were earlier compensated and relocated.</li> <li>2. Tolerance of government towards land encroachment</li> </ol>
Opportunities (O)	SO Strategies	WO Strategies
<ol style="list-style-type: none"> <li>1. Squatters' demand for the grant of land use rights.</li> <li>2. Squatters' request for government's attention towards their inputs concerning urban planning.</li> <li>3. Squatters' interest in integrated relocation and compensation policy.</li> <li>4. Squatters' interest in participatory urban planning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Issue certificates of land use rights in alternative sites as a motivation for squatters to be relocated.</li> <li>2. Offer housing development subsidy in alternative sites as a motivation for squatters to be relocated.</li> <li>3. Joint participation of stakeholders towards creating jobs and other economic opportunities for resettled squatters.</li> <li>4. Participatory decisions towards squatter settlements rehabilitation for environmental protection.</li> <li>5. Enforce land use regulations and restrictions against further growth of squatter settlement.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve efficiency of land governance institutions through collaboration among stakeholders</li> </ol>
Threats (T)	ST Strategies	WT Strategies
<ol style="list-style-type: none"> <li>1. Squatters' demand for legal recognition of squatter settlements.</li> <li>2. Squatters' request for settlement development within ecologically hazardous land.</li> <li>3. Squatters' request for the grant of secure tenure on ecologically hazardous land after a long period of occupancy.</li> </ol>	<ol style="list-style-type: none"> <li>1. Persuasive relocation of squatters to alternatively safer sites where they are guaranteed secure land tenure.</li> <li>2. Construction of low cost housing or apartments in resettlement sites as a viable alternative to squatter settlement rehabilitation.</li> <li>3. Provision of better infrastructural facilities in resettlement sites</li> <li>4. Replace existing squatter settlement with natural parks and environmental protection infrastructures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Timely restriction of access to existing squatter settlement following immediate relocation of all squatters</li> <li>2. Enforcement of land use regulations to avoid land encroachment</li> </ol>

Table 7: SWOT analysis of urban governance intervention strategies for secure land tenure

Strategy development towards attaining land secure tenure is influenced by internal and external factors (Table 7). Internal factors comprising the strength and weaknesses derived from existing intervention strategies (sub-section 4.3.1) and Table 4, while the external factors of opportunities and threats to existing intervention strategies were derived from the ranking of squatters' perception of strategy indicators in Table 5. Specifically, those indicators in Table 5 that failed to align with existing intervention strategies were adopted as threats while those that align (match) with these strategies were adopted as opportunities.

The new and feasible intervention strategy geared towards granting squatters secure land tenure was developed and summarized using a four-quadrant combination of strategies (as shaded in Table 7) comprising Strength-Opportunity strategies, Weakness-opportunity strategies, Strength-Threat strategies, and Weakness-Threat strategies include:

- a. Improve efficiency of land governance institutions through collaboration among stakeholders.
- b. Persuasive relocation of squatters to alternatively safer sites where they are guaranteed secure land tenure.
- c. Issue certificates of land use rights in alternative sites as a motivation for squatters to be relocated.
- d. Provision of better infrastructural facilities in resettlement sites.
- e. Offer housing development subsidy in alternative sites as a motivation for squatters to be relocated.
- f. Construction of low cost housing or apartments in resettlement sites as a viable alternative to squatter settlement rehabilitation.
- g. Joint participation of stakeholders towards creating jobs and other economic opportunities for resettled squatters.
- h. Participatory decisions towards squatter settlements rehabilitation for environmental protection.
- i. Timely restriction of access to existing squatter settlement following immediate relocation of all squatters.
- j. Enforcement of land use regulations to avoid land encroachment.
- k. Replace existing squatter settlement with natural parks and environmental protection infrastructures.
- l. Enforce land use regulations and restrictions against further growth of squatter settlement.

Further discussion about those 12 new intervention strategies will be presented in the next section.

## **5.5. Discussion on the results**

Following the use of SWOT analysis introduced in section 5.3, a total of 12 feasible intervention strategies were developed using the existing strategies as a foundation. These strategies have been examined in systematic order of implementation:

- a. Improve efficiency of land governance institutions through collaboration among stakeholders.
- As observed from the satellite images in Figure 12, the high growth of squatter settlement over the years (1992 - 2001 and 2001 - 2013) in Bansighat area would have been averted if governance institutions and stakeholder had been efficient in their operations and collaborative efforts. Therefore, an intervention strategy which should serve as a primer to other strategies in Table 7 is the need to improve efficiency of land governance institutions in the Kathmandu through collaboration among stakeholder comprising civil servants and government organizations, squatters, and civil society groups. The essence of this intervention strategy is help build trust among the stakeholder because without this trust, no meaningful implementation of these strategies in Table 7 can be achieved.



- b. Persuasive relocation of squatters to alternatively safer sites where they are guaranteed secure land tenure.

The existing situation whereby squatters live on the land that is near to river and prone to disasters like floods poses a threat to their social well-being. Therefore, an intervention strategy aimed at convincing squatters to relocate to safer sites where they are guaranteed secure land tenure is important. The role of government is to apply persuasive approaches such as mass media campaigns, religious organizations, and cooperatives towards promoting relocation of squatters to safer sites where they will be given secure land rights.

- c. Issue certificates of land use rights in alternative sites as a motivation for squatters to be relocated.

Existing intervention strategies do not support the conferment of secure land titles to squatters in Bansighat area. In addition to persuading squatter to relocate from Bansighat, government can further motivate them to relocate by granting them certificate of land use rights in an alternative site. This strategy might be better appreciated by squatters if implemented in conjunction with the provision of better infrastructural facilities in resettlement sites as examined in the next paragraph.

- d. Provision of better infrastructural facilities in resettlement sites.

It is the policy of government that squatters in Bansighat should be relocated to alternative site prepared for them. However, the desire of squatters to relocate depends on the availability of better infrastructural facilities such as domestic water supply, power supply, roads, schools, hospitals, and a local market in resettlement sites compared to facilities in existing squatter settlement. In other words, squatters might be willing to relocate if they are assured of secure land use rights (*strategy c*) and access to better infrastructural facilities in alternative site.

- e. Offer housing development subsidy in alternative sites as a motivation for squatters to be relocated.

It is recalled from Table 4 in section 4.3 that government does not tolerate the expansion of squatter settlement in Bansighat; hence, informal housing developments in the squatter site are implemented at a cost for the squatters who are uncertain about future demolitions. Therefore, an intervention strategy (Table 7) is directed towards providing housing subsidy to motivate squatters to be relocated to alternative sites and avert the risk of informal housing development in Bansighat and its likely future demolition costs.

- f. Construction of low cost housing or apartments in resettlement sites as a viable alternative to squatter settlement rehabilitation.

Although squatters in Bansighat prefer settlement rehabilitation programme, existing urban governance strategies cannot intervene to permit such preference. However, The SWOT strategy in Table 7 indicates that squatters' preference for settlement rehabilitation in Bansighat can be sustainable if translated into construction of low cost housing or apartments in resettlement sites considering limited availability of land in Kathmandu. Strategy 3 may be implemented alongside or in place of *strategy b*.

- g. Joint participation of stakeholders towards creating jobs and other economic opportunities for resettled squatters.

SWOT analysis in Table 7 further indicates that for the new intervention strategies to succeed, stakeholder participation is required in order to create jobs and other economic opportunities for resettled squatters before their relocation. Therefore, these squatter shall be willing to relocate to alternative sites if they are assured of continuity of their livelihood or better livelihood opportunities compared to what they currently have.

h. Participatory decisions towards squatter settlements rehabilitation for environmental protection.

It is recalled from section 4.3 that the government prefers all squatters to be relocated to alternative sites in order to pave way for the construction of natural parks and roads. The SWOT analysis in Table 7 proposes intervention strategy which targets the rehabilitation of Bansighat area for environmental conservation uses that are more economically viable besides natural parks and roads as proposed in the existing intervention strategy. It is envisaged that stakeholder participation and commitment is required for the conversion of Bansighat area into environmental protection site in order to avert any further encroachment because squatters at this stage should have been attracted by *strategies a to g* as motivation to relocate to an alternative site.

i. Timely restriction of access to existing squatter settlement following immediate relocation of all squatters.

It is timely for the government to secure existing squatter settlement for environmental protection purposes immediately a deal is reached with stakeholders that squatters shall be relocated. In other words, timely restriction of access to Bansighat area after squatters might have relocated will help send a clear message to all stakeholders that the area is now under government control such that no squatter will be allowed to come back to that area again because an alternative site and necessary intervention strategies of secure tenure rights have been provided for them.

j. Enforcement of land use regulations to avoid land encroachment.

Related to *strategies a*, *strategy b*, and *strategy i* is *strategy j* which suggests that government and its relevant institutions in Nepal should enforce land use regulations to avoid land encroachment in Bansighat area after it must have been secured by the state for environmental protection purposes. Through this intervention strategy, further growth of squatter settlement and its associated negative impacts such as urban congestion, pollution and poor hygiene can be kept under control.

k. Replace existing squatter settlement with natural parks and environmental protection infrastructures.

While the government is interested in land rehabilitation through slum clearance in Bansighat area, this existing intervention strategy is threatened by squatters' request for settlement development within ecologically hazardous land (Table 7). Hence, *strategy k* seeks to balance these diverging interests by suggesting the replacement of Bansighat area with natural parks and infrastructure that will foster environmental protection in line with strategy 8. Replacement of Bansighat area with these environmental protection infrastructures can be feasible strategy after squatters have relocated successfully.

l. Enforce land use regulations and restrictions against further growth of squatter settlement.

Given the opportunity created by squatters' willingness to participate in urban planning (Table 7), another intervention strategy is the enforcement of land use regulations and restrictions especially in the resettlement site in order to avoid emergence of squatter settlements. Specifically, enforcement of land use regulations and restrictions might accompany land use rights granted to beneficiaries of the relocation programme as a means of averting growth of another squatter settlement.

## 5.6. Concluding remarks

This Chapter helps to answer the following research question *“How can the prioritized indicators be used to develop an intervention strategy?”* It was found that the squatters’ prioritized indicators of intervention strategies can be used to develop a feasible intervention strategy for tenure security by matching existing of the government’s intervention strategies (internal factors) with the squatters’ expectations (external factors), which lead to the development of a SWOT strategy that identifies areas of diverging and converging interests and how these interests can be aligned for the benefit of the squatters. This alignment of interest between government and squatters led to the development of a feasible intervention strategy capable of delivering secure land tenure and sustaining socioeconomic well-being of squatters in resettlement sites.

In view of these and other findings in the preceding Chapters, the next Chapter (Chapter 6) concludes this research by examining each research question and evaluating their answers in the light of the stated research problem in Chapter 1.

## 6. CONCLUSIONS AND RECOMMENDATIONS

### 6.1. Conclusions

This Chapter reviews the achievements obtained in this research. Chapter 1 has described the introduction of this research include research's background, conceptual framework, research approach, and study area. The purpose of this research was evaluating urban governance's intervention strategies to attain land tenure security for squatters in Kathmandu followed by redesigning those intervention strategies with the purpose delivering land tenure security for squatters. The approach taken in this research was by doing fieldwork for primary and secondary data's collection. Preparation before heading to the field included preparation of materials for interview and determining the potential respondents.

With the aim to complete this research, there are three sub-objectives that have to be achieved. Sub-objective 1: "To examine the growth of squatter settlement" has been achieved by answering the following research questions:

(a) *"How did the squatters occupy land in Kathmandu?"*

This question has been answered in Chapter 3 described by the findings that most of squatters live in that area by occupying the available land found by their self, purchase from another person illegally and other ways such as marriage or given by parents. Reasons that followed the way of occupancy include the high price for house renting in Kathmandu, find the job and had no choice have urged those squatters to live in squatter settlement.

(b) *"How long have these squatters been there?"*

The answer of this question is described by the statement from 34 of 47 respondents who claimed that they have occupied the land for more than 20 years, 6 respondents claimed between "15 – 20" years, 4 respondents claimed between "10 – 15" years and 3 respondents claimed that they have occupied the land between "5 – 10" years.

(c) *"What is the extent of squatter settlement growth over the years?"*

The illustration of the Bansighat squatter settlement's growth has been presented in Chapter 3. Result of image processing has identified that small amount of buildings covered this area. Then, map of year 2001 has illustrated a lot of buildings appeared in this area. Furthermore, the area was transformed into a wider squatter settlement in year 2013.

In addition, there is an interesting finding when comparing between question (1.b) and (1.c). With regard to the statements from squatters compared to the emergence of buildings in Bansighat area, it can be concluded that some squatters have been stayed in Bansighat area at least more than 10 years.

Sub-Objective 2: "To identify urban government's intervention strategies for squatters" has been achieved by answering the following research questions:

(a) *"What are the existing intervention strategies for land tenure security?"*

The answer of this question has been examined in Chapter 2. The various developing country cases examined in sections 2.7 and 2.8 (including Nepal) indicate that existing intervention strategies for secure land tenure comprise registration of all members of squatters, relocation of squatters, infrastructure's development, issuing certificate of land rights, and housing provision.

(b) *“What is the perception of stakeholder towards urban government intervention strategy for land tenure security?”*

The answer of this question has been described in Chapter 4. Narrative method was used in the processing of data interview with government's employees, NGOs' employees, international organization's employee, and academician. The important points of the opinions and statements from those respondents have been presented on Table 4.

(c) *What intervention strategies are relevant to tenure security for squatters in Kathmandu?*

The answer of this question is the answer for question (2.b). Harmonization of the opinions and statements from those respondents gives result four relevant intervention strategies which include:

- i. Implementation of resettlement plan which will encourage squatters to move to a new location prepared for them while discouraging most of them from returning and occupying land near Baghmati River.
- ii. Relocation of squatters living in areas those are vulnerable to natural disasters (e.g. floods) to safer place.
- iii. Build the low-cost apartment for the squatter with the purpose of optimization on limited land in Kathmandu.
- iv. Implement the integrated land redevelopment activities comprising slum clearance, road construction, and protection of ecosystems around Baghmati River through the construction of a natural park.

Sub-Objective 3: “To develop an intervention strategy to improve land tenure security in squatter settlement” which could be regarded as the core of this research has been achieved by answering the following research questions:

(a) *“What are the elements of an intervention strategy for tenure security?”*

This question has been answered by the list of elements that can be used for designing intervention strategies such as “*recognition of land right*”, “*right enforcement*”, “*tool for rights*”, “*transparency*” and “*equity*” as presented in Chapter 2.

(b) *“What are indicators of an intervention strategy?”*

The answer of this question is the indicators which followed the elements of intervention strategies such as “*recognition of settlement*”, “*grant of land use rights*”, “*settlement rehabilitation for improved land tenure security*”, “*integrated relocation and compensation policy*”, “*grant of secure tenure on condition of long time occupancy*”, “*attention to input from the public concerning urban planning*”, and “*participatory urban planning*”.

(c) *“How do squatters prioritize the indicators of an intervention strategy?”*

This question has been answered by the ranking on squatters' prioritize on the indicators of intervention strategies. This based on the arrangement of value counted using mean score method after converting the squatters' perception into the weights and values. Seven ranks for these indicators include:

- i. Participatory urban planning.
- ii. Recognition of settlement.
- iii. Grant of land use rights.
- iv. Grant of secure tenure on condition of long time occupancy.
- v. Attention to input from the public concerning urban planning.
- vi. Settlement rehabilitation for improved land tenure security.
- vii. Integrated relocation and compensation policy.

(d) "How can the prioritized indicators be used to develop an intervention strategy?"

This question has been answered by implementing "SWOT" (Strengths, Weaknesses, Opportunities and Threats) analysis. The internal factors for this analysis were derived from the existing of government's intervention strategies which were converted as "*Strengths*", while weaknesses or failures of intervention strategies' implementation were converted as "*Weaknesses*". On other side, external factors were extracted from the expectations of squatters which were converted into "*Opportunities*" and "*Threats*" in accordance with the compatibility of its expectations with relevant intervention strategies. Analysis ultimately produces 12 new intervention strategies that are a combination of "*SO Strategies*", "*WO Strategies*", "*ST Strategies*", and "*WT Strategies*" include:

- i. Improve efficiency of land governance institutions through collaboration among stakeholders.
- ii. Persuasive relocation of squatters to alternatively safer sites where they are guaranteed secure land tenure.
- iii. Issue certificates of land use rights in alternative sites as a motivation for squatters to be relocated.
- iv. Provision of better infrastructural facilities in resettlement sites.
- v. Offer housing development subsidy in alternative sites as a motivation for squatters to be relocated.
- vi. Construction of low cost housing or apartments in resettlement sites as a viable alternative to squatter settlement rehabilitation.
- vii. Joint participation of stakeholders towards creating jobs and other economic opportunities for resettled squatters.
- viii. Participatory decisions towards squatter settlements rehabilitation for environmental protection.
- ix. Timely restriction of access to existing squatter settlement following immediate relocation of all squatters.
- x. Enforcement of land use regulations to avoid land encroachment.
- xi. Replace existing squatter settlement with natural parks and environmental protection infrastructures.
- xii. Enforce land use regulations and restrictions against further growth of squatter settlement.

Finally, by achieving the all of 3 sub-objectives coupled by a total of 10 research questions, this research has accomplished the evaluation and redesign of urban governance intervention strategies to attain land tenure security for squatters in Kathmandu, Nepal with the study area of Bansighat squatter settlement.

## 6.2. Recommendations

This research was conducted within a certain time limit and accompanied by a selection of the study area. Fieldwork is conducted only for field data collection in order to develop intervention strategies. In other words, the results of this study have not been resumed at the stage of validation or verification of the final results in the field to determine whether the new intervention strategies can be applied in Kathmandu or not. Therefore, I provide recommendation that there will be a further research to validate the result of this research and generate new findings in order to support the achievement of land tenure security for the squatters in Bansighat area.

Based on the "SWOT" analysis as one of methods to develop urban governance intervention strategies to attain land tenure security for squatters, I also recommend that this method can be implemented to develop urban governance intervention strategies to attain land tenure security for squatters in other area by considering the balance of the government's policy and the expectation of the squatters.





## List of references

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- Babu, R. A. (2008). *Government and Public Land Management in Nepal*. Retrieved from [http://www.fig.net/commission7/verona\\_fao\\_2008/papers/10\\_sept/5\\_4\\_acharya.pdf](http://www.fig.net/commission7/verona_fao_2008/papers/10_sept/5_4_acharya.pdf)
- Çağdaş, V., & Stubkjær, E. (2011). Design research for cadastral systems. *Computers, Environment and Urban Systems*, 35(1), 77-87. doi: <http://dx.doi.org/10.1016/j.compenvurbsys.2010.07.003>
- Choguill, C. L. (2005). The research design matrix: A tool for development planning research studies. *Habitat International*, 29(4), 615-626. doi: DOI 10.1016/j.habitatint.2005.06.001
- Couch, C., Sykes, O., & Börstinghaus, W. (2011). Thirty years of urban regeneration in Britain, Germany and France: The importance of context and path dependency. *Progress in Planning*, 75(1), 1-52. doi: <http://dx.doi.org/10.1016/j.progress.2010.12.001>
- Czarniawska-Joerges, B. (2004). *Narratives in social science research*. London ; Thousand Oaks, Calif.: Sage Publications.
- de Souza, F. A. M. (1998). Land Tenure Security and Housing Improvements in Recife, Brazil. *Habitat International*, 23(1), 19-33. doi: [http://dx.doi.org/10.1016/S0197-3975\(98\)00033-2](http://dx.doi.org/10.1016/S0197-3975(98)00033-2)
- de Souza, F. A. M. (2001). The future of informal settlements: lessons in the legalization of disputed urban land in Recife, Brazil. *Geoforum*, 32(4), 483-492. doi: [http://dx.doi.org/10.1016/S0016-7185\(01\)00014-8](http://dx.doi.org/10.1016/S0016-7185(01)00014-8)
- Deininger, K. W., Selod, H., Burns, A., & World Bank. (2012). *The land governance assessment framework : identifying and monitoring good practice in the land sector*. Washington, D.C.: World Bank.
- Elangovan, A. R. (1998). Managerial Intervention in organizational Disputes: Testing a Prescriptive Model of Strategy selection. *International Journal of Conflict Management*, 9(4), 301 - 335. doi: 10.1108/eb022813
- FAO. (2002). Land tenure and rural development. *Land Tenure Studies*. Rome: United Nations Food and Agriculture Organization, FAO.
- FAO. (2007). Good governance in land tenure and administration *Land Tenure Studies*. Rome: United Nations Food and Agriculture Organization, FAO.
- FAO, & CFS. (2012). *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*. Rome: Food and Agricultural Organization (FAO) of the United Nations
- FIG. (2008). Improving Slum Conditions through Innovative Financing (pp. 60). Copenhagen, Denmark: International Federation of Surveyors.
- Garba, S. B., & Al-Mubaiyedh, S. (1999). An assessment framework for public urban land management intervention. *Land Use Policy*, 16(4), 269-279. doi: [http://dx.doi.org/10.1016/S0264-8377\(99\)00026-5](http://dx.doi.org/10.1016/S0264-8377(99)00026-5)
- Golsteijn, C., & Wright, S. (2013). Using Narrative Research and Portraiture to Inform Design Research. In P. Kotzé, G. Marsden, G. Lindgaard, J. Wesson & M. Winckler (Eds.), *Human-Computer Interaction – INTERACT 2013* (Vol. 8119, pp. 298-315): Springer Berlin Heidelberg.
- GTZ. (1998). *Land Tenure in Development Cooperation*. Eschborn: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH.

- Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis – where are we now?: A review of academic research from the last decade. *Journal of Strategy and Management*, 3(3), 215 - 251. doi: 10.1108/17554251011064837
- Karki, T. K. (2004). An Assessment of The Urban Poverty Reduction Programmes in Nepal: To draw lessons for far reaching urban poverty reduction strategies. doi: 10.1.1.196.8842
- Kearns, A., & Paddison, R. (2000). New challenges for urban governance. *Urban Studies*, 37(5-6), 845-850.
- Kombe, W. J., & Kreibich, V. (2000). Reconciling informal and formal land management:: an agenda for improving tenure security and urban governance in poor countries. *Habitat International*, 24(2), 231-240. doi: [http://dx.doi.org/10.1016/S0197-3975\(99\)00041-7](http://dx.doi.org/10.1016/S0197-3975(99)00041-7)
- Laquian, A. A. (2005). *Beyond metropolis: the planning and governance of Asia's mega-urban regions*. Washington, D.C.: Woodrow Wilson Center Press.
- Laurel, B. (2003). *Design Research: Methods and Perspectives*. Cambridge, M.A.: MIT Press.
- Lemmen, C. (2010). The Social Tenure Domain Model: A Pro-Poor Land Tool (pp. 19). Copenhagen, Denmark: International Federation of Surveyors.
- Lumanti. (2012). About Lumanti Retrieved 4th September, 2013, from <http://lumanti.org.np/cms/?q=node/28>
- Minnery, J., Argo, T., Winarso, H., Hau, D., Veneracion, C. C., Forbes, D., & Childs, I. (2013). Slum upgrading and urban governance: Case studies in three South East Asian cities. *Habitat International*, 39(0), 162-169. doi: <http://dx.doi.org/10.1016/j.habitatint.2012.12.002>
- NEST (P) Ltd. (2010). *Physical mapping of the squatter settlements situated along the Bagmati River Corridor (east-west) in the Kathmandu Valley*. Kathmandu: Government of Nepal.
- Nkwae, B., & Dumba, D. (2010). From certificate of rights to long-term leaseholds in Botswana. *Habitat International*, 34(4), 367-373. doi: <http://dx.doi.org/10.1016/j.habitatint.2009.10.001>
- Novicevic, M. M., Harvey, M., Autry, C. W., & Bond III, E. U. (2004). Dual-perspective SWOT: a synthesis of marketing intelligence and planning. *Marketing Intelligence & Planning*, 22(1), 84-94. doi: 10.1108/02634500410516931
- Parsa, A., Nakendo, F., McCluskey, W. J., & Page, M. W. (2011). Impact of formalisation of property rights in informal settlements: Evidence from Dar es Salaam city. *Land Use Policy*, 28(4), 695-705. doi: <http://dx.doi.org/10.1016/j.landusepol.2010.12.005>
- Payne, G. (1997). *Urban land tenure and property rights in developing countries : a review*. London: Intermediate Technology Publications : Overseas Development Administration.
- Payne, G. (2004). Land tenure and property rights: an introduction. *Habitat International*, 28(2), 167-179. doi: [http://dx.doi.org/10.1016/S0197-3975\(03\)00066-3](http://dx.doi.org/10.1016/S0197-3975(03)00066-3)
- Rashid, S. F. (2009). Strategies to Reduce Exclusion among Populations Living in Urban Slum Settlements in Bangladesh. *Journal of Health Population and Nutrition*, 27(4), 574-586.
- Roy, A. (2005). Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association*, 71(2), 147-158.
- Shrestha, B. K. (2013). Squatter Settlements in the Kathmandu Valley: Looking Through the Prism of Land Rights and Tenure Security. *Urban Forum*, 24(1), 119-135. doi: 10.1007/s12132-013-9189-x

- Singh, M. (1991). Environmental upgrading of Delhi slums. *Building and Environment*, 26(3), 269-271. doi: [http://dx.doi.org/10.1016/0360-1323\(91\)90049-H](http://dx.doi.org/10.1016/0360-1323(91)90049-H)
- Srinivas, H. (1999). *Defining squatter settlements*. Retrieved from <http://www.gdrc.org/uem/define-squatter.html>
- Stoker, G. (1998). Governance as theory: five propositions. *International Social Science Journal*, 50(1), 17-+. doi: Doi 10.1111/1468-2451.00106
- Stone, D. (2011). *Policy Paradox: The Art of Political Decision Making*. New York: W W Norton & Company Incorporated.
- Teddlie, C., & Yu, F. (2007). Mixed Methods Sampling A Typology With Examples. *Journal of Mixed Methods Research*, 1(1), 77-100. doi: Doi 10.1177/2345678906292430
- Thapa, R. B., & Murayama, Y. (2009). Examining Spatiotemporal Urbanization Patterns in Kathmandu Valley, Nepal: Remote Sensing and Spatial Metrics Approaches. *Remote Sensing*, 1(3), 534-556.
- Thapa, R. B., Murayama, Y., & Ale, S. (2008). Kathmandu. *Cities*, 25(1), 45-57. doi: <http://dx.doi.org/10.1016/j.cities.2007.10.001>
- Tuladhar, A. M. (2004). *Parcel - based geo - information system : concepts and guidelines*. (115), ITC, Enschede. Retrieved from [http://www.itc.nl/library/Papers\\_2004/phd/tuladhar.pdf](http://www.itc.nl/library/Papers_2004/phd/tuladhar.pdf)
- UN-Habitat. (2004). *Urban Land for all*. Nairobi: United Nations Human Settlements Programme (UN-HABITAT).
- UN-Habitat. (2008). *Secure Land Rights for all*. Nairobi: United Nations Human Settlements Programme (UN-HABITAT).
- UN-Habitat, IIRR, & GLTN. (2012). *Handling Land: Innovative tools for Land Governance and Secure Tenure*. Nairobi: United Nations Human Settlements Programme (UN-Habitat) and International Institute of Rural Reconstruction (IIRR).
- UN-Habitat, & TI. (2004). *Tools to Support Transparency in Local Governance*. Nairobi: UN-HABITAT (United Nations Human Settlements Programme) and TI (Transparency International).
- van Gelder, J.-L. (2010). What tenure security? The case for a tripartite view. *Land Use Policy*, 27(2), 449-456. doi: <http://dx.doi.org/10.1016/j.landusepol.2009.06.008>
- Vonk, G., Geertman, S., & Schot, P. (2007). A SWOT analysis of planning support systems. *Environment and Planning*, 39, 1699 - 1714. doi: 10.1068/a38262
- Williamson, I., Enemark, S., Wallace, J., & Rajabifard, A. (2010). *Land Administration for Sustainable Development*. California: ESRI Press.
- Wily, L. A., Chapagain, D., & Sharma, S. (2008). *Land Reform in Nepal: Where is it coming from and where is it going?* Nepal: DFID.
- World Bank. (2013). What is Governance? Retrieved July 17, 2013, from <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/EXTMNAREGTOPGOVERNANCE/0,,contentMDK:20513159~pagePK:34004173~piPK:34003707~theSitePK:497024,00.html>
- Yin, R. K. (2003). *Case Study Research: Design and Methods* (3rd ed.). London: Sage Publications.

- Zevenbergen, J. (2002). *Systems of land registration: aspects and effects*. Delft, Netherlands Geodetic Commission. Retrieved from <http://www.ncg.knaw.nl/Publicaties/Geodesy/pdf/51Zevenbergen.pdf>
- Zevenbergen, J., Augustinus, C., Antonio, D., & Bennett, R. (2013). Pro-poor land administration: Principles for recording the land rights of the underrepresented. *Land Use Policy*, 31(0), 595-604. doi: <http://dx.doi.org/10.1016/j.landusepol.2012.09.005>

# APPENDICES

Appendix 1: Questionnaire from Government Perspectives

**UNIVERSITY OF TWENTE**  
**FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION**

**Questionnaire from Government Perspectives**

Interview No..... Date of interview.....

Interviewee Name..... Job Position .....

Organization.....

**Introduction**

This interview is part of data collection for my MSc Land Administration course at the Faculty of Geo-Information Science and Earth Observation of the University of Twente, the Netherlands. The MSc thesis title is "Urban Governance intervention strategy for Land Tenure Security in Squatter Settlement: A case study in Kathmandu, Nepal".

**General Questions:**

1. Does your organization work in land issues of squatter sector?  
a. Yes      b. No;      if no, go to question 8
2. If yes, how your organizations identify/ perceive the issues of squatter settlements?
  - It is the political issues, explanation: .....
  - It is social issues, explanation: .....
  - It is environmental issues, explanation: .....
  - It is economic issues, explanation: .....
  - It is legal issues, explanation: .....
  - Any other issues .....
  - All of the above
3. Which of the identified issues in Question No. 2 are needed to be addressed first? Please rank in ascending order. (Most critical as 1, critical as 2, less critical as 3)
  - Political Issues      (.....)
  - Social Issues      (.....)
  - Environmental Issues      (.....)
  - Economic Issues      (.....)
  - Legal Issues      (.....)
  - Other Issues .....
4. In which dimensions of above mentioned issues does your organization involved? You can check more than one.
  - ☐ Political Issues
  - ☐ Social Issues
  - ☐ Environmental Issues
  - ☐ Economic Issues
  - ☐ Legal Issues
  - ☐ Other Issues .....

5. What are the activities conducted to address the issues related squatters from your organization?  
.....
6. Does the government have development plan in the squatter settlements?  
a. Yes      b. No  
Specify.....
7. What is government going to do considering that planning?  
a. Relocation  
Where? ( near / far from the area before )  
  
b. Upgrading the area  
How?  
☐ Improvement of physical environment only (sanitation, water supply, road etc)  
☐ Improvement of social environment only (health, education, etc)  
☐ Improvement of economic only (employment, financing etc)  
☐ Improvement of legal only (land tenure security, anti-eviction etc)  
☐ Any others .....  
Please provide the brief explanation of above option .....
8. In your opinion, is the distribution of land in the individual manner is the sustainable solution to tackle the issues of squatter settlement?  
☐ If Yes, How it can be done .....  
☐ If No, What could be the solution .....

**Specific Questions (Considering to the Case Settlement):**

1. Name of the case settlement .....
2. In what type of land this settlement resides?  
a. Government/public land    b. Guthi land    c. Private land
3. In your opinion, is this area safe from possibility of disaster, such as flood?  
a. Yes      b. No
4. Has any development program implemented in the settlement? Name the program?  
.....
5. What is the benefit for the government by applying this planning?  
.....
6. What is the consequence for the household in that area?  
.....
7. What could be the possible solution to manage squatter settlement and improve urban environment in particular case area?  
☐ Improvement of physical environment only (sanitation, water supply, road etc)  
☐ Improvement of social environment only (health, education, etc)  
☐ Improvement of economic only (employment, financing etc)  
☐ Improvement of legal only (land tenure security, anti-eviction etc)  
☐ Any others .....  
☐ All of the above .....  
☐ Please provide the brief of above option .....



Element & Indicator	SA	A	N/A/D	D	SD
<b>Urban governance for rights recognizing:</b>					
Urban governance should recognize this settlement: <b>Q:</b> Do you agree if the government recognizes the existence of that settlement?					
Grant use rights in certain periods for the people in this settlement: <b>Q:</b> Do you agree if the government grants use rights in certain year for those people?					
Rehabilitation in this settlement to maintain the environment and improve land tenure security for people in this settlement: <b>Q:</b> Do you agree if the government has a plan to develop that settlement for those people?					
<b>Right enforcement:</b>					
Urban planning which include the land use changes should accompany by compensation for the affected people: <b>Q:</b> Do you agree if eviction/relocation policy accompany by the compensation for those people?					
<b>Tool for rights:</b>					
Long time occupancy is an evidence of land tenure: <b>Q:</b> Do you agree if long time occupancy is an evidence to prove their existence?					
<b>Transparency:</b>					
Input from public should be an attention concerning to the urban planning: <b>Q:</b> Do you agree if the government should give attention to the public opinion concerning the land policy in that settlement?					
<b>Equity:</b>					
Public participatory is needed to support the urban planning: <b>Q:</b> Do you agree if the land policy can still run even without public participation?					

Q : Question

N/A/D: Neither agree or disagree

SA : Strongly Agree

D : Disagree

A : Agree

SD : Strongly Disagree

Appendix 2: Questionnaire from NGO/ CBO Perspectives

**UNIVERSITY OF TWENTE**  
**FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION**

**Questionnaire from NGO/ CBO Perspectives**

Interview No..... Date of interview.....

Interviewee Name..... Position.....

Organization.....

**Introduction**

This interview is part of data collection for my MSc Land Administration course at the Faculty of Geo-Information Science and Earth Observation of the University of Twente, the Netherlands. The MSc thesis title is "Urban Governance intervention strategy for Land Tenure Security in Squatter Settlement: A case study in Kathmandu, Nepal".

**General Questions:**

1. When and how your organization has been established?

.....

2. In which aspect your organization has focused for squatter settlements?

.....

3. What are the programs initiated to create secure living environment of squatter since the establishment of your organization?

.....

4. Has any development program implemented in the settlement? Name of the program?

.....

5. Do you have any coordination with government while implementing the program in squatter?

.....

6. What are the major problems and issues the squatter are facing?

.....

### Specific Questions:

1. Do you know about emergence of squatter settlement in that area (Bansighat settlement/ Ramhiti settlements)?  
a. Yes    b. No
2. Do you know in which types of land those settlements resides?  
a. Government/public land    b. Guthi land    c. Private land
3. In your opinion, is this area safe from possibility of disaster, such as flood?  
a. Yes    b. No
4. Do you have any information about government plan going to be applied/ have been applied in that area?  
a. Yes    b. No
5. If yes, what kind of planning is that and what benefit the settlements received from that planning?  
.....
6. What type of program your organization has implemented/ planning to implement in the area?  
a. awareness program    b. physical facilities program    c. education program  
Others .....
7. Do you think the settlements are secure from the perspective of eviction?  
a. Yes    b. No  
Why.....
8. Do the squatters trust your organization?  
a. Very Much    b. Fairly    c. Somewhat    d. Not at all
9. Do the squatters trust the government organization?  
a. Very Much    b. Fairly    c. Somewhat    d. Not at all

Element & Indicator	SA	A	N/A/D	D	SD
<b>Urban governance for rights recognizing:</b>					
Urban governance should recognize this settlement: <b>Q:</b> Do you agree if the government recognizes the existence of that settlement?					
Grant use rights in certain periods for the people in this settlement: <b>Q:</b> Do you agree if the government grants use rights in certain year for those people?					
Rehabilitation in this settlement to maintain the environment and improve land tenure security for people in this settlement: <b>Q:</b> Do you agree if the government has a plan to develop that settlement for those people?					
<b>Right enforcement:</b>					
Urban planning which include the land use changes should accompany by compensation for the affected people: <b>Q:</b> Do you agree if eviction/relocation policy accompany by the compensation for those people?					
<b>Tool for rights:</b>					
Long time occupancy is an evidence of land tenure: <b>Q:</b> Do you agree if long time occupancy is an evidence to prove their existence?					
<b>Transparency:</b>					
Input from public should be an attention concerning to the urban planning: <b>Q:</b> Do you agree if the government should give attention to the public opinion concerning the land policy in that settlement?					
<b>Equity:</b>					
Public participatory is needed to support the urban planning: <b>Q:</b> Do you agree if the land policy can still run even without public participation?					

Q : Question

N/A/D: Neither agree or disagree

SA : Strongly Agree

D : Disagree

A : Agree

SD : Strongly Disagree

**UNIVERSITY OF TWENTE**  
**FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION**

**Questionnaire from Household Perspectives**

Interview No..... Date of interview.....

Interviewee Name..... (M / F) Location.....

**Questions:**

**Personal Information:**

1. Where you are born (District, VDC/ Municipality)? .....
2. Education Level
  - a. Primary Level (1-5) b. Secondary Level (6-10) c. Intermediate d. Bachelor e. Masters
  - f. Not educated
3. Ethnicity
  - a. Newar b. Brahmin c. Chettri d. Lama/ Tamang e. Others.....
4. What is your occupation?
  - a. Wage Labor b. Small Business c. Service (Regular Salary) d. private c. other

**Family Information:**

1. How many family members are there in your home? .....
2. Where is your home town (District, VDC/ Municipality)? .....
3. You or Your family (father, grandfather) have a. house b. Land c. nothing in your home town?
4. For how long do you and your family live in this area (in year)?
  - a. <5 b.5-10 c.10-15 d. 15-20 e.>20
5. What is the reason for living here?
  - a. Search for job b. cannot afford the rent c. Near to work d. Better facilities
  - e. Others .....

**Access to services:**

1. What type of road access to your house?
  - a. Metaled b. Gravel c. Earthen d. No access
2. How did you get the access of road?
  - a. Manage from community b. Municipality support c. Manage by civil society
  - d. Any Others.....
3. What is the source of drinking water do you have?
  - a. Private connection b. Public Tap c. Well d. Boring d. Others.....
4. How did you manage the source of drinking water?
  - a. Manage from community b. Municipality support c. Manage by civil society
  - d. Any Others.....

5. Are there any drainage/ sewerage facilities in your settlements?  
a. Yes b. No
6. If Yes, Who have managed it?  
a. Manage from community b. Municipality support c. Manage by civil society  
d. Any Others.....
7. What are the facilities do you have in your settlements?  
a. School b. Clinic c. Playground d. Any others.....

### **Land & Housing Condition**

1. How did you build your house?  
a. Own income b. Loan from relatives c. Loan from financial institution d. Rented  
d. Others.....
2. Do you feel your house safe from disaster such as safe from flood?  
a. Yes b. No
3. How did you get this place to stay?  
a. Bought from somebody b. Given by parents c. found yourself d. Others.....
4. Which organization do you trust for your security in your area?  
a. Political leader's b. Ministry c. Municipality d. Ward e. civil society  
f. community organization g. Any others .....
5. Is there any organization formed by your community?  
a. Yes b. No c. Don't Know  
If Yes, how the organization is working for your security?  
.....
6. Do you think you need to be relocated from here?  
a. Yes b. No c. Don't Know  
If Yes, What is government need to do while relocating?  
.....  
If No, What is government need to do in your existence area?  
.....
7. Do you feel your house safe from disaster such as safe from flood?  
a. Yes b. No
8. Do you need any permit from (local) government to explore/build on your land?  
a. Yes b. No
9. Is it difficult to get the permit? a. Yes b. No
10. Have you ever have land dispute with your neighbor for example in the context of boundary of your land?  
a. Yes b. No
11. Concerning with land investment, have you ever try to invest your land such as for credit/loan to the bank or cooperation?  
a. Yes b. No
12. What is your hope for the government about your land in the future?  
a. Remain for certain periodic time (reason?). b. Relocate to other area (reason?).  
.....

Element & Indicator	SA	A	N/A/D	D	SD
<b>Q:</b> Do you agree if the government recognizes the existence of this settlement?					
<b>Q:</b> Do you agree if the government grants use rights in certain year for you?					
<b>Q:</b> Do you agree if the government has a plan to develop this settlement for you?					
<b>Q:</b> Do you agree if relocation accompany by the compensation?					
<b>Q:</b> Do you agree if long time occupancy is an evidence to prove your existence?					
<b>Q:</b> Do you agree if the government should give attention to your opinion concerning to your land?					
Public participatory is needed to support the urban planning: <b>Q:</b> Do you agree if the government made any decision on your land without the community participation will be success?					

Q : Question

SA : Strongly Agree

A : Agree

N/A/D: Neither agree or disagree

D : Disagree

SD : Strongly Disagree

Signature Interviewee .....



Appendix 4: Data interview from government perspective

Interview No	Date of Interview	Interviewee Name	Organization	Position	1. How your organizations identify/perceive the issues of squatter settlements?	2. What are the activities conducted to address the issues related squatters from your organization?	3. Does the government have development plan in the squatter settlements?	4. What is government going to do considering that planning?	5. In what type of land is the squatter settlement resides?
1	25-09-13	Prakash Joshi	National Land Use Land Project	Chief survey officer	looking in the issue of the land use, better land use				
2	26-09-13	Karuna Rama Shakya	Kathmandu Valley Department Authority	Senior divisional engineer	Works in social and politic issues	provide the land for the government for land pooling and will distributed to the people who have been shifted	The government have plan to displace the people who live near the river area(more than 400 families) to the other place	Government try to shift the people to the different place, political issues will varies there. Some politician will support, the other will reject	One of the areas namely Sankhamul area is located near the river area. The land is belongs to the government.
3	27-09-13	Zanak Raj	Land Management Training Center	Director	Land titling		Land pooling	Relocation, Improvement of physical environment, improvement of legal	Government/public land
4	29-09-13	Gopal Giri	Land Register Office	chief land revenue officer			If the government wants to use the land, the government will give new settlement, but it is only political issue and some time it does not implemented. in national land policy, it states that if there is an eviction, the people will get at least place for shelter.		

Appendix 4: Data interview from government perspective (continued)

Interview No	Date of Interview	Interviewee Name	Organization	Position	1. How your organizations identify/perceive the issues of squatter settlements?	2. What are the activities conducted to address the issues related squatters from your organization?	3. Does the government have development plan in the squatter settlements?	4. What is government going to do considering that planning?	5. In what type of land is the squatter settlement resides?
5	29-09-13	Biaya mahato	Land Register Office	Chief survey officer		The job of this office is processing by demand from government who wants to register their land. There is no law to prepare cadaster for informal area. Squatter area is beyond of coverage the cadaster. The cadaster map is a map contains the parcel with legal rights. If then, there is a program from government such as to give title the land for the people, the responsible of the department is to do survey and mapping.	5 or 6 years ago government had program to give some lands for poor people.	if the government will evict those people, the government will announces in 35 days before	Bansighat is the area under the land register office ..... Authority. The land is belongs to the government.
6	01-10-13	Ganesh	Survey Department		Responsible in developing all cadaster. Tiling of land provide by the office under the survey department in district level.				
7	02-10-13	Kameenee	Lalitpur development office	Engineer	Cannot evict the squatter because it is political also they are in environmentally sensitive area	No program yet			government land
8	02-10-13	Surej Raj Kamnikar	KVDA Office			The other program is the government builds the apartment with low cost for squatter.	the land near the bagmati river will be used for UN park (government plan)	The government already evicted people once, compensation is the people got money for renting a house for 3 months, but people came back to that area.	government land

Appendix 4: Data interview from government perspective (continued)

Interview No	Date of Interview	Interviewee Name	Organization	Position	1. How your organizations identify/perceive the issues of squatter settlements?	2. What are the activities conducted to address the issues related squatters from your organization?	3. Does the government have development plan in the squatter settlements?	4. What is government going to do considering that planning?	5. In what type of land is the squatter settlement resides?
9	03-10-13	Mr Bimal	Kathmandu Municipality	Senior City Planner		Land pooling project in Kathmandu.		The progress is finishing the infrastructure and re-plotting	the squatter settlement in river bank of bagmati is on the public land
10	04-10-13	Mr. Krishna	Ministry of land reform and management	Joint secretary	The commission take care landlessness since 2009 ; distribution land is not solving the problem of urban poor	Provide certificate for landlessness both for urban and rural (providing land access for people)	managing of public land is responsible of local government	in general policy, people does not allowed to encroach the public land	
11	04-10-13		Ministry of urban development						public land
12	04-10-13	Bhai	KVDA	district commission	KVDA has a regulation that it is not allowed to make a construction in the periphery of 20 meters from the riverbank		there is a program to construct road along the baghmari river for squatter, it is better to provide house rather than giving land because the limitation of land stock in urban area ; in land pooling, the government purchase the land and build the house for urban poor	the land in the squatter settlement is belongs to government	
13	08-10-13		Ministry of urban dev		in the urban area, the land is so expensive, so it is difficult to define the land tenure security issue. The housing tenure is more important than land tenure. with small area should use for maximal amount of house/apartment			the public land is encroached by the people and the government still do not have proper manner to protect the public land, only monitor and collect the information about the situation	

Appendix 4: Data interview from government perspective (continued)

Interview No	Date of Interview	Interviewee Name	Organization	Position	1. How your organizations identify/perceive the issues of squatter settlements?	2. What are the activities conducted to address the issues related squatters from your organization?	3. Does the government have development plan in the squatter settlements?	4. What is government going to do considering that planning?	5. In what type of land is the squatter settlement resides?
14	09-10-13	Meena	DUIDBC	Engineering		Last year the government tried to remove the squatter settlement, but it was difficult. Finally the people came back, due to they work near from the settlement. if they move to far area, how come they get job ; other program was relocation people to other area, but people in the new area do not welcome the new people due to the different attitude ; the current program is land pooling project, by building apartments for urban poor and low income group. now about 130 apartment will be finished in the next 3 months			public land
15	09-10-13	Bharat	HPC	Deputy project manager			to improve the area along the baghmati river	the land which has been purchased by the government and the road is constructed on that land	
16	10-10-13	Sarita Maskey	DUIDBC	Senior divisional engineer			house/apartment for urban poor	other program is the government buy some land and build house/apartment for urban poor	

Appendix 4: Data interview from government perspective

Interview No	Date of Interview	Interviewee Name	Organization	Position	6. In your opinion, is the squatter settlement safe from possibility of disaster, such as flood?	7. Has any development program implemented in the settlement? Name the program?	8. What is the benefit for the government by applying this planning?	9. What is the consequence for the household in that area?
1	25-09-13	Prakash Joshi	National Land Use Land Use Project	Chief survey officer				
2	26-09-13	Karuna Ratna Shakya	Kathmandu Valley Department Authority	Senior divisional engineer	The area is in the dangerous zone (flood area), and also pollution area.	The specific program from the organization is resettlement program by building apartment for more for 250 families	The benefit by the removing settlements near the river area is the place will be clean, and will be beauty area. It also has benefit for people because in that place, people are suffering from flood, do not have electricity and water facilities.	Remove from the settlement
3	27-09-13	Zanak Raj	Land Management Training Center	Director	yes			
4	29-09-13	Gopal Giri	Land Register Office	chief land revenue officer				
5	29-09-13	Biaya mahato	Land Register Office	Chief survey officer		Before, the land near the river is wide, but people encroach that public land; until now there is no program for that area and there is no provision for those people.		

Appendix 4: Data interview from government perspective (continued)

Interview No	Date of Interview	Interviewee Name	Organization	Position	6. In your opinion, is the squatter settlement safe from possibility of disaster, such as flood?	7. Has any development program implemented in the settlement? Name the program?	8. What is the benefit for the government by applying this planning?	9. What is the consequence for the household in that area?
6	01-10-13	Ganesh	Survey Department					
7	02-10-13	Kameence	Lalitpur development office	Engineer	no	relocation, but still planning and has a problem	clean the bagmati river	evicted, but later on they come back ; compensation to rent on other place
8	02-10-13	Surej Raj Kavnkar	KVDA Office		no	Building park ; land pooling the land might be for park, but most of public land is not properly used by the government, so people squat easily ; The plan from government is evacuating and resettle in other area and build the settlement	Environment improvement, green area	compensation for renting house for 3 months ; temporary settlement in Taisingu
9	03-10-13	Mr Bimal.	Kathmandu Municipality	Senior City Planner	the building are temporary buildings, so it is vulnerable with flood			
10	04-10-13	Mr. Krishna	Ministry of land reform and management	Joint secretary				eviction

Appendix 4: Data interview from government perspective (continued)

Interview No	Date of Interview	Interviewee Name	Organization	Position	6. In your opinion, is the squatter settlement safe from possibility of disaster, such as flood?	7. Has any development program implemented in the settlement? Name the program?	8. What is the benefit for the government by applying this planning?	9. What is the consequence for the household in that area?
11	04-10-13		Ministry of urban development			the land will be used for park to avoid the growth of squatter settlement ; other plan is there will be new road to link between Kathmandu with other area		
12	04-10-13	Bhai	KVDA	district commission		until now there is no program to use the land in the squatter settlement	by implementing this construction, the river will be looking good, clean and also there will be a garden	if the government wants to use the land the government the compensation will be given only to the people who build the house legally ; the squatter settlement will be evicted, but now the NGO try to keep the settlement
13	08-10-13		Ministry of urban dev			for the widening road purpose ; program: constructing affordable housing for urban poor		some squatter settlement has evicted
14	09-10-13	Meena	DUDBC	Engineering		there is a project called bagmati corridor improvement project which is conservation the river area	make the environment better	eviction because that area is so dirty, and also it is near the main road
15	09-10-13	Bharat	HPC	Deputy project manager				
16	10-10-13	Sarita Maskey	DUDBC	Senior divisional engineer		Widening road ; UN park		there was an eviction and this department selected people who will live for a while in the bamboo house (semi-permanent house) as a transitional house ; money for renting house for 5 months



Appendix 5: Data interview from international agency's perspective

Interviewee Name	Organization	Position	1. How your organizations identify/ perceive the issues of squatter settlements?	2. What are the activities conducted to address the issues related squatters from your organization?
Raja Ram Chhatkuli	UN-Habitat	Project coordinator	In land sector, UN habitat in Nepal, only concerning in urban settlement program, urban poor who live in informal settlement and do not have formal tenure, they live for long time without tenure properly, without secure settle, they are force to be evicted.	UN started concerning on the shelter such as sanitation, housing since about 10 years ago. Works in many districts ; In 2008, works in building houses for effective families.

Appendix 6: Data interview from non-governmental organizations' perspective

Interviewee Name	Organization	Position	3. What are the programs initiated to create secure living environment of squatter since the establishment of your organization?	4. Has any development program implemented in the settlement? Name of the program?	5. Do you have any coordination with government while implementing the program in squatter?	6. What are the major problems and issues the squatter are facing?	4. Do you have any information about government plan going to be applied/ have been applied in that area?
Bhagavati	Mahila Ekta Samaj		water and sanitation, health issues, secure settle rights by conduct discussion with government in local level, women capacity building	one year ago, one community has been evicted by the government. the reason is because the river become dirty because of the squatter	coordination with the local government such as DUDBC, and also discussion with the central government by unity committee	The government threat the squatter that the government will evict the squatter as soon as possible, and there is notice published by the government (the main issue), and also, the government cut the electricity, water facilities and also does not give citizenship card (ID)	
Mahendra Shakya	Lumanti	program manager	housing program	housing program to solve the problem of urban poor	give suggestion / propose to the government about the solution about squatter problem	eviction	use the land for UN park and start evict the squatter settlement

Appendix 7: Data interview from academicians's perspective

Date of Interview	Interviewee Name	Organization	Position	1. How your organizations identify/perceive the issues of squatter settlements?	3. Does the government have development plan in the squatter settlements?	4. What is government going to do considering that planning?	7. Has any development program implemented in the settlement? Name the program?
30-09-13	Sagar Raj Sharma, PhD	School of Art, University of Kathmandu	Dean	the squatter do not buy and even the state does not give any permission to use the land. The problem is, the citizen needs land to live, and the state also has responsibility to take care the citizen. So, when there is vacant land in the river area, people start to claim the land	the state also has responsibility to take care the land near the river as a natural resources. The emergence of squatter settle cause the pollution of the river, and also it dangerous for people regarding to the flood possibility, so actually the state does not give permit for the people to live in that area ; Last year, the government wanted to relocate the bagmati squatters to the other area (Lalitpur). However, the squatter did not agree, because the government did not prepare it well, so after the eviction, the people came back to the area again.	one of solution is the state should implement the proper land use policy, which land that have to be used for what purpose have to clear implemented. However, until now the government does not have the proper land policy, still in preparation.	It does not good to sacrifice the river for settlement. River has a live, so the better way is relocating those people to the other area with the proper planning, proper housing, and the people should accept this policy because the land also belongs to the state.

Appendix 8: Data interview from household perspective

Interview No	Interviewee Name	Sex	Born Place	Education Level	Ethnicity	What is your occupation?	Where is your hometown?	You or your family have..... in your home town?	For how long do you and your family live in this area (in year)	What is the reason for living here	How did you build your house?	Do you feel your house safe from disaster such as flood?	How did you get this place to stay?	Have you ever have land dispute with your neighborhood for example in the context of boundary of your land?
1	Laxmi Mishra	Female	Rautahat	Secondary Level (6-10)	-	other	-	Nothing	5 - 10	Better facilities	Loan from relatives	Yes	Other	Yes
2	Uma Nahat	Female	Kaure (Panauti)	Secondary Level (6-10)	Newar	Small Business	Kaure	Nothing	10 - 15	Can not afford the rent	Loan from relatives	No	Found by yourself	No
3	Chinmaya Sunuwar	Female	Dhading	Not Educated	Other	other	-	Nothing	10 - 15	Can not afford the rent	Rent	No	Other	No
4	Sabitri Gurung	Female	Lalitpur	Not Educated	Lama / Tamang	other	Lalitpur	Nothing	>20	Can not afford the rent	Own income	No	Found by yourself	No
5	Nanu Pariyar	Female	Bhaktapur	Primary Level (1-5)	Other	Small Business	-	Land	15 - 20	Can not afford the rent	Loan from relatives	Yes	Other	No
6	Kausila Tamang	Female	Kavera	Not Educated	Lama / Tamang	Wage Labour	Kavera	House	15 - 20	Other	Own income	Yes	Other	Yes
7	Indrabahadur Paxiwar	Male	Dolakha	Secondary Level (6-10)	Other	other	Dolakha	Nothing	>20	Can not afford the rent	Own income	Yes	Found by yourself	No
8	Rambahadur Nepali	Male	Gunwarpani, Ramechhap	Masters	Other	other	Gunwarpani, Ramechhap	Nothing	>20	Can not afford the rent	Own income	Yes	Found by yourself	No
9	Bimala Pariyar	Female	Kavre, Chailal	Primary Level (1-5)	Other	Small Business	Roulahat	Nothing	15 - 20	Can not afford the rent	Loan from relatives	No	Other	Yes
10	Anju Tamang	Female	Kathmandu	Not Educated	Lama / Tamang	Small Business	Kathmandu	Nothing	>20	Can not afford the rent	Loan from relatives	No	Given by parents	No
11	Buddhiran Chaudary	Male	Nawalparasi	Primary Level (1-5)	-	Small Business	-	Land	>20	<b>No response</b>	Own income	Yes	Found by yourself	No
12	Sabitri Shrestha	Female	Palpa	Not Educated	Newar	Small Business	Palpa	House	15 - 20	Other	Own income, Loan from relatives, Loan from financial institution	Yes	Bought from somebody	No

Appendix 8: Data interview from household perspective (continued)

Interviewee No	Interviewee Name	Sex	Born Place	Education Level	Ethnicity	What is your occupation?	Where is your hometown?	You or your family have.... in your home town?	For how long do you and your family live in this area (in year)	What is the reason for living here	How did you build your house?	Do you feel your house safe from disaster such as safe from flood?	How did you get this place to stay?	Have you ever have land dispute with your neighborhood for example in the context of boundary of your land?
13	Dhanraj Khadka	Male	Kamjung	Secondary Level (6-10)	-	Small Business	-	House	>20	Search for job	Own income	No	Found by yourself	No
14	Rukman Pariyar	Female	-	Not Educated	-	other	-	Land	>20	Can not afford the rent	Own income	No	Given by parents	No
15	Fantama Syangra n	Female	Sindhuli, Marinkhola	Not Educated	Lama / Tamang	Wage Labour	Sindhuli	Nothing	>20	Other	Own income	Yes	Other	No
16	Machakasi Maharja n	Male	Kathmandu	Primary Level (1-5)	Newar	Service (Regular Salary)	Kathmandu	Nothing	>20	Can not afford the rent	Loan from relatives, Loan from financial institution	Yes	Given by parents	No
17	Nabin Lama	Male	Bhukdeu, Kavre	Not Educated	Lama / Tamang	Small Business	Bhukdeu, Kavre	Nothing	>20	Can not afford the rent	Own income	Yes	Brought from somebody	Not Answer
18	Manna Tamang	Male	kaure	Not Educated	Lama / Tamang	Wage Labour	Kaure	Land	>20	Other	Own income, Loan from relatives	No	Found by yourself	No
19	Radhika Raut	Female	Khotang	Secondary Level (6-10)	Chettri	Small Business	Kathmandu	Nothing	>20	Other	Loan from financial institution	No	Other	No
20	Samila Khatri	Female	Dholku, Kathmandu	Primary Level (1-5)	Chettri	Small Business	Trishuli	Nothing	>20	Other	Loan from financial institution	No	Given by parents	No
21	Kanchi maya Tamang	Female	Kavre	Not Educated	Lama / Tamang	Wage Labour	Sinpal, Sindhuli	Land	5 - 10	Search for job and Can not afford the rent	Loan from relatives	No	Found by yourself	No
22	Singita Nepali	Female	Sasahi	Primary Level (1-5)	-	Service (Regular Salary) other	-	Land	>20	Other	Own income, Loan from relatives	No	Other	No
23	Bhakta Thapa	Male	Janakpur	Primary Level (1-5)	Chettri	other	-	Land, House	>20	Can not afford the rent	Own income, Loan from relatives	Yes	Other	No
24	Pabitra maya majar	Female	Ramechhap	Not Educated	Other	Small Business	Ramechhap	Nothing	>20	Can not afford the rent	Rent	No	Found by yourself	Yes

Appendix 8: Data interview from household perspective (continued)

Interviewee No	Interviewee Name	Sex	Born Place	Education Level	Ethnicity	What is your occupation?	Where is your hometown?	You or your family have..... in your home town?	For how long do you and your family live in this area (in year)	What is the reason for living here	How did you build your house?	Do you feel your house safe from disaster such as flood?	How did you get this place to stay?	Have you ever have land dispute with your neighborhood for example in the context of boundary of your land?
25	Ruhman i Dhungara	Female	Sindhuli	Not Educated	Brahmin	other	-	Land	>20	Can not afford the rent	Own income, Loan from relatives	Yes	Found by yourself	No
26	Yurra Makran	Male	Kavre, Budhokhani	Bachelor	Lama / Tamang	Small Business	Kathmandu	Nothing	>20	Better facilities	Own income	No	Found by yourself	No
27	Suntali Lama	Female	Kavre, Padkhobesi	Not Educated	Lama / Tamang	Wage Labour	Kavre	Nothing	>20	Can not afford the rent	Loan from financial institution	Yes	Other	Yes
28	Santi Shresta	Female	Sorkha	Not Educated	Newar	Small Business	Kathmandu	Nothing	>20	Can not afford the rent and Near to work	Own income, Loan from financial institution	Yes	Other	No
29	Binda Rana	Female	Bhaktapur	Not Educated	Chettri	other	Kathmandu	Nothing	>20	Other	Own income	Yes	Found by yourself	No
30	Mangal Moktar	Male	Kavre, Banakhu	Primary Level (1-5)	Lama / Tamang	other	Kavre, Banakhu	Nothing	>20	Can not afford the rent	Loan from relatives	Yes	Found by yourself	No
31	Dhan Maja	Female	Pokhara	Not Educated	Lama / Tamang	other	-	-	>20	Other	Loan from financial institution	Yes	Other	No
32	Dambar Bhahdar	Male	Kavre, Sinduli	Secondary Level (6-10)	Lama / Tamang	Small Business	Sindhuli	Nothing	>20	Search for job	Rent	Yes	Bought from somebody	Not Answer
33	Heta Nepal	Female	Bhardeu	Not Educated	Other	-	Dhulikel, Kavre	Nothing	>20	Other	Own income	Yes	Found by yourself	No
34	Nanda lat Shresta	Male	Ramechhap	Not Educated	Newar	Small Business	Kathmandu	Nothing	>20	Better facilities	Own income	Yes	Found by yourself	No
35	Ramsara n Nepali	Male	Dhading, Hajuri	-	-	Small Business	-	Land	10 - 15	Can not afford the rent	Own income	Yes	Other	No
36	Wadhar e Pariya	Male	Narayan ghal	Secondary Level (6-10)	-	other	-	Land	>20	Search for job	Own income	Yes	Other	No

Appendix 8: Data interview from household perspective (continued)

Interviewee No	Interviewee Name	Sex	Born Place	Education Level	Ethnicity	What is your occupation?	Where is your hometown?	You or your family have..... in your home town?	For how long do you and your family live in this area (in year)	What is the reason for living here	How did you build your house?	Do you feel your house safe from disaster such as safe from flood?	How did you get this place to stay?	Have you ever have land dispute with your neighborhood for example in the context of boundary of your land?
37	Bhimba hadur Bishwokarna	Male	Kavre, Saping	Not Educated	Other	Wage Labour	Kavre	Land	5 - 10	Search for job	Own income, Loan from relatives	No	Found by yourself	No
38	Laxmi Kayartha	Female	Lubu	Not Educated	Newar	other	-	House	>20	<b>No response</b>	Loan from relatives	Yes	Found by yourself	No
39	Ram Bahadus	Male	Kavre	Not Educated	Other	Wage Labour	-	House	10 - 15	Can not afford the rent	Own income	No	Found by yourself	No
40	Hira Kavatha	Male	Kathmandu	Not Educated	Newar	other	-	House	>20	Can not afford the rent	Own income	Yes	Other	No
41	Surya Sital	Male	Lalitpur	Secondary Level (6-10)	Chettri	other	-	Land	>20	Other	Own income	Yes	Found by yourself	No
42	Dandoponey Humgain	Male	Kavre	Not Educated	Brahmin	Small Business	Kavre	Nothing	>20	Other	Rent	Yes	Bought from somebody	No
43		Male	Panauti	Primary Level (1-5)	Brahmin	Small Business	Panauti	Nothing	>20	Search for job	Own income	No	Bought from somebody	No
44	Lajan Gautam	Male	Kavre	Primary Level (1-5)	Brahmin	Wage Labour	-	House	15 - 20	Better facilities	Loan from financial institution	Yes	Found by yourself	Yes
45	Laxmi Rayamajhee	Female	Kavre	Not Educated	Chettri	other	Kavre	Nothing	>20	Can not afford the rent	Own income	Yes	Found by yourself	Yes
46	Shanta Lamu	Female	Narayan	Not Educated	Lama / Tamang	other	Kavre	-	15 - 20	Search for job	Own income	Yes	Other	No
47	Balkumary Karki	Female	Kavre	Not Educated	Chettri	other	Dolokha	Nothing	>20	Other	Loan from relatives	Yes	Other	No



Appendix 9: Data of households' preference

Interview No	Interviewee Name	Sex	Do you agree if the government recognizes the existence of this settlement?	Do you agree if the government grants use rights in certain year for you?	Do you agree if the government has a plan to develop this settlement for you?	Do you agree if relocation accompany by the compensation?	Do you agree if long time occupancy is an evidence to prove your existence?	Do you agree if the government should give attention to your opinion concerning to your land?	Do you agree if the government made any decision on your land without the community participation will be success?
1	Laxmi Mishra	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	NOT ANSWER	AGREE	DISAGREE
2	Uma Nahat	Female	STRONGLY AGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	NOT ANSWER	AGREE	STRONGLY AGREE	STRONGLY DISAGREE
3	Chinmaya Sunuwar	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	AGREE	AGREE	STRONGLY AGREE	STRONGLY AGREE
4	Sabitri Gurung	Female	STRONGLY AGREE	AGREE	DISAGREE	AGREE	NOT ANSWER	AGREE	DISAGREE
5	Nanu Pariyar	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	AGREE	AGREE	STRONGLY AGREE
6	Kausila Tamang	Female	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE	DISAGREE	AGREE	AGREE	AGREE	STRONGLY DISAGREE
7	Indrabahadur Paxiwar	Male	AGREE	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE	AGREE	DISAGREE	NOT AGREE OR DISAGREE	NOT ANSWER
8	Rambahadur Nepali	Male	AGREE	NOT AGREE OR DISAGREE	DISAGREE	AGREE	NOT ANSWER	DISAGREE	STRONGLY DISAGREE
9	Bimala Pariyar	Female	NOT AGREE OR DISAGREE	AGREE	AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
10	Anju Tamang	Female	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE
11	Buddhiran Chaudary	Male	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	AGREE	AGREE	STRONGLY DISAGREE
12	Sabitri Shrestha	Female	STRONGLY AGREE	AGREE	DISAGREE	DISAGREE	STRONGLY AGREE	NOT ANSWER	DISAGREE
13	Dhanraj Khadka	Male	STRONGLY AGREE	NOT ANSWER	AGREE	NOT ANSWER	STRONGLY AGREE	NOT ANSWER	DISAGREE
14	Rukmani Parijar	Female	STRONGLY AGREE	AGREE	AGREE	DISAGREE	AGREE	AGREE	DISAGREE
15	Panamaya Syangtan	Female	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE

Appendix 9: Data of households' preference (continued)

Interview No	Interviewee Name	Sex	Do you agree if the government recognizes the existence of this settlement?	Do you agree if the government grants use rights in certain year for you?	Do you agree if the government has a plan to develop this settlement for you?	Do you agree if relocation accompany by the compensation?	Do you agree if long time occupancy is an evidence to prove your existence?	Do you agree if the government should give attention to your opinion concerning to your land?	Do you agree if the government made any decision on your land without the community participation will be success?
16	Machakasi Maharjan	Male	STRONGLY DISAGREE	AGREE	AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE	AGREE	STRONGLY DISAGREE
17	Nabin Lama Manman Tamang	Male	NOT AGREE OR DISAGREE	STRONGLY AGREE	AGREE	AGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE
18		Male	STRONGLY AGREE	AGREE	NOT ANSWER	DISAGREE	NOT ANSWER	NOT ANSWER	NOT ANSWER
19	Radhika Raut	Female	STRONGLY AGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
20	Sarnila Khatri	Female	STRONGLY AGREE	AGREE	STRONGLY AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
21	Kanchimaya Tamang	Female	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	NOT AGREE OR DISAGREE	DISAGREE	STRONGLY DISAGREE
22	Sangita Nepali	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	NOT ANSWER	AGREE	DISAGREE
23	Bhaktra Thapa	Male	STRONGLY AGREE	AGREE	DISAGREE	DISAGREE	AGREE OR DISAGREE	AGREE	DISAGREE
24	Pabitra Maya majar	Female	AGREE	AGREE	AGREE	STRONGLY DISAGREE	AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE
25	Ruhmani Dhungara	Female	STRONGLY AGREE	AGREE	NOT ANSWER	DISAGREE	NOT AGREE OR DISAGREE	AGREE	DISAGREE
26	Yurras Maktan	Male	STRONGLY DISAGREE	DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE
27	Suntali Lama	Female	DISAGREE	NOT AGREE OR DISAGREE	AGREE	STRONGLY DISAGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE
28	Santi Shresta	Female	STRONGLY DISAGREE	DISAGREE	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
29	Binda Rana	Female	DISAGREE	STRONGLY DISAGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
30	Mangal Moktar	Male	AGREE	STRONGLY AGREE	STRONGLY AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
31	Dhan Maja	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	NOT ANSWER	NOT AGREE OR DISAGREE	STRONGLY AGREE	STRONGLY DISAGREE

Appendix 9: Data of households' preference (continued)

Interview No	Interviewee Name	Sex	Do you agree if the government recognizes the existence of this settlement?	Do you agree if the government grants use rights in certain year for you?	Do you agree if the government has a plan to develop this settlement for you?	Do you agree if relocation accompany by the compensation?	Do you agree if long time occupancy is an evidence to prove your existence?	Do you agree if the government should give attention to your opinion concerning to your land?	Do you agree if the government made any decision on your land without the community participation will be success?
32	Dambar Bhandar	Male	STRONGLY AGREE	AGREE	AGREE	NOT AGREE OR DISAGREE	AGREE	STRONGLY AGREE	STRONGLY DISAGREE
33	Heeta Nepal	Female	AGREE	AGREE	AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
34	Nanda lat Shresta	Male	NOT AGREE OR DISAGREE	STRONGLY AGREE	STRONGLY AGREE	DISAGREE	AGREE	STRONGLY AGREE	AGREE
35	Ramsaran Nepali	Male	STRONGLY AGREE	AGREE	AGREE	DISAGREE	AGREE	AGREE	DISAGREE
36	Wadhare Pariya	Male	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	STRONGLY AGREE	AGREE	DISAGREE
37	Bhimbahadur Bishwokarma	Male	NOT AGREE OR DISAGREE	NOT AGREE OR DISAGREE	AGREE	AGREE	AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE
38	Laxmi Kayartha	Female	STRONGLY AGREE	AGREE	NOT AGREE OR DISAGREE	DISAGREE	AGREE	NOT ANSWER	DISAGREE
39	Ram Bahadus	Male	STRONGLY AGREE	AGREE	AGREE	NOT ANSWER	AGREE	NOT ANSWER	DISAGREE
40	Hira Kayatha	Male	STRONGLY AGREE	STRONGLY AGREE	NOT AGREE OR DISAGREE	STRONGLY DISAGREE	NOT ANSWER	NOT ANSWER	STRONGLY DISAGREE
41	Surya Silual	Male	NOT AGREE OR DISAGREE	AGREE	DISAGREE	DISAGREE	NOT ANSWER	AGREE	STRONGLY DISAGREE
42	Dandoponey Hungain	Male	STRONGLY AGREE	AGREE	STRONGLY AGREE	DISAGREE	AGREE	DISAGREE	STRONGLY DISAGREE
43		Male	STRONGLY AGREE	AGREE	STRONGLY AGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
44	Lajan Gautam	Male	STRONGLY AGREE	NOT AGREE OR DISAGREE	AGREE	NOT ANSWER	AGREE	STRONGLY AGREE	STRONGLY DISAGREE
45	Laxmi Rayamalhee	Female	STRONGLY AGREE	AGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	STRONGLY AGREE	AGREE	STRONGLY DISAGREE
46	Shanta Lamu	Female	STRONGLY AGREE	STRONGLY DISAGREE	STRONGLY DISAGREE	DISAGREE	NOT ANSWER	STRONGLY AGREE	STRONGLY DISAGREE
47	Baikumary Karki	Female	STRONGLY AGREE	AGREE	STRONGLY AGREE	STRONGLY AGREE	STRONGLY DISAGREE	STRONGLY AGREE	STRONGLY DISAGREE