Pro-poor Land Management in Developing Countries:
A case study in Nepal and India

Dev Raj Paudyal
June, 2008

INTERNATIONAL FEDERATION OF SURVEYORS (FIG)
Executive Summary

Informal settlements are common features of developing countries and are typically the product of an urgent need for shelter by the urban poor. Most of the developing countries experience a massive migration from rural area to cities where the majority of the new urban dwellers settle in non-regularized areas, often in locations that are exposed to natural hazards (such as land slides and flooding) and to ill health, illiteracy and unemployment. According to Homeless International (2005), there are about 900 million people or 32% of the world’s urban population living in slums and 43% percent of slum population is clustered in developing countries. This is projected to rise to 2 billion slum population in 30 years. In south Asia alone, more than 150 million slum dwellers are without secure tenure, facing the threat of forced eviction. Lack of secure tenure discourages residents from improving conditions through investment in their houses and in common services for water, sewerage, roads, etc. City authorities generally consider slum or informal settlement as illegal. Since these settlements are not part of the formal land management system there is also a general lack of information or at least reliable information necessary for planning purposes as well as for the formulation of policies and programmes for upgrading and regularization of the areas. To help these people, the city authorities need to recognise the people and include the settlement in the planning process. If the settlement is in hazardous zone, they need to provide them land that is close to income opportunities, geographical location and basic amenities. Different organisations are working to improve the living conditions of slum dwellers and make visible them in the formal system. UN-HABITAT is one of the organisations working for the Habitat Agenda and the Millennium Development Goals (MDGs) of significantly improving the lives of at least 100 million slum dwellers by the year 2020. UN-HABITAT (2004) launched a Pro-poor land management concept to improve the lives of slum dwellers with a flexible approach that depends upon on the local circumstances.

The goal of this research is to explore the conceptual framework and implementation arrangement for Pro-poor Land Management in developing countries. In this context, a case study methodology has been adopted. Two cities Kathmandu Valley (five major municipalities; Kathmandu, Lalitpur, Bhaktapur, Kritipur, and Thimi from Nepal) and Allahabad (from India) were taken for the study. In both of the cities, the slum dwellers live without tenure rights, in very poor conditions, and mostly occupied public land. To carryout this research a structured set of concepts/definitions regarding the Pro-poor land management has been discussed. Various organisations who are lobbying from global to local scale for Pro-poor land management are described.

For the development of conceptual framework for Pro-poor land management, the current situation is analysed through SWOT analysis methods and based on the SWOT analysis, six step-wise approach has been explored as slum identification and mapping, development of relevant framework, application of GI technology, Build local LIS, City-wide slum upgrading and spatial planning and slum participation for Pro-poor land management.

For implementation arrangement of Pro-poor land management, four administrative hierarchy national level, city level, municipal level and community level/settlement level has been explored and their activities are discussed.
Acknowledgements

This research would not have been possible without the support of many people and organizations that provided support in many ways.

First of all I would like to express my gratitude to FIG Foundation which provides me this prestigious grant to support this study. My special appreciation goes to Mrs Tine Svendstorp and FIG Director Mr. Markku Villikka for their kind support during my study. I would also like to thanks my home organisation Survey Department of Nepal that support me during my field works in Nepal.

I am thankful to my supervisors A/Professors Kevin McDougall and Armando Apan for their support during the research period.

I would like to dedicate my special thanks to all the slum dwellers and their representative whom I met and discuss to understand their real problems.

My gratitude goes to Mr. Dinesh Azad and Shrees Kumar who dragged me the galli and hut of slum dwellers during my field visit to Allahabad city and introduces me with settlers. It would be impossible for me to get information from slum settlers without taking the assistant from you. Your friendship, encouragement and assistance are greatly appreciated.

Finally, a special and loving thank to my wife Charu, who with patience and love supported me during this short journey and pulled me for the long journey.
# Table of contents

1. Research Background and Objectives ..........................................................................................................................1  
   1.1. Background ...............................................................................................................................................................1  
   1.2. Rationale for the Study ................................................................................................................................................2  
   1.3. Research Problems ...................................................................................................................................................2  
   1.4. Aims and Objectives ..................................................................................................................................................2  
   1.5. Research Questions .................................................................................................................................................2  
   1.6. Research Methodology ................................................................................................................................................2  
      1.6.1. Literature Review ................................................................................................................................................4  
      1.6.2. Pre-Fieldwork ......................................................................................................................................................4  
      1.6.3. Fieldwork ............................................................................................................................................................4  
      1.6.4. Post fieldwork ......................................................................................................................................................4  
   1.7. Resources ...................................................................................................................................................................4  
      1.7.1. Data Used ............................................................................................................................................................4  
      1.7.2. Resources Used ...................................................................................................................................................5  
   1.8. Operational Plan .........................................................................................................................................................5  
   1.9. Structure of Report ....................................................................................................................................................5  
2. Literature Review ........................................................................................................................................................................7  
   2.1. Introduction ....................................................................................................................................................................7  
   2.2. Definitions ....................................................................................................................................................................7  
      2.2.1. Land Management vs. Pro-poor Land Management ..............................................................................................7  
      2.2.2. Informal Settlements vs. Slums ...................................................................................................................................7  
      2.2.3. Social Tenure Domain Model ....................................................................................................................................8  
      2.2.4. Land Information System ........................................................................................................................................8  
      2.2.5. Land Tools vs. Pro-poor Land Tool ..........................................................................................................................8  
      2.2.6. Poor and Poverty ........................................................................................................................................................9  
   2.3. Institutions Lobbing for Pro-poor land management ...................................................................................................9  
      2.3.1. Global Level ..........................................................................................................................................................10  
      2.3.2. National Level ....................................................................................................................................................11  
   2.4. Characteristics of Pro-poor Land Management ..............................................................................................................12  
   2.5. Some Innovations for Pro-poor land management ......................................................................................................13  
   2.6. Summary and Concluding Remarks ...............................................................................................................................13  
3. Field Study (Case Study) ............................................................................................................................................................14  
   3.1. Background ....................................................................................................................................................................14  
   3.2. Country context .............................................................................................................................................................14  
      3.2.1. Nepal ..................................................................................................................................................................14  
      3.2.2. India ..................................................................................................................................................................15  
   3.3. Case Studies ..................................................................................................................................................................16  
      3.3.1. Profile of Allahabad City ........................................................................................................................................16  
      3.3.2. Brief Profile of Kathmandu Valley ........................................................................................................................16  
      3.3.3. Geographic Characteristics ......................................................................................................................................17  
      3.3.4. Demographic Profile and Trends ..........................................................................................................................17  
      3.3.5. Poverty and Deprivation ........................................................................................................................................17  
      3.3.6. Slum Settlements & Population ...........................................................................................................................18
v

3.3.7. Slum Characteristics .........................................................................................................18
3.3.8. Status of Community Facilities in Slum Areas.................................................................19
3.4. Summary and Concluding Remarks .....................................................................................26
4. Results and Discussions .................................................................................................................27
  4.1. Introduction................................................................................................................... ....27
  4.2. Strategic Plan for Pro-poor Land Management .................................................................27
  4.3. Implementation Arrangement ...........................................................................................35
  4.3.1. National Level ..................................................................................................................35
  4.3.2. City Level .........................................................................................................................35
  4.3.3. Municipal Level .................................................................................................................36
  4.3.4. Community and Settlement Level ....................................................................................36
  4.4. Summary and Concluding Remarks .....................................................................................36
5. Conclusions and Recommendations...............................................................................................38
  5.1. Introduction................................................................................................................... ........38
  5.2. Conclusions .................................................................................................................... .......38
  5.3. Recommendation ..................................................................................................................40

Annexure 1: Name of Slum Settlement in Allahabad City
Annexure 2: Maps
Annexure 3: Some Photographs of Research Areas
List of figures

Figure 1: Research Framework ................................................................................................................3
Figure 2: Operational Plan ........................................................................................................................5
Figure 3: Dimension of Pro-poor land management Tools ...................................................................9
Figure 4: Location Map of Nepal ............................................................................................................15
Figure 5: Location Map of India .............................................................................................................16
Figure 6: Classification of Slums ............................................................................................................23
Figure 7: Strategic Planning Model (Adapted from Molen et.al, 2002) ................................................27
Figure 8: Conceptual Framework for Pro-poor Land Management .......................................................33
List of tables

Table 1 : Slum Population..................................................................................................................23
Table 2: Urban Population and Area in Kathmandu Valley from 1971 to 2011 Projection ...........17
Table 3: Slum Settlement Development..............................................................................................18
1. Research Background and Objectives

1.1. Background

Informal settlements are common features of developing countries and are typically the product of an urgent need for shelter by the urban poor. As such they are characterized by a dense proliferation of small, makeshift shelters built from diverse materials, degradation of the local ecosystem and by severe social problems (Begu 2003). According to (HomelessInternational 2005), there are about 900 million people or 32% of the world’s urban population living in slums and 43% percent of slum population is clustered in developing countries. This is projected to rise to 2 billion slum population in 30 years. World-wide, around 2.8 billion people currently live in cities. By 2007, more people will live in cities than in rural areas (McLaren, Coleman et al. 2005). Most of the developing countries experience a massive migration from rural area to cities where the majority of the new urban dwellers settle in non-regularized areas, often in locations that are exposed to natural hazards (such as land slides and flooding) and to ill health, illiteracy and unemployment. They thus remain in poverty. Lack of secure tenure discourages residents from improving conditions through investment in their houses and in common services for water, sewerage, roads, etc. Land tenure in these types of settlement is informal, and does not provide enough security for the residents. Since these settlements are not part of the formal land management system there is also a general lack of information or at least reliable information necessary for planning purposes as well as for the formulation of policies and programmes for upgrading and regularization of the areas (Nordin 2004).

Like in other developing countries, Nepal and India the issues of slum dwellers is one of the main concern for the government. In Kathmandu valley (of Nepal) only, there are more than 65 such informal settlements areas which are settled encroaching public and government lands (Paudyal 2006). There is no documentary evidence of land tenure in informal settlement area with government. The existing cadastral system does not provide the real field situation about the land tenure. The information about the settlers is informally recorded by the community groups. Lack of secure property rights in the occupied lands inhibits investments in housing, sustainable food production and access to credit, hinder good governance and the emergence of civic societies, reinforce social exclusion and poverty, undermine long term planning, and distorts prices of land and services. Likewise, the urban poor in India are highly disadvantaged with respect to legitimate access to land and land development rights. An estimated 55 million urban dwellers live without tenure rights, in very poor conditions, on public land. The Government has in this regard undertaken a number of measures to improve the tenure situation of the poor. These include regularization of land tenure and improvement of basic infrastructure in informal settlements (Banerjee 2002). Allahabad city is one of the cities having the problems of informal settlements. Hence, there is an urgent need to explore an innovative approach for developing conceptual framework for low cost Pro-poor land management. In this study, two cities Kathmandu and Allahabad are taken as a case study. A conceptual framework has been developed and implementation arrangement for Pro-poor land management is discussed.
1.2. Rationale for the Study

The issues related to informal settlement has a global concern, as clearly stated in the year 2000 United Nations Millennium Declaration. It is clearly explained in the Millennium Development Goal 7, Target 11 that aims to significantly improve the lives of at least 100 million slum dwellers by the year 2020. For poverty reduction and sustainable development these agenda should be addressed by the Government. Particularly for developing countries, this issue is serious. For case study, two South Asian developing countries are taken into account. One of the countries having centralized government structure and other has federated states. In Nepal, Central Government deals with the issues of informal settlements and but in India State Government has the authority. Two major cities of these two countries are taken as a case study as the issues of informal settlements is serious in both of these cities.

1.3. Research Problems

The central research problem of this research project is how to recognize the Pro-poor land administration system with the formal system for poverty reduction and economic growth of developing nation. With this central research question, the research objectives and research questions are formulated.

1.4. Aims and Objectives

Based on the above background and research problem, the main objective of this project proposal is to explore the conceptual framework for Pro-poor land management in developing countries.

To achieve the main objective, two sub-objectives are laid down:

- To assess the current practices for Pro-poor land management in both of the cities
- To develop strategic plan for Pro-poor Land Management
- To develop appropriate approach (conceptual framework) for Pro-poor land management and implementation arrangement for Pro-poor land management

1.5. Research Questions

The proposed research addresses the following research questions:

A. What is Pro-poor land management?
B. Who are the main stakeholders for the Pro-poor land management and what are their roles?
C. What are the available approaches for Pro-poor land management?
D. How to develop strategic plan for Pro-poor Land Management?
E. What is the appropriate approach for Pro-poor land management and its effective implementation arrangement at various administrative levels?

1.6. Research Methodology

The following methodology is proposed to achieve the objectives and to answer the research questions:

First of all, the topic for the research work was defined and after that the research problem, aims, objectives and justification for the research was explored. A through literature review was done to understand the concept of land management, informal settlements, Pro-poor scheme, unconventional approach, innovation for Pro-poor land management tools, upgrading informal settlements etc. A case study methodology was applied to assess the state of art of Nepalese as well as Indian Pro-poor land
management techniques. SWOT Analysis was performed for external as well as internal scanning of the current Pro-poor land management practices. A statistical analysis was performed to evaluate the data as well as output. The conceptual framework for Pro-poor land management was developed and implementation arrangement for Pro-poor land management is suggested.

Figure 1: Research Frame
1.6.1. Literature Review

The purpose of the literature review was to answer the various research questions and to extract the various issues. For the convenience, the issues were listed and classified as definitions, state of art knowledge, experience (past/present) and statistics.

1.6.2. Pre-Fieldwork

The research topic is related to Pro-poor land management. The field observation and interaction with informal settlers and potential stakeholders is very crucial for this research. A good preparation is necessary to conduct field observation. Preparation of Questionnaires, list of participants for interview personnel persons, Correspond with stakeholders for workshop, arrangement of resources for field trips etc. were the main activities carried out before going to field work.

1.6.3. Fieldwork

This research is case study Research and two cities of different countries are taken as a case study. The following were the main activities for field work.

a. Inform to the Respondents
b. Interview (Direct and Indirect)
c. Workshop (one day)
d. Open Discussion
e. Feedback (From experts/ users)
f. Data Compilation and Clustering

1.6.4. Post fieldwork

After the fieldwork the following analysis and calculation was done to evaluate the two scenarios.

a. Identification of Stakeholders
b. Identification of Information and data used
c. Stakeholders Analysis
d. Data Analysis
e. Prepare Field Report

1.7. Resources

1.7.1. Data Used

a. Field Books
b. Plot Register
c. Cadastral maps and plans
d. High resolution satellite data
e. Topographical maps/Orthophoto
f. Statistical data
g. Informal settlers spatial and attribute data
h. Proof of Owners/Settlers (Ration Card, Electricity Bills, Telephone Bills etc.)
1.7.2. **Resources Used**

a. Hardware and Instruments: PC, Laptop, Handheld GPS

b. Software: Microsoft Windows XP, MS Office, MS Project, Microsoft Visio, ESRI ArcGIS, Endnote, PDF writer etc

1.8. **Operational Plan**

The detailed operational plan for this research work is given below.

![Operational Plan](http://example.com/operational_plan.png)

1.9. **Structure of Report**

The research report is organised into six chapters and a description of each chapter is provided below.

**Chapter I: Research Background and Objectives**

This chapter provides an overview of the research. It presents the background to the study, rationale for the study and the research problems. It further outlines the research aims and objectives, the research questions, research methodology, resources and operational plan. Finally, it gives an overview of the structure of the research report.

**Chapter II: Literature Review**

This chapter highlights various concepts under Pro-poor land management domain. It further describes the institutions lobbying for Pro-poor land management from global to local level and some innovations about Pro-poor land management.
Chapter III: Field Study (Case Study)
This chapter describes the methods adopted for field study. Then, it describes the validation process adopted to check the validity of the data collected during the field study. Finally, it highlights on the field study results.

Chapter IV: Results and Discussion
This chapter highlights the results from field study and discusses the steps for strategic plan for Pro-poor Land Management. It assesses the current situation based upon the phases of Pro-poor land management as slum identification and mapping, relevant tenure framework, application of geo-information technology, land information system, citywide slum upgrading and spatial planning. It further discusses the SWOT analysis for internal as well as scanning of Pro-poor land management tools. Finally, it describes conceptual framework and implementation arrangement for Pro-poor land management tools in Nepal and India.

Chapter VI: Conclusions and Recommendations
This chapter concludes highlighting the outcomes of the research and poses some recommendations
2. Literature Review

2.1. Introduction

The aim of this chapter is to give an overview of Pro-poor land management based on the literature review. This chapter starts with section definitions. Then, it discusses the institutions lobbying for Pro-poor land management. Some innovations for Pro-poor land management from literature review are structured. Finally, it concludes with the summary of this chapter.

2.2. Definitions

2.2.1. Land Management vs. Pro-poor Land Management

Land management is the process by which the resources of land are put into good effect (UN-ECE 1996). Land management encompasses all activities associated with the management of land and natural resources that are required to achieve sustainable development. The concept of land includes properties and natural resources and thereby encompasses the total natural and build environment (Enemark 2005).

A Pro-poor Land Management (UN-HABITAT 2004) is defined as
- The development of an appropriate and flexible form of tenure
- A participatory planning approach for informal land delivery processes
- Links to services to increase community capacity for sustainability
- A decentralised land administration system that uses local capital and is in partnership with local authorities
- A cost recovery approach or self reliance

According to (Tuladhar 2005), the main characteristics of Pro-poor Land Management System are;
- Making the poor visible and legal citizen of the city, enabling participation in the decision making process
- Enabling the settlements where they live to be included in the planning
- Developing procedures for tenure security and providing services that are accessible and affordable to the poor
- Ensuring that local land information systems are transparent and close to civil society and the poor who require the information for making decisions regarding their land (UN-HABITAT 2004).

2.2.2. Informal Settlements vs. Slums

Informal settlements are difficult to define. There is not a formal definition for informal settlements. The definition depends upon the country context. According to (Paudyal and Subedi 2005), they are not landless people but occupying the government and public lands and their occupancy is socially accepted but legally unrecognised.
A slum household is a group of individuals living under the same roof that lack basic civic amenities like access to safe water, access to sanitation, sufficient living area, and durability of housing and secure tenure. According to the situation of the city this can be locally accepted. According to the (UN-HABITAT 2004), half of the people living in cities in the developing world live in slums.

2.2.3. Social Tenure Domain Model

The Social Tenure Domain Model (STDM) is developed as a specialisation of the FIG’s Core Cadastral Domain Model (CCDM). The focus of STDM is on modelling the relations between people and land; independent from the level of formalisation and/or legality of those relationships. The development of STDM is a search for a domain model that can be used as a basis for the development of a land administration system that can support all forms of land rights, social tenure relations and overlapping claims to land (e.g. in post conflict areas). STDM is for developing countries with very little cadastral coverage in urban and/or rural areas, for post conflict areas and for countries with large scale informal settlement and/or large scale customary areas. The focus is on recorded rights (or social tenure relationships) and not on registered rights; this means on personal and not on real rights. The spatial unit forms the basis for recording the people-land relationship (Clarissa, Lemmen et al. 2006).

2.2.4. Land Information System

Any land management system must supply information on land rights and use, land transactions, as well as current and planned land use. This requires an effective land information and record system that can be administered easily, and is clear and user friendly to those that it services.

2.2.5. Land Tools vs. Pro-poor Land Tool

According to (GLTN 2006) a tool is a practical method to achieve a defined objective in a particular context and considers a land tool as an operational means to address land issues such as security of tenure, land reform/redistribution and land management/administration. Land tools should contribute towards policy making, land management, capacity development, research, teaching, advocacy and conflict resolution.

Pro-poor land tools empower the poor in the community, meet the needs of the poor and support the livelihood of the poor. Pro-poor land tools emphasize on development sectors which have positive impacts and bearing on the marginalised and vulnerable members of a community. Pro-poor land tools protect the poor from abuse and promote social justice in the access to land as well as housing (GLTN 2006). In brief, a Pro-poor land tool has the following characteristics.

- Empowering the poor and vulnerable part of the community
- Being sensitive to the needs and situation of the poor
- Protecting the poor from abuse
- Encouraging participation of the poor and grassroots communities
- Leading to an increased welfare of the less well-off in the community
- Increasing net benefits/opportunities for the poor rather than further marginalize them
- Promoting social justice in the access to urban land and housing
- Promoting social inclusion
Basically, a Pro-poor land tool is used for policy making, conflict resolution, research and development, capacity building, land management, awareness and advocacy etc.

Figure 3: Dimension of Pro-poor land management Tools

2.2.6. Poor and Poverty

Poverty in a city is complex to define – a large number of indicators such as health and wellbeing, and income are involved. There are a number of ways to define poverty and measure it. The simplest definition of poverty is to describe it as the lack of specific consumptions (i.e., not enough to eat). A broader definition defines poverty as the lack of command over commodities exercised by a population. Another, more sophisticated definition is based on the capability of poor to function in society. Access to basic services, especially adequate and safe water, health and sanitation, and education are now increasingly being recognized as an important indicator of poverty. There are several standards, widely accepted representations of poverty – for example, the Head Count Index (HCI) signifies the percentage of people below poverty line, while Poverty Gap (PG) measures the depth of poverty (in statistical terms, this stands for the mean distance below the poverty line as percent of the poverty line). DFID’s White Paper on International Development refers to people living on “less than 1 US$ per day at 1985 purchasing power parities adjusted to current price terms” as suffering ‘extreme poverty (DFID 1997).
2.3. **Institutions Lobbing for Pro-poor land management**

The Pro-poor land management issue could be shaped by policies, institutions and processes (PIPs) at all levels from community to the international. The institutions lobbing for Pro-poor land management can be categorised into three ways.

2.3.1. **Global Level**

It includes the institutions which are at global scale. The main organisations are the followings.

2.3.1.1. **World Bank**

The World Bank carried out regional workshops, released report on Land Policies for Growth and Poverty Reduction. The bank is now undertaking research on pro poor land tool implementation. It provides the fund for respective government two works towards Pro-poor land management.

2.3.1.2. **GLOBAL LAND TOOL NETWORK (GLTN)**

Global Land Tool Network (GLTN), is an international network that aims to establish a continuum of land rights and develop Pro-poor land management and land tenure tools. The vision of GLTN is to provide appropriate land tools at global scale to implement on Pro-poor land policies. Their mission is also to work with partners to assist member states at global level in implementing land policies that are pro poor, gender sensitive and at scale.

The GLTN’s mission statement envisages achieving (GLTN 2006).

- Developing pro poor gendered land tools
- Unblocking existing initiatives and to add value
- Researching, documenting and disseminating
- Strengthening global comprehensiveness (Paris Declaration)
- Improving security of tenure for the poor (Global Campaign on Secure Tenure)
- MDG goals: indicators/benchmarks

2.3.1.3. **FIG**

FIG, the Federation Internationale des Geometres (International Federation of Surveyors) is a federation of national associations and is the international body that represents all surveying disciplines. It is an UN-recognised non-government organisation (NGO) and its aim is to ensure that the disciplines of surveying and all who practise them meet the needs of the markets and communities that they serve. FIG has identified technical tools that are needed for pro poor land administration approaches & established working group to deal that issues. FIG Commission 7 advocates the informal settlements regularization and formalization processes. The Commission is organised with three Working Groups and Working Group 7.1 is responsible for Development of Pro Poor Land Management and Land Administration.

The aim of this working group is (www.fig.net)

- recognise and support the development of pro poor land management approaches
- communicate, as far as possible, the FIG concepts in development of land policy and land management: land law, land tenure and security of tenure, land markets, land taxation, land use planning, land reform, land redistribution, post conflict land administration
- identify (geometric) aspects related to social, informal land tenures
Pro-poor Land Management in Developing Countries: A case study in Nepal and India

- support the development of low cost, innovative, data acquisition methods
- develop the social tenure domain model
- contribute in the GLTN
- propose a capacity building approach for pro poor land management

2.3.1.4. UN-HABITAT

UN-HABITAT (United Nations Human Settlements Programme) is the United Nation’s Human Settlement’s Programme for human settlements started in 1978. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-HABITAT’s strategic vision is anchored in a four-pillar strategy aimed at attaining the goal of Cities without Slums. This strategy consists of advocacy of global norms, analysis of information, field-testing of solutions and financing. These fall under the four core functions assigned to the agency by world governments - monitoring and research, policy development, capacity building and financing for housing and urban development.

2.3.2. National Level

It includes the institutions which are at national scale. The main organisations are the followings.

2.3.2.1. Government organisations

There are various government organisations which are mandated for land management activities throughout the country. They are responsible to formulate policies and programme in the favor of Pro-poor land management.

2.3.2.2. Civil Society

Civil society is composed of the totality of voluntary civic and social organizations and institutions that form the basis of a functioning society as opposed to the force-backed structures of a state (regardless of that state's political system) and commercial institutions. Civil society has been lobbying governments to deal with rural and urban poor land issues.

2.3.2.3. Private Organisations

Though Private sector is not sufficiently involved for land reform works, it can play a great role for the property related information management and infrastructure. They can assist for the land information system development, infrastructure development and capacity building.

2.3.2.4. Political Parties

Land is one of the most sensitive political issues in any country. Land is linked to political patronage and the vested interests of elites. Land is often a politically explosive issue, and the source of many potential and actual conflicts. Political will with indigenous thinking is essential for addressing the Pro-poor land management issues.

2.3.2.5. Academia and Land Experts

Academia and land experts can help for the education, research and development for the Pro-poor land development. They can assist government for the formulation of policy and programme in the wellbeing of poor.
2.3.2.6. Land Lawyers

Land lawyers can assist for the formulation of Pro-poor land policy and revision of existing land related acts in the welfare of landless people, slum dwellers, poor and marginalized people and minority groups. This helps for the sustainability of Pro-poor land management activities.

2.3.2.7. Local Level

It includes the institutions which are at local level. The main organisations are the followings.

2.3.2.8. NGOs

Non-Government Organisations has a great role to work in the informal sector. They have faith at the community level and can lobby for Pro-poor land management agenda.

2.3.2.9. Traditional or Customary Authority

There are various traditional or customary authorities. The community members believe more with these organisations. They have social norms and values and widely accepted rules and regulation. They could have a great role for Pro-poor land management activities.

2.3.2.10. CBOs

There are various community based organisations which are working at the community level. They support community for awareness about the Pro-poor land management activities.

2.3.2.11. Local Authority

Local authority such as village development committee has the government authority to make plan and programme for Pro-poor land management at local level.

2.3.2.12. Informal Settlement Representatives

In formal settlement representatives are the focal groups to raise the voice of poor and community members. They are also responsible for monitoring the activities carried out by different stakeholders in the favor of poor.

2.4. Characteristics of Pro-poor Land Management

The Pro-poor land management approach should have the following characteristics (Clarissa 2007).

- Protecting the poor
- Protecting women
- Strengthening decentralization
- Improving transparency & access to information
- Encouraging media campaign
- Improving service delivery
- Strengthening land tax
- Addressing conflicts over land
- Having Dispute resolution mechanisms
- Providing new adjudication
- Affordable & sustainable
- Innovative cadastral /registration
2.5. Some Innovations for Pro-poor land management

Form literature review, some innovations for Pro-poor land management has been identified, to drag informal system into formal systems in an inexpensive and sustainable way.

- Participatory Approach for Slum Identification and Mapping
- Identification of New Paradigm on Land Rights, Records and Registration
- Application of Geo-Information Technology
- Local Land Information System
- Slum Participation for Land Management
- Citywide slum upgrading and spatial planning
- Citywide New Forms of Spatial Unit
- Expropriation, eviction and compensation
- Establish Pro-poor Land Law

2.6. Summary and Concluding Remarks

This chapter discusses various terminology related to the Pro-poor land management. The issues related to Pro-poor land management is becoming global issues. At various levels, the institutions are lobbying in the favour of Pro-poor land management. At Global level institutions like World Bank, GLTN, FIG, UN-HABITAT etc. are working. Likewise, Government Organisations, Civil Society, Private Organisations, Political Parties, Academia and Land Experts are lobbing at national level. At local level, the institutions like NGOs, CBOs, Traditional or Customary Authority, Local Authority, Informal Settlement Representatives etc. are lobbing. Some Innovations are already developed for Pro-poor land management and need to assess these by city-wise context.
3. Field Study (Case Study)

3.1. Background

The aim of this chapter is to give an overview of Pro-poor land management based on the case study. This chapter starts with a section country context. A brief introduction of Nepal and India is introduced and case study of two cities Allahabad and Kathmandu valley is examined. The As-IS situation of slum profiles, characteristics and land management tools is explored with field study. Finally, it concludes with conclusions.

3.2. Country context

3.2.1. Nepal

Nepal is a land locked country surrounded by China in North and India in South, East and West. Geographically, it is located between 26 degree N to 31 degree N latitude and 80 degree E to 88 degree E longitude approximately. The elevation ranges from around 60m to 8848m, the highest peak of the world, Mount Everest. The length in the east-west direction is about 885 km. and the width in the north-south direction varies between 145 km to 245 km. Nepal covers an area of 147181 sq. km. and a population of over 23 million. Population density of the country is 157.73 per square kilometer (CBS 2002). For Administrative purpose the country is divided into 5 development regions, 14 zones and 75 districts, each district is further divided into small administrative units called Village Development Committee (VDC) and Municipalities. There are 3914 VDCs and 58 municipalities in the country. Ecologically Nepal can be divided into 3 Regions Mountain, Hill and Terai. Land in Nepal is categorized into Government, Public, Trust and Private lands.

The urban population of Nepal is increasing dramatically. In the census year 1961 and 1971, the urban population grew from 38 percent to 41 percent. The figure increased again by 107 percent between 1971 and 1981, and by 76 percent between 1981 and 1991. The growth was 41 percent between 1991 and 2001 (CBS 2002). Municipal Association of Nepal estimated that if this trend continues half of the population will be living in urban areas by 2035. The population of slum dwellers is 92.4 percent in urban areas.
India is located in Southern Asia, bordering the Arabian Sea and Bay of Bengal, between Burma and Pakistan with an area of over 3,287,270 sq km including territorial sea. It has land cover over 2,973,190 sq km. The land mass boundary is about 15,200 km and coastal line is about 75,166 km including Mainland, Lakshadweep and Andaman & Nicobar. India has plain in south, flat to rolling plain along the Ganges, desert in west and high mountains in north. India occupies much of the South Asian. There are three main geological regions: the Indo-Gangetic Plain, the Himalayas and the Peninsula, or South India.

According to the Planning Commission’s estimation, nearly 62 million people are living in urban slums (IndoAsianNewsService 2008). The number of people living in slums in India has more than doubled in the past two decades. In Maharashtra state, 32% of the state's population live in slums. In Delhi alone, there are around 860 slum clusters with a total population of about four million. There are 185 slums with a total population of 330000 covering almost 27.4% of the total population in Allahabad city.
3.3. Case Studies

For case studies, two cities, Allahabad and Kathmandu are taken into account. A brief introduction of case studies cities has been elaborated in the following section.

3.3.1. Brief Profile of Kathmandu Valley

Kathmandu valley, which comprises of five municipalities (Kathmandu, Lalitpur, Bhaktapur, Kirtipur and Thimi), is the main attraction for the rural poor as well as urban rich for betterment of livelihood. The population of Kathmandu valley is 1.5 million people, (220,000 households). One-third of its residents live in slum dwellings and 18,000 people are squatting (without land rights) (3CD 2005). Rice, wheat, corn, vegetables, and a variety of fruit including bananas and oranges are grown in the fertile Valley, which supports a relatively high percentage of the hill population. Because of the growing number of people and vehicles in the Valley, especially in Kathmandu, air and water pollution are becoming a serious problem. Kathmandu Metropolitan City (KMC) is the largest city in Nepal and the cosmopolitan heart of the Himalayan region. With a history and culture dating back 2,000 years, the city, along with the other towns in the Valley, ranks among the oldest human settlements in central Himalaya.
3.3.1.1. Geographic Characteristics

From a geographical point of view, there are three major streams/rivers: Bagmati, Bishnumati, and Rudramati (Dhobikhola) in Kathmandu Valley. The Bagmati, which rises at Bagdwar and drains out through the Chobhar gorge in Kathmandu, is the principal river of the Kathmandu Valley and all streams are the tributary of Bagmati River. Icchumati, Manohara, Nakkhu, Hanumante, Karmanasa and Godavari River are other tributary of Bagmati River. The climate of Kathmandu valley is characterised by summer, monsoon and the winter. The winter season usually extends from mid-November to February and is followed by the summer which continues till the mid. of June. The monsoon then starts with rainy season which lasts till the end of September.

3.3.1.2. Demographic Profile and Trends

The Valley of Kathmandu (KV) includes five major municipalities: Kathmandu, Lalitpur, Bhaktapur, Kirtipur, and Thim. Kathmandu valley is the political, cultural, tourism, educational, administrative, commercial, industrial, security, hospital and financial centre of Nepal. Hence, it has become a favourite destination for migration of rural population. The Demographic profile of those municipalities is tabulated below.

Table 1: Urban Population and Area in Kathmandu Valley from 1971 to 2011 Projection

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathmandu</td>
<td>150,402</td>
<td>235,160</td>
<td>421,258</td>
<td>729,690</td>
<td>1,011,105</td>
<td>50</td>
</tr>
<tr>
<td>Kirtipur</td>
<td>31,970</td>
<td>37,877</td>
<td>46,477</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lalitpur</td>
<td>59,049</td>
<td>79,875</td>
<td>115,865</td>
<td>163,923</td>
<td>229,852</td>
<td>15</td>
</tr>
<tr>
<td>Bhaktapur</td>
<td>40,112</td>
<td>48,472</td>
<td>61,405</td>
<td>74,707</td>
<td>105,561</td>
<td>6</td>
</tr>
<tr>
<td>Thimi</td>
<td>31,338</td>
<td>39,988</td>
<td>49,767</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Population growth is the crucial factor influencing the valley’s socio-economic, socio-cultural and environmental condition. The average density of population per sq. km was 1,837 in 2001. However, the average population density per sq. km of the country was only 157 in the same year. The corresponding figures were 1,277 against 126 in 1991, 963 against 102 in 1981 and 623 against 79 in 1971. This shows that population density in the Kathmandu Valley is growing rapidly compared to the national population density. The population of the Valley has increased by 23.8 per cent from 1971 to 1981, 44.2 per cent from 1981 to 1991 and 48.8 per cent from 1991 to 2001.

3.3.1.3. Poverty and Deprivation

All three districts of Nepal are placed in the top level of the national poverty and deprivation index. Among these districts, Kathmandu ranks first, Bhaktapur second and Lalitpur third. Marginal farm households are taken as those households with operational agricultural landholdings (worked by the farm households as owner or tenant) of 0.5 ha or less. Majority of the population in Bhaktapur are still dependent on agricultural activities. All As such no recent studies are available about the extent of
poverty levels in Kathmandu Valley, but the discussions with stakeholders reveal that the poverty levels are very low and that their main concerns are unemployment, security of land tenure, quality of housing and access to basic infrastructure and civic amenities. The urban poor population (slum population) in Kathmandu valley is 13243; mostly located in the river banks and the rapid growth of slums has largely contributed to social and environmental problems in the urban area.

3.3.1.4. Slum Settlements & Population

The slum and informal settlements is rapidly increasing in Kathmandu Valley. In most of the cases, they have occupied government lands and public lands. The areas around the river banks have been their favourite targets for settlements. This has been putting tremendous pressure on the limited infrastructure, and causing environmental degradation in the valley.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Settlements</th>
<th>No. of Household</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>17</td>
<td>-</td>
<td>2134</td>
</tr>
<tr>
<td>1988</td>
<td>24</td>
<td>348</td>
<td>3665</td>
</tr>
<tr>
<td>1990</td>
<td>19</td>
<td>859</td>
<td>4295</td>
</tr>
<tr>
<td>1992</td>
<td>33</td>
<td>1271</td>
<td>6355</td>
</tr>
<tr>
<td>1996</td>
<td>47</td>
<td>1783</td>
<td>8927</td>
</tr>
<tr>
<td>1998</td>
<td>49</td>
<td>2021</td>
<td>10323</td>
</tr>
<tr>
<td>2000</td>
<td>61</td>
<td>2031</td>
<td>11862</td>
</tr>
<tr>
<td>2008</td>
<td>68</td>
<td>2844</td>
<td>13243</td>
</tr>
</tbody>
</table>

3.3.1.5. Slum Characteristics

According to (Paudyal and Subedi 2005), the informal settlers of Nepal can be categorised into three types.

**Slums:** They are legal but overcrowded, under serviced settlements. They are normally found in the centre of the cities but are not uncommon to find them also where the land is rented, in the urban periphery. They are unplanned settlements, very old and not compliance with current planning and building regulations.

**Informal Settlements:** They are not landless people but occupying the government and public lands. They are socially accepted but do not have the legal land right.

**Landless Settlements (Sukumbasi Basti):** They are landless people occupying the government land, forestland, or public land. The land has been occupied illegally. They are unplanned and often unserviced. They can be found on marginal or environmentally hazardous lands, both in urban areas and remote area. Various high level committees have formed to solve the problems of such settlements. There were 277140 applications received on the way of identification of land-less family and 30381 were identified as landless and 41035 were as informal settlements (Comission 2000).
Ex-Bonded labour Settlements (Kamaiya Basti): "Kamaiya" is the term for agricultural workers or tenants of farmland working on farm or in house as labour in the verbal or written agreement with landowner of Terai areas of Mid and Far Western Development Regions of Nepal. About 15,000 families were existed in the beginning now reached the number about 25,000.

In Kathmandu Valley, most of the slums are recognised them as land less settlements (Sukumbashi) category.

It has been found from the field study that the Kathmandu valley slums having the following characteristics

- Having multi-cultural community
- Involvement of political groups who have vested interests
- Poor economic conditions – can neither pay rent for proper housing nor can afford to buy a house
- Inability on the part of the local administration to prevent encroachment of government-owned land
- Migration from rural areas in search of livelihood as urban areas provide commercial and industrial set-up offering greater employment opportunities
- Occupy river banks and public land

3.3.1.6. Status of Community Facilities in Slum Areas

This section deals with the access of slums and urban poor in basic services in Kathmandu Valley. The slum areas have their local name and own administrative division. It is quite interesting that they have assumed their areas separate administrative unit from municipality. They have their own rules and regulation to govern the community. The followings section provides a brief description about the community facilities in slum areas.

Water Supply and Sanitation

The slum settlements are not getting sufficient water to fulfil their water demand. It is very common to use open space for toilet. In most of the settlement if they have toilets also the outlets of toilets flow directly into river. Mostly, the settlements are without sewer and people dispose household waste water and solid wastes taking place directly into open drainage, which adversely affects the physical environment.

Housing

The durability of housing is very poor. In Kathmandu, it is quite interesting to note that some of the settlers has constructed pakki house using cement and bricks. But, in most of the houses are made of bamboo and mud. The leaving space in side the house is insufficient.

Electricity and Telephone

In most of the settlement, it is found that there is electricity connection. But some settlement people are using informal way to connect electricity. Due to the facility of wireless telephone, settlers are using wireless telephone or mobile phone for communication.
Transportation and Other Infrastructure

The size of the road inside slum settlements is small and they have left very small open space in front/back of their house. Mostly, the access roads are muddy and very difficult to drive/walk during rainy season. But they are managed by community groups.

Public Health, School and Temples

In Kathmandu, the local community have run their own school, public health centre and temples. NGO and local community themselves are sharing the running cost. Though, they are of low quality, but settlers are very happy getting these facilities in their locality.

Funding and Maintenance of Basic Services

The settlers are managing fund for the maintenance of basic services. They have their own community group to manage the fund. There are some NGOs and community groups working for the informal settlements.

Land Management System in Kathmandu Valley

In Nepal, graphical cadastral maps are the base for the land administration activities. Deed registration system is used for land registration. The survey department is responsible for cadastral parts and Department of Land Management is responsible for land registry part.
Stakeholders for Pro-poor

There are a number of governmental and non-governmental organizations that are directly or indirectly involved in the Pro-poor land management. The principal organizations are:

**The Ministry of Physical Planning and Works (MPPW):** It is the main government agency responsible for physical planning of urban areas at the national level. Under this ministry, the Department of Urban Development and Building Construction (DUBDC) implements various urban development plans and programs through its 23 division offices located in different parts of the country.

**The Ministry of Local Development (MLD):** It is responsible for administering the programs of local governments such as Municipalities and Village Development Committees (VDCs). The Town Development Fund Board (TDFB) was established in 1989. TDFB is an autonomous body under the MPPW. It has two main functions: to provide financial support to municipalities for the implementation of social infrastructure and revenue-generating projects, and to strengthen the technical and managerial capability of municipalities to implement the projects.

**Kathmandu Valley Town Development Committee (KVTDC):** It was established as the main regional planning body in order to enforce the plan in 1976. District-level units of the KVTDC were also established in Kathmandu, Lalitpur and Bhaktapur. KVTDC is responsible for planning and implementing urban development in the Valley.

**Local Authority:** Kathmandu Metropolitan City (KMC), Lalitpur Sub-metropolitan, Bhaktapur Municipality, Kirtipur Municipality and Mahayapur Thimi Municipality are also involved in planning and implementing urban development at the local level. Apart from other municipalities, KMC is currently formulating a city development strategy, with key stakeholders, to provide a broad framework for the city’s development and to coordinate stakeholder efforts.

**NGOs:** There are various NGOs actively working for Pro-poor land management. The Lumanti Support Group for Shelter is a non-government organization dedicated to the alleviation of urban poverty in Nepal by improving shelter conditions. It is working in 68 slum and squatter communities throughout Kathmandu, Lalitpur and Thimi via three programs; the Urban Community Empowerment Program, Water and Sanitation Program and Support for Displaced Poor Urban Communities.

### 3.3.2 Brief Profile of Allahabad City

Allahabad (25°28’ N latitude, 81°54’ E longitude; 98 msl), founded by Moghul Emperor Akbar in the year 1575 AD by the name of ‘Illahabas’, meaning the city of Allaha, is the modern Allahabad city and a typical third tier city of north India. It is today an important city where history, culture and religion create a magical confluence, much like the sacred rivers that caress this blessed land. The city is located in alluvial plains of Rivers Ganga and Yamuna. Allahabad is an important centre of education and business, and one of the least industrialized and least polluted cities in east Uttar Pradesh (UP).
3.3.2.1. Geographic Characteristics

From geographical point of view, Allahabad City could be categorised into three distinct physical parts which are formed by Ganga and its tributary Yamuna River

a. Trans-Ganga or the Gangapar Plain,
b. The Ganga-Yamuna dovan (confluence), and
c. Trans-Yamuna or the Yamunapar tract

General topography of the city is plain with moderate undulations. The climate of Allahabad is characterised by a long and hot summer, a fairly pleasant monsoon and the winters. The winter season usually extends from mid-November to February and is followed by the summer which continues till the mid. of June. The southwest monsoon then ushers in the rainy season which lasts till the end of September. October and the first half of November constitutes the post-monsoon season. The railway station is an important junction of the Indian Railways, spread over an area of approximately 67 km2.

3.3.2.2. Demographic Profile and Trends

Allahabad city has the third highest growth rate in the state (U.P.), only next to Lucknow and Agra. One of the principal reasons for highest growth rate is migration quest for better education. According to the categorization of Census of India (CoI), the city of Allahabad is composed of three regions namely the Municipal Corporation of Allahabad (MCA), the city outer growth (OT) and the Allahabad Cantonment (CB). The municipal area of the city covers approx. 82 km2 areas and having a population of 975,393 (JICA report). For administrative convenience this area is divided into 70 wards. The CB area has 7 wards and supports a population of 24,137 persons Apart from these areas; the city is bound on three sides by Ganga and Yamuna and its growth spills across the river by the virtue of transport connectivity of bridges to the Phaphamau area to north, Jhusi to east and Naini to south. These areas are considered as the outer growth areas and consist of 17 wards. Therefore including the CB area, the city has 87 wards and a population of 1,018,092 (Annexure 2D).

3.3.2.3. Poverty Mapping

As such no recent studies are available about the extent of poverty levels in Allahabad, but the discussions with stakeholders reveal that the poverty levels are very low and that their main concerns are unemployment, security of land tenure, quality of housing and access to basic infrastructure and civic amenities. It could be true that absolute poverty as per the general definition i.e. not enough to eat, may not exist here, except among a small section of people who lack even housing and other amenities. But if other parameters of urban poverty like housing, access to better sanitation facilities and capability to function in the society are considered, almost all slum dwellers can be categorized as urban poor. The urban poor population (slum population) in Allahabad is nearing 1/3rd of total population and the rapid growth of slums has largely contributed to social and environmental problems in the urban area.

3.3.2.4. Slum Settlements & Population

It is interesting to note that a large number of slums clustering (Annexure 2D) are located along the riverbed, in the core of the old city, in the cantonment area and other environmentally sensitive areas. There are 185 slums with a total population of 330000 covering almost 27.4% of the total population of the city. Whereas a rapid survey of authorized and unauthorized settlements/ slums and urban
villages carried out by Oxfam (India) Trust in 2005 suggests that there are 283 poor settlements or slums in Allahabad with a population of 363550 persons. This constitutes 30% of the total population of the city. However, as per the governmental record (COI 2001), only about 15% of city’s population lives in slums. Table 3 depicts the decadal increase in the slum population.

Table 3 : Slum Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>Slum Population</th>
<th>% of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>793000</td>
<td>83000</td>
<td>10.5</td>
</tr>
<tr>
<td>2001</td>
<td>1206000</td>
<td>330000</td>
<td>27.4</td>
</tr>
</tbody>
</table>

Source: Census of India 2001, and SUDA

3.3.2.5. Classification of Slum

The slum of Allahabad can be categorised into three types: Authorised Slums, Unauthorised Slums and Urban Villages.

According to the record of Oxfam (India) Trust, out of the total 283 slums, there are 59 slum settlements having a total of 20-50 households while 159 settlements inhabit over 200 households. There are about 131 authorized slums, 112 unauthorized ones and 40 urban villages (Figure 8).

The main differences between authorised and unauthorized slums are (OXFAM, 2005)

- Poor People living in unauthorized slums do not have access to minimum basic services while there are better basic services in authorized slums;
Only 3% houses are pucca, 20% semi-pucca and 77% kacha in unauthorized slums whereas 70% houses in authorized slums are pucca. There are about 40% pucca houses in urban villages;

- 60% houses have individual connections (electricity, water supply, telephone etc.) in authorized slums whereas it is only 10% in unauthorized slums;
- 85% inhabitants in authorized slums have individual hygienic toilets whereas 85-90% people in unauthorized slums take to open defecation

### 3.3.2.6. Slum Characteristics

The rapid growth and development of slums in Allahabad city has led to deterioration of its physical environment.

It has been found from the field study that the Allahabad City slums having the following characteristics

- Desire to live close to one's own community
- Involvement of religious or political groups who have vested interests
- Poor economic conditions – can neither pay rent for proper housing nor can afford to buy a house
- Inability on the part of the local administration to prevent encroachment of government-owned land
- Migration from rural areas in search of livelihood as urban areas provide commercial and industrial set-up offering greater employment opportunities
- Occupy environmentally hazard areas

### 3.3.2.7. Status of Community Facilities in Slum Areas

This section deals with the access of slums and urban poor in Allahabad to basic services, drawing from secondary information and interactions with stakeholders. The aim is to identify key issues in service delivery to the poor in Allahabad and suggest strategies that would enable the Municipal Corporation of Allahabad and other local bodies to address these issues and fulfil their mandate of providing basic services to the poor in the city, as per the mandatory reform.

#### Water Supply and Sanitation

The slum settlements are not getting sufficient water to fulfil their water demand and are therefore made to meet the requirement on their own. Only about 25% to 30% slum people (authorized slums + unauthorized slums) have individual water supply connections and rest 70% to 75% people are dependent either on the public stand post and hand pumps or do not have accessibility to the potable water/municipal water. Basically the slums located along the railway lines and in the CB areas do not have the access to municipal water. It is very common to use open space for toilet. There are 111 public toilets at various slum locations in the city which are poor and inadequate according to the size of slum population. In most of the settlement, it is found that people prefer open defecation. Mostly, the settlements are without sewer and people dispose household waste water and solid wastes taking place directly into open drainage, which adversely affects the physical environment. The poor environmental conditions within the slum areas have adversely affected the health of the residents. As the slum settlements are scattered in the entire city so it is difficult for municipal authority to make a
separate arrangement of water supply and sanitation system especially for them. An integrated water supply system need to be designed and laid in the city, which can provide the adequate amount of water to the citizens, including slum dwellers.

**Housing**

Only 3% houses are *pucca*, 20% *semi-pucca* and 77% *kacha* in unauthorized slums whereas 70% houses in authorized slums are *pucca*. There are about 40% *pucca* houses in urban villages.

![Figure 9: Proportion of Housing Condition in Slum Area](image)

![Figure10: Housing Condition in Slum Areas at Allahabad City](image)

**Electricity and Telephone**

60% houses have individual connections (electricity, water supply, telephone etc.) in authorized slums whereas it is only 10% in unauthorized slums.
Funding and Maintenance of Basic Services

The settlers are managing fund for the maintenance of basic services. They have their own community group to manage the fund. There are some NGOs and community groups working for the informal settlements.

3.4. Summary and Concluding Remarks

The issues of Pro-poor land management are found very complex in both of the cities Kathmandu Valley and Allahabad. In Allahabad city, the slum can be categorised as authorised slums, unauthorised slums and urban villages. In Kathmandu valley, the informal settlers are categorised as slums, informal settlements, landless settlements (Sukumbashi Basti), ex-bonded labour settlements (Kamaiya Basti). The status of community facilities like water supply and sanitation, housing, electricity and telephone, Transportation, Public health, School etc. is not so good in both of the cities. Different Stakeholders are working for the Pro-poor land management in both of the countries.
4. Results and Discussions

4.1. Introduction
This chapter aims to discuss the results of case study. It explains the strategic plan for Pro-poor Land Management. The current As-IS situation is assessed based upon the Slum Identification and Mapping, Relevant Tenure Framework, Application of Geoinformation Technology, Land Information System, City-wide Slum upgrading and Spatial Planning. It further explains, environmental analysis, assessing the external as well as internal scanning through SWOT analysis to develop conceptual framework for Pro-poor Land Management. Finally, it suggests the implementation arrangement at four levels.

4.2. Strategic Plan for Pro-poor Land Management
Strategic planning is an analytical tool that serves to take decisions. The Strategic Planning Model indicates the steps to be undertaken in order to develop a strategic plan that will support Pro-poor land management. The following figure illustrates the phases carried out in this research.

![Strategic Planning Model](image)

Figure 12: Strategic Planning Model (Adapted from (Molen and Georgiadou 2002) )

4.2.1.1. Assessment of Current Situation
This assessment consists in an internal analysis carried out by collecting and assessing during case study. Field observation and interview with stakeholders are the methods used to assess current situation. The assessment is organised into the followings phases of Pro-poor management tools.
Slum Identification and Mapping

For slum/informal settlers’ identification, the approach used at Allahabad city is found more participatory approach. The local authority and political parties are more aware about the issues of slums. The mutual agreement with occupants and legal owners is found much more matured in Allahabad city. For slum identification, they have used some innovative tools like Ration Card, Electricity Bill, Telephone Bills, Birth certificates, Community records etc as settler’s identity. In most cases, they have occupied river beds, Cantonment (Army) land and government land. In some of places, they have occupied private land. Private land occupancy is found more negotiable as the land owners have provided that land to settler’s ancestor as an endowment. Slum dwellers are more supportive from community leaders and politicians too. Every settlements they have specific name and one chief. They have recorded slum dwellers name and description on their community records. In some of the settlements, they also have prepared their own map.

In Kathmandu Valley, the settlers are found new, most of the settlements existed after the rise of democracy in 1990. The economic development began and many people came to Kathmandu for searching opportunity. The construction employment was booming. There was huge demanding for construction materials and labours. People explored the use of river bed sand (after washing with water) as it was treated as free gift from river. The local authority was also not much aware about the sand business. It was very easy way and most profitable business to generate income for low income family selling the sand to local people. The house rent was very expensive so they started to occupy river bed and public space for living making temporary hut. Another reason is they are able to capture the land and erect the hut as political parties put cheap and popular political agenda favouring the activities of settlers.

Being, new settlements, slum/informal settlers’ identification is always one of the problematic issues. But, it is found that the settlers have alleged their own administrative unit for their settlement. They have divided that settlement into different social/spatial units. Most of the places, they have occupied either governmental land or public land. There is always clash between local authority and settlers. Political parties are using them as vote bank. So upgrading of informal settlers and Pro-poor land management is one of the main agenda for government of Nepal. As informal settlers do not have any legal proof for their occupancy, the voter card, community records etc. could be found innovative approaches for identification of informal settlers. Some of the settlements, it is found that the settlers have prepared the maps of their occupancy. Community organisations and NGOs are found working in the favour of informal settlers.

Relevant Tenure Framework

Land tenure can be defined as an arrangement of land holding, i.e. how land is held and used by individuals or institutions for economic opportunities i.e. the right or manner of holding a landed property (Tuladhar 2004). A main characteristic of land tenure is that it reflects a social relationship between man and land in both formal and informal environment.

In formal Land Administration of India, statutory tenure is the basic land tenure system where two forms of the rights to the land are found. The first one is the right of disposition over the land. The second one is right to use the land. The owner has the right to decide whether to sell, lease, bequeath, lend and give away a piece of land. It is like the free hold system. The occupant has the right to use the
land. A tenant has no right of disposition over his land but can only use it. It is like the lease hold. The formal tenure system is very much influenced by colonial administration (British Common Law) and does not address the informal land tenure of slum dwellers.

In Nepal, mainly three types of Land Tenure exist as Raikar, Guthi and informal. The Raikar is state ownership and allow the land owners to use, inherit, sell and paying tax. Raikar land can further be classified into private lands, public lands and government lands. Trust institutions hold the ownership rights on Guthi lands, but the rights of use can be alienated to individuals under the conditions imposed by trust institutions. The Informal Land Tenure System is existed as the number of informal setters is going to be increased by day to day. In Kathmandu valley only, there are 64 settlements, 2844 households and 13243 lands-less people (sukumbashi) (Kantipur 2008). It is very urgent for government to recognise the non formal land tenure and bring into the land tenure framework.

**Application of Geoinformation Technology**

In both of the countries, the application of Geoinformation Technology is found better. Both field survey and space technology is in practice for spatial data acquisition. Chain Survey using tape is the simplest and cheapest method for surveying in small areas. Plane tabling methods with alidade is most reliable and widely accepted method for cadastral surveying in both of the countries. But, in dense areas, it is quite difficult and less accurate. Now, Total Station and GPS are also been used for digital mapping. Being not the part of formal system, the informal settlement areas are not mapped by government agency. But Slum community has prepared their maps for their purposes. The integration of ICT with Geoinformation Technology has made easy for Pro-poor land management. Also, the informal settlement could be easily traced out using GI technology.

**Land Information System**

The computerization of land records has been initiated by NIC-Allahabad, in Allahabad. In the process of computerization, the attribute information about the use, value and ownership of land parcel has stored in a digital database. Still, the cadastral maps are in analogue format and have not connected to the national geodetic reference system. But various studies have proven that the utility of seamless geo-spatial data specially property related data and technologies are useful tools for providing tenure security, improving tax administration, land development and land use and monitoring encroachments. The awareness for the building LIS has created but the LIS is the subject of state government and local
government. The slum community also has prepared the slum settlement maps. But these maps are used for the community purpose but do not recognise by the local authority.

In Nepal, the digital cadastral data are the base for development of land information system. In Kathmandu Valley, the cadastral maps are geo-referenced with national geodetic framework. Nepalese Government has initiated the computerization of land records since 1993. In 2000, the council of Ministers decided to establish a new department called the Department of Land Information and Archiving (DoLIA). The district wise development of land information system has begun. In resurveying, the informal settlement areas are mapped as a block parcel. Within that block some community members has prepared a separate maps showing the occupancy of slum dwellers but these maps are informal.

![Figure 14 A cadastral map showing the huts of informal settlers in one block parcel](image)

**Citywide Slum Upgrading and Spatial Planning**

In India, the “Integrated Housing and Slum Development Programmes (IHSDP)” have been introduced by the Government for improvement of slums in the not covered under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in the country. This is one of the initiatives for citywide slum upgrading and spatial planning. Like wise, there is slum networking project which aims to upgrade cities in India. It has an innovative approach. Instead of ignoring and denying the reality of slums, it uses slums as urban nets to upgrade the whole city in an integrated way. The project identifies where slums are, spatial spread, and where they are in relation to each other and city planner’s use this to strengthen the infrastructure networks of the whole city. The project has shown that it is possible to undertake large-scale urban renewal programs sensitivity, if partnerships are created between government agencies (including local government), NGOs and local professionals. Slum dwellers themselves also showed they were willing to mobilize resources despite their poverty.

Likewise, in Nepal high level Land Less Problem Solving Commission (Sukumbashi Samashya Samadhan Ayog) has been constituted to solve the issues of landlessness and informal settlement. In Kathmandu valley, most of the land encroached is belongs to the river land so government is recently planning to lease 61048.8 m2 lands and make house for the land less people.
4.2.1.2. Environmental Analysis

Environmental analysis is the process of finding a strategic fit between external opportunities and internal strengths while working around external threats and internal weaknesses (Hunger and Wheelen 1996). Environmental analysis is achieved through the SWOT analysis. SWOT is an acronym for Strengths, Weaknesses, Opportunities and Threats enables to identify the Strengths, Weaknesses, Opportunities and Threats and gain a clear view of its current situation. SWOT analysis establishes basically two pairs of components. The Threats and Opportunities are the results of conditions imposed by the environment that surrounds the organisation and are determined by external scanning. The Strengths and Weaknesses are internal elements that exist within the organisation and are determined through internal scanning. SWOT analysis tool is used for environmental analysis to determine the deficiencies and challenges for Pro-poor Land Management. The SWOT analysis will consists of the following basic steps.

- External Scanning
- Internal Scanning

4.2.1.2.1. External Scanning

The external environment covers major driving forces such as political, legal, economic, technological, socio-cultural and demographic forces. The opportunities comes from the advance in technology, changes in government policy, changes in customer’s expectations, Globalisation etc. The threats come from international declaration, global warming, public campaign/awareness etc.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Slum dwellers are more supportive from local political leaders and community leaders</td>
<td>1. Most of the land they have occupied is governmental land</td>
</tr>
<tr>
<td>2. Advocacy/Awareness for need of Pro-poor land management has began</td>
<td>2. The settlements are in environmentally hazardous zone</td>
</tr>
<tr>
<td>3. Well established/matured national level organisations are existed to campaign for Pro-poor land agenda</td>
<td>3. Lack of basic civic amenities like safe drinking water, durability of housing, etc.</td>
</tr>
<tr>
<td>4. Both of the countries has already signed on/agreed on international declaration on the issues of Pro-poor land agenda</td>
<td>4. New settlements are creating day by day and hard to differentiate between real slum settlers and new one</td>
</tr>
<tr>
<td></td>
<td>5. Political parties are publishing cheap political agenda</td>
</tr>
</tbody>
</table>

4.2.1.2.2. Internal Scanning

The internal scanning is a process that aims at establishing the strengths and weakness. The various internal factors, such as human resources, organisation setup, responsibilities distribution, financial issues, operational issues, cultural issues have been analysed to identify strength as well as weakness of current situation. The strength and weakness has been explained in the table below.
Table 5 Internal Scanning Table

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Local Authority and political parties are more aware about the issues of slums</td>
<td>1. Conflict between private land owners and slum dwellers in some areas</td>
</tr>
<tr>
<td>2. Community participation approach for land management is recognised by the local government</td>
<td>2. Limited use of GI and digital technology at local level for service delivery</td>
</tr>
<tr>
<td>3. Some innovative tenure framework is already conceptualised and recognised by the government</td>
<td>3. No standardization in local level for land information system development</td>
</tr>
<tr>
<td>4. City wide slum upgrading is recognised by the government</td>
<td>4. Approaches dominated by the government organisations</td>
</tr>
<tr>
<td>5. High level commissions are formed and worked for the slum and landless agenda</td>
<td>5. Force eviction is practice in some areas and arises the social instability and stress</td>
</tr>
<tr>
<td>6. Development of Nation-wide LIS concept has been began</td>
<td>6. Citywide New Forms of Spatial Unit has not been recognised yet and the maps prepared by slum settlers is not approved by government</td>
</tr>
<tr>
<td>7. Various studies has been carried out to solve Pro-poor land agenda</td>
<td>7. Pro-poor land law is not formulated</td>
</tr>
<tr>
<td>8. New form of administrative division is in practice at community level</td>
<td>8. Slum dwellers are invisible as far the city authorities.</td>
</tr>
</tbody>
</table>

After external as well as internal scanning, the deficiencies and challenges of existing system is determined and conceptual framework Pro-poor land management has been developed.

4.2.1.3. Conceptual Framework (Appropriate Approach)

From the case study of two cities from two different countries, Nepal as well as India, the conceptual framework for Pro-poor land management has been developed. The theoretical background for developing this conceptual framework is literature review and field study. The framework has six components. The process for Pro-poor management start from slum identification and mapping, development of relevant tenure framework, application of GI technology, Build Local LIS, City Wide Slum Upgrading and Spatial Planning and Slum Participation for Pro-poor Land Management (Figure 15).
Slum Identification and Mapping
The initial step for Pro-poor Land management is slum identification and mapping. The community participatory approach is appropriate for inventory of genuine squatters and people who live in informal settlement. There might be groups and sub-groups who tend to exclude or hide some of the poorest households due to complex micro politics. All community processes may not be positive, therefore, mediation and negotiations while identification and mapping are important to ensure sustainability and justice in Pro-poor land management. A stakeholder forum can be created at local level which can audit the legal status of occupied land suitability for human settlements. If the land is not suitable for human settlements, an appropriate mechanism for the resettlement plan should be fixed. Their might be settlements found on private land. A healthy negotiation between private owners and squatters is equally important to resolve their conflicts with win-win situation.

Development of Relevant Tenure Framework
Rights such as freehold and registered leasehold, and the conventional cadastral and land registration systems, are not adequate for the security of tenure to the vast majority of the low income groups. Several reports of global campaign and research results indicate that there is a need of relevant tenure framework for the management of informal settlements. Residential licenses in Tanzania, individual starter title of group based in Namibia, certificate of occupancy in Uganda, land tenure certificates in Benin, possessory title recognition in Indonesia are a few examples of some innovative approach for the recognition of informal land tenure (Molen and Lemmen 2004). The innovative approach is different from place to place and country to country. Form the case study of Nepal and India, it could be suggested that group or cooperative land ownership reduce the registration costs and preserves the land rights for low income groups including informal settlements. Also, the providing ownership certificate in the joint name of the male head and female head provide tenure security to the female. The conditional tenure certificate such that if family shifts elsewhere from that house, it will be taken back by the municipality, reduces the unwanted land grabbing and holding. The use of Temporary Occupation License (TOL) with some sort of classification also provides security of tenure and accessibility to land by the poor for their livelihood. There is a need to recognise informal land tenure and develop a slum upgrading and resettlement programme under specified flexible tenure system for Pro-poor land management.
Application of GI Technology

It is found from case study that the identification and mapping of informal settlement areas is time consuming and delayed for the informal settlement regularization process. The conventional technology for spatial data acquisition and management is tedious one for large areas. Still, chain survey and plane tabling methods with alidade are the simplest and cheapest method for spatial data acquisition for small areas. Though Plane tabling is most reliable and widely accepted method but, in dense areas, it is quite difficult and less accurate. It is skill dependent and time consuming method for large areas surveys and digital output. GPS and Total Stations are most efficient way to capture data with high accuracy and digital output though the initial cost might be much more in this approach. Space technology application such as photogrammetry and remote sensing are the latest technology for spatial data acquisition for large areas. The field expenses could be reduced as most of the measurement could be done in office itself. With the advent of high resolution satellite system in stereo, high accuracy digital output could be obtained and are capable of producing the necessary standard for Pro-poor land management. Space technology is more cost effective and rapid approach for new as well as large areas surveying. But, for small areas, a hybrid approach of both field survey and space technology is found more suitable. The application of GIS/RS with ICT tools is found decisive tools for the Pro-poor land management in urban and semi urban areas. The integration of high resolution satellite imaginary with existing cadastral maps makes easy for the identification of settlements and their mapping.

The development of new land tools, such as the Land Administration Domain Model, will allow for the registration of customary forms of tenure and overlapping land rights and claims.

Build Local LIS

The existing land information system is centralised, expensive, inflexible and inaccessible to the poor and having overlapping land rights. There is a need to develop flexible infrastructure and standard which can be extendable and adaptable to local circumstances and support both cadastral and non-cadastral approaches. The land information system should be transparent, affordable, accountable and accessible to the poor. There is a need to develop low cost-tools and methods to enable poor and marginalised groups of the society to access and use the information related to land. The system should be very simple with very low running cost. Building LIS at community level, it is possible to maintain functional linkage between local-central information, better public awareness, and concurrent data. The holistic approach is important for effective upgrading of informal settlements, and which can be achieved through effective spatial data/information sharing.

City-wide Slum Upgrading and Spatial Planning

City-wide Slum Upgrading and Spatial Planning provides the urban poor an opportunity to contribute decision making on issues related to the improvement of slum conditions in which they live. It is one of the way of incorporating city slums/informal settlements into the formal systems in an inexpensive and sustainable manner.

City-wide Slum Upgrading and Spatial Planning

City-wide Slum Upgrading and Spatial Planning refer to the centralised management of spatial information that is needed to achieve sustainable development throughout a city. As such it includes
the policies, institutional arrangements, data, technologies, standards, delivery mechanisms and financial and human resources that are relevant to the Pro-poor Land Management of a city. Building Spatial Data Infrastructure (SDI) at local level/community level facilitates City-wide Slum Upgrading and Spatial Planning.

**Slum Participation for Pro-poor Land Management**

As explained above, it includes the involvement of slum from slum identification & mapping to slum upgrading and spatial planning. Also, in each of the step, engage slum dwellers from problem identification to solution in order to make urban poor to be beneficiated. It is hard to define the community engagement. Engagement can range from ‘consultation, which may simply mean the provision of information to a community, to ‘empowerment’ and ‘development’, which may involve the community creating a Pro-poor Land Management vision of its own and actively participating in working towards its realization.

### 4.3. Implementation Arrangement

For implementation arrangement of Pro-poor land management, four administrative hierarchy, National level, City level, Municipal level and Community / Settlement level has been explored. There is a need of good horizontal and vertical co-ordination across these levels.

#### 4.3.1. National Level

The high level commission should be formed under the National Planning Commission or Prime Minister Office. For India, state government should take initiation for the formation of such high level commission and in Nepal; it should be initiated by Central Government. The government representative from Ministry of Land Reform and Management, Ministry of Finance, Ministry of Local Development, Ministry of Law, Ministry of Physical Planning, National Planning Commission etc. should be involved on that high level commission. The representative from private sector, NGO’s, CBO’s, political parties should also be included on that commission. There is a need to lobby the government and parliamentarians to legislate laws to secure Pro-poor land tools. The followings are the main activities which need to be carried out at national level.

- Formulation of appropriate Pro-poor land policy and review of existing land related legislation to meet the need of poor, woman, low income family, indigenous people and minorities
- Arrangement of innovative tenure options for poor and land dependent low income people
- Decentralisation of land administration and decision making activities to local authorities and community/settlement level
- Develop the policy and plans for the beneficiary of slum dwellers

#### 4.3.2. City Level

At city level, there is a need to promote Cities Alliance programme to enable local authorities to adopt and implement the reforms necessary to affect a citywide approach for Pro-poor Land management and slum upgrading. The following are the main activities need to be carried out at city level.

- Recognise and understand the diversity of stakeholders residing and working in informal settlements at city level
Understand the livelihood strategies and priorities of informal settlement dwellers
Analysis the option for city-wise approach

4.3.3. Municipal Level
Municipal is the local body to address Pro-poor land management issues at local level. The followings are the main activities which need to be carried out at municipal level.

- Sensitize the issues of slum at the development agenda
- Develop local land record management system
- Develop Pro-poor Spatial Data Infrastructure
- Adopt participatory approach for Pro-poor land management
- Adopt city-wide planning with a range of stakeholders, including communities, NGOs and private sector
- Build capacity for decentralised land management function
- Protect public and governmental land from encroachment through appropriate land auditing
- Land records and administration shared through partnerships between local authority and community

4.3.4. Community and Settlement Level
The communities or settlements should be made more responsible and active for decision making, prioritising of interventions, community planning, community contracting and mobilization of local resources. The community or settlement need to be treated as separate administrative unit of government body at local level. The followings are the main activities which need to be carried out at community/settlement level.

- Organise communities through NGOs and CBOs to lobby for Pro-poor land management
- Sensitize members on their roles and responsibilities for Pro-poor land management
- NGOs and CBOs develop capacity to run local land record systems
- Make communities more engaged in decision making activities to build confidence and maximise their contribution
- Focus skill development programme, education, health for community members
- Mobilize the local resources including saving schemes i.e. innovative financing

4.4. Summary and Concluding Remarks
The above discussion and results suggested that Pro-poor land management techniques are practices in both of the countries. For slum/informal settler’s identification and mapping, Allahabad city of India has already recognised some innovative tools like Ration Card, Electricity Bill, Telephone Bill, Birth Certificate, Community Records etc. Slum dwellers are more supportive from community leaders and politicians. The formal tenure system of Allahabad city is very much influenced by colonial administration. The application of GI technology is practice but limited. The computerization of land records has been initiated but not much focus on the spatial data. IHSDP has been introduced by the government for city-wide slum upgrading and spatial planning.

In Kathmandu Valley, most of the settlements are new and supported by local politicians. Mainly three types of tenure exists as Raikar, Guthi and informal. Nepalese government has also started to develop
District-wise Land Information System. In re-cadastral surveying, the informal settler’s area is mapped as one block parcel and community has prepared a separate map according to their occupancy. They have own administrative unit for management and service delivery. High Level Land Less Problem Solving Commission has been constituted many times to recognise landless people and informal settlers.

After the SWOT analysis, a conceptual framework for Pro-poor land management is formulated. A step-wise approach as slum identification and mapping, development of relevant tenure framework, application of GI technology, Build LIS, City-wide slum upgrading and spatial planning and Slum participation for Pro-poor land management is proposed and discussed. Four administrative hierarchies as National level, City level, Municipal level and Community/Settlement level has been explored and discussed for Pro-poor land management implementation in developing nation.
5. Conclusions and Recommendations

5.1. Introduction

In this chapter, conclusions are drawn as to outcomes of this research regarding Pro-poor land management taking the case study of Nepal and India. The conclusions are presented in section 5.2. Then recommendations for further research are presented in section 5.3.

5.2. Conclusions

The motivation behind this research basically relates to the fact that the issues of Pro-poor land management are not recognised by the local authorities. They generally consider slums or informal settlers as illegal. UN-HABITAT (2004) launched a Pro-poor land management concept, with a flexible approach that depends upon the local circumstances. As a case study, two countries one has federal and the other has a central governance system is taken into account. The Kathmandu valley of Nepal and Allahabad City of India are taken as a study area to analysis the existing Pro-poor Land Management System and develop conceptual framework and implementation arrangement for Pro-poor land management system. The followings are the conclusion drawn from this study.

1. To carry out this research a structured set of concepts/definitions regarding the Pro-poor land management has been discussed. The key concepts discussed are Land Management vs. Pro-poor Land Management, Informal Settlement vs. Slums, Land Tool vs. Pro-poor Land Tool, Poor and Poverty, STDM and Land Information System.

2. There are various organisations lobbying from global to local scale for Pro-poor land management. At Global level institutions like World Bank, GLTN, FIG, UN-HABITAT etc. are working. At National level, Government Organisations, Civil Society, Private Organisations, Political Parties, Academia and Land Experts are lobbying. Likewise, in local level, the institutions like NGOs, CBOs, Traditional or Customary Authority, Local Authority, Informal Settlement Representatives etc. are lobbying.

3. With regards to the Nepalese context, the valley of Kathmandu includes five major metropolitan cities and municipalities as Kathmandu, Lalitpur, Bhaktapur, Kirtipur, and Thimi. The population of slum and informal settlements is rapidly increasing in Kathmandu Valley. In 1985, there were 17 settlements and 2134
population but now there are approximate 68 settlements and 13243 populations. Basically, the informal settlements in Nepal can be categorised into four types; Slums, Informal Settlements, Landless settlements, and ex-Bonded labour (Kamaiya Basti). There is lack of community facilities in slum areas.

4. With regards to the Allahabad City, there are large number of slums clustering in river bed, cantonment area and other environmentally sensitive areas. There are 283 slums with a total population of approx. 363550 populations covering almost 30% of the total population of the city. The slum of Allahabad can be categorised into three types; Authorised Slums, Unauthorised Slums and Urban Villages. There is lack of basic civic amenities in these settlements too.

5. For the development of conceptual framework for Pro-poor land management, the current situation is analysed though SWOT analysis and based on the SWOT analysis, six step-wise approach has been explored as slum identification and mapping, development of relevant framework, application of GI technology, build local LIS, city-wide slum upgrading and spatial planning and slum participation for Pro-poor land management.

6. For implementation arrangement of Pro-poor land management, four administrative hierarchies as national level, city level, municipal level and community level/settlement level has been explored. The followings are the main activities to be carried out at different levels.

**National Level**
- Formulation of appropriate Pro-poor land policy and review of existing land related legislation to meet the need of poor, woman, low income family, indigenous people and minorities
- Arrangement of innovative tenure options for poor and land dependent low income people
- Decentralisation of land administration and decision making activities to local authorities and community/settlement level
- Develop the policy and plans for the beneficiary of slum dwellers

**City Level**
- Recognise and understand the diversity of stakeholders residing and working in informal settlements at city level
- Understand the livelihood strategies and priorities of informal settlement dwellers
- Analysis the option for city-wise approach

**Municipal Level**
- Sensitize the issues of slum at the development agenda
- Develop local land record management system
- Develop Pro-poor Spatial Data Infrastructure (SDI)
- Adopt participatory approach for Pro-poor land management
o Adopt city-wide planning with a range of stakeholders, including communities, NGOs and private sector
o Build capacity for decentralised land management function
o Protect public and governmental land from encroachment through appropriate land auditing
o Land records and administration shared through partnerships between local authority and community

Community Level
o Organise communities through NGOs and CBOs to lobby for Pro-poor land management
o Sensitize members on their roles and responsibilities for Pro-poor land management
o NGOs and CBOs develop capacity to run local land record systems
o Make communities more engaged in decision making activities to build confidence and maximise their contribution
o Focus skill development programme, education, health for community members
o Mobilize the local resources including saving schemes i.e. innovative financing

5.3. Recommendation
Several issues are identified below as recommendations for further research and implementation of Pro-poor land management.

1. Both of the cities of this case study are urban cities. UN-HABITAT has more highlighted the cases of urban poor. From the case study, it is found that the access of land and resources is also limited in the remote areas. Consequently, there is deforestation, social imbalance, environmental problems arises with these issues. The problem is rural poor is different than the urban poor. For example, the case of ex-bonded labour of Nepal causes many social as well as economic imbalances in the society. Due to the time limitation, the study of Pro-poor Land Management as a holistic approach (taking urban and rural cases) is not possible in this research. So, there is a need to study about the situation of rural poor and Pro-poor land management in rural areas.

2. For slum upgrading, innovative financing is one of the tools for sustainability of Pro-poor Land Management System. This research indicates that innovative financing could be a mean for sustainability of Pro-poor Land Management System. Hence, further research related to innovative financing is needed within the Pro-poor land management in Nepal and India.

3. The Pro-poor land policy and legislation is found very important to develop Pro-poor land management tools. There is many gaps and overlaps in land related laws. Through research is needed to identify the Pro-poor land policy and legislation.
4. This research indicates four administrative hierarchy for the development of Pro-poor Land Management System and but institutional arrangement part within these hierarchy is beyond the scope of this research. Further research is necessary to model the optimal institutional arrangement for Pro-poor land management.

5. This research is focusing the case study of cities of South Asia. To test the developed model and make fit with developing countries, there is still need to study of another geographical location like Africa or Latin America. Therefore, further research is necessary to be carried out in another geographical location.

6. It has been suggested that Pro-poor Spatial Data Infrastructure at Municipal level need to be developed. Due to the time limitation, this research does not explain about the overview of Pro-poor Spatial Data Infrastructure. But, there is a need a depth research under the concept of Pro-poor Spatial Data Infrastructure both technically as well as institutionally.
REFERENCES


GLTN (2006). Development of innovative pro-poor land tools. N. C. G. Rapporteur: Michael Fergus, UN-HABITAT, the Norwegian Ministry of Foreign Affairs, Norad, the Norwegian Mapping Authority and Sida.


### Annexure 1: Name of Slum Settlements in Allahabad City

<table>
<thead>
<tr>
<th>No.</th>
<th>Slum Settlement Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Penghat (Harijan Basti)</td>
</tr>
<tr>
<td>2</td>
<td>Lal Vihara</td>
</tr>
<tr>
<td>3</td>
<td>Neam Sarai</td>
</tr>
<tr>
<td>4</td>
<td>Begum Sarai</td>
</tr>
<tr>
<td>5</td>
<td>Mundera Village</td>
</tr>
<tr>
<td>6</td>
<td>Pughat Jushwaha Basti</td>
</tr>
<tr>
<td>7</td>
<td>Malak Raj</td>
</tr>
<tr>
<td>8</td>
<td>Behruna (Holi Pali Gali)</td>
</tr>
<tr>
<td>9</td>
<td>Govindpur Chilla</td>
</tr>
<tr>
<td>10</td>
<td>Big Bagiya</td>
</tr>
<tr>
<td>11</td>
<td>Suraj Hata</td>
</tr>
<tr>
<td>12</td>
<td>Saraj Nagar</td>
</tr>
<tr>
<td>13</td>
<td>Harwara</td>
</tr>
<tr>
<td>14</td>
<td>Meera Fatti</td>
</tr>
<tr>
<td>15</td>
<td>Gayamadin Pur</td>
</tr>
<tr>
<td>16</td>
<td>Bhagalpur Harwara</td>
</tr>
<tr>
<td>17</td>
<td>Jouram Pur (Harijan Basti)</td>
</tr>
<tr>
<td>18</td>
<td>Jouram Pur Patpar</td>
</tr>
<tr>
<td>19</td>
<td>Bharat Nagar Rajapur</td>
</tr>
<tr>
<td>20</td>
<td>Chak Neeranul (Kasani Masari)</td>
</tr>
<tr>
<td>21</td>
<td>Meheela Gram BSP</td>
</tr>
<tr>
<td>22</td>
<td>Panyabad Malin Basti (Village)</td>
</tr>
<tr>
<td>23</td>
<td>Krishan Nagar</td>
</tr>
<tr>
<td>24</td>
<td>Manayraganj Sweeper Basti</td>
</tr>
<tr>
<td>25</td>
<td>Jahanirabad Malin Basti</td>
</tr>
<tr>
<td>26</td>
<td>Ambekar Nagar</td>
</tr>
<tr>
<td>27</td>
<td>Khawani</td>
</tr>
<tr>
<td>28</td>
<td>Fathehpur Basupa</td>
</tr>
<tr>
<td>29</td>
<td>Lakhipur Road Malin Basti</td>
</tr>
<tr>
<td>30</td>
<td>Karelabagh Malin Basti</td>
</tr>
<tr>
<td>31</td>
<td>Madanpur</td>
</tr>
<tr>
<td>32</td>
<td>Kanpur Road (Near High Court)</td>
</tr>
<tr>
<td>33</td>
<td>Ramman Ka Purwa</td>
</tr>
<tr>
<td>34</td>
<td>Khanyia</td>
</tr>
<tr>
<td>35</td>
<td>Bhola Ka Purwa</td>
</tr>
<tr>
<td>36</td>
<td>Sulam Sarai Bazar</td>
</tr>
<tr>
<td>37</td>
<td>Ganga Canal</td>
</tr>
<tr>
<td>38</td>
<td>Newada</td>
</tr>
<tr>
<td>39</td>
<td>Mauzariya</td>
</tr>
<tr>
<td>40</td>
<td>Sadiyapur</td>
</tr>
<tr>
<td>41</td>
<td>Karelabag Balu Market</td>
</tr>
<tr>
<td>42</td>
<td>Katghar Melantrama Malin Basti</td>
</tr>
<tr>
<td>43</td>
<td>Chota Baghada</td>
</tr>
<tr>
<td>44</td>
<td>Tarheniya (Alanganj)</td>
</tr>
<tr>
<td>45</td>
<td>Purana Phaphanmavu Village</td>
</tr>
<tr>
<td>46</td>
<td>Matadan Ka Purwa</td>
</tr>
<tr>
<td>47</td>
<td>Shuvkuti</td>
</tr>
<tr>
<td>48</td>
<td>Kumhara Gadwa (Allahapur)</td>
</tr>
<tr>
<td>49</td>
<td>Danyabad Malin Basti (Second)</td>
</tr>
<tr>
<td>50</td>
<td>Sultanpur Bhawa Malin Basti</td>
</tr>
<tr>
<td>51</td>
<td>Uwawa Gadi Malin Basti</td>
</tr>
<tr>
<td>52</td>
<td>Pali Village Malin Basti</td>
</tr>
<tr>
<td>53</td>
<td>Trivani Nagar</td>
</tr>
<tr>
<td>54</td>
<td>Bhim Nagar</td>
</tr>
<tr>
<td>55</td>
<td>Udoyg Nagar</td>
</tr>
<tr>
<td>56</td>
<td>Kanpur 1826</td>
</tr>
<tr>
<td>57</td>
<td>Mehar Ka Purva</td>
</tr>
<tr>
<td>58</td>
<td>Dube Ka Talh</td>
</tr>
<tr>
<td>59</td>
<td>Nani Village 1852</td>
</tr>
<tr>
<td>60</td>
<td>Salori Malin Basti</td>
</tr>
<tr>
<td>61</td>
<td>Om Gayatri Nagar</td>
</tr>
<tr>
<td>62</td>
<td>Madhawapur</td>
</tr>
<tr>
<td>63</td>
<td>Shobhiya Bagh</td>
</tr>
<tr>
<td>64</td>
<td>Tularam Bagh</td>
</tr>
<tr>
<td>65</td>
<td>Jaymasti Pur</td>
</tr>
<tr>
<td>66</td>
<td>Unarpur Ncewa</td>
</tr>
<tr>
<td>67</td>
<td>Aasurbur</td>
</tr>
<tr>
<td>68</td>
<td>Bhakatana Jayatipur</td>
</tr>
<tr>
<td>69</td>
<td>Karelbagh Malin Basti</td>
</tr>
<tr>
<td>70</td>
<td>Daskhun Lokpur</td>
</tr>
<tr>
<td>71</td>
<td>Purafolh Mohammad</td>
</tr>
<tr>
<td>72</td>
<td>Uttari Lokpur</td>
</tr>
<tr>
<td>73</td>
<td>Pakardwani</td>
</tr>
<tr>
<td>74</td>
<td>Sugar Mill Pasiyana</td>
</tr>
<tr>
<td>75</td>
<td>Pakparyulla</td>
</tr>
<tr>
<td>76</td>
<td>Kali Badi</td>
</tr>
<tr>
<td>77</td>
<td>Pramakar Nagar</td>
</tr>
<tr>
<td>78</td>
<td>Shankar Ghat</td>
</tr>
<tr>
<td>79</td>
<td>Azad Nagar</td>
</tr>
<tr>
<td>80</td>
<td>Jothwal Pariyana</td>
</tr>
<tr>
<td>81</td>
<td>Naya Gaon Rasulabad</td>
</tr>
<tr>
<td>82</td>
<td>Mehandori</td>
</tr>
<tr>
<td>83</td>
<td>Pank Raghmash</td>
</tr>
<tr>
<td>84</td>
<td>Molyatsam Gauj</td>
</tr>
<tr>
<td>85</td>
<td>Darbhanga Kaysal</td>
</tr>
<tr>
<td>86</td>
<td>Muthigunj Pamaroti</td>
</tr>
<tr>
<td>87</td>
<td>Madiya Tola</td>
</tr>
<tr>
<td>88</td>
<td>Sundar Gauj</td>
</tr>
<tr>
<td>89</td>
<td>Maharvir Nagali Tharkar Basti</td>
</tr>
<tr>
<td>90</td>
<td>Maharvran Speekar Basti</td>
</tr>
<tr>
<td>91</td>
<td>North Malaka</td>
</tr>
<tr>
<td>92</td>
<td>Malviya Nagar</td>
</tr>
<tr>
<td>93</td>
<td>Meenapur</td>
</tr>
<tr>
<td>94</td>
<td>Saniya Bakhsh Khurd</td>
</tr>
</tbody>
</table>
Annexure 2: Maps

A. Location Map of Kathmandu Valley (Study Area)
B. Manohara Basti Slum Area in Kathmandu Valley (Snap shot of image from Google Earth)
C. Location map of Study Area (Allahabad City)
D. Slum Clustering in Allahabad City
E: Administrative Division of Allahabad City
Annexure 3: Some Photographs of Research Areas

Researcher Mr. Dev Raj Paudyal is discussing with Slum Dwellers in Allahabad, India

Force Eviction by Local Authority Charging Illegal Construction in Allahabad City

Poor Housing Condition in Allahabad City at Slum Settlements
Pro-poor Land Management in Developing Countries: A case study in Nepal and India

Poor Infrastructure Condition at Slum Settlements in Allahabad City

Slum Settlements near Railway line and Ganga River Bed

Access Road Near Slum Area of Allahabad City
Pro-poor Land Management in Developing Countries: A case study in Nepal and India

Slum Settlements in the bank of Manohara River of Bhaktapur Municipality

Condition of Road Managed by Slum Community in Kathmandu Valley

Excavating Sand from River Bed for Local Earning in Manohara River of Kathmandu Valley
Pro-poor Land Management in Developing Countries: A case study in Nepal and India

Condition of Sanitation in Slum Settlements at Kathmandu Valley

Public Participation for Managing the Community Environment

Informal Organisation Working in the Favour of Slum Dwellers and Slum Dwellers Representatives