

**School of Management
Faculty of Business and Law**

**Land Readjustment in Challenging Contexts:
A Case Study of Informal Settlements in Kabul, Afghanistan**

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**This thesis is presented for the Degree of
Doctor of Philosophy
Of
Curtin University**

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Declaration

To the best of my knowledge and belief, this thesis contains no material previously published by any other person, except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Human Ethics (for projects involving human participants/issues)

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) — updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number: RDHU-256-15.

Signature:

Date: **02/01/2019**



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Dedication

To all those informal settlers around the world who live in challenging contexts.

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List of Abbreviations

CC	Create a Change
CLR	Customised Land Readjustment
CR	Customisation Requirements
CSC	Customisation Success Criteria
GIS	Geographic Information System
IDP	Internally Displaced Persons
JICA	Japan International Cooperation Agency
KIC	Kabul in Context
KURP	Kabul Urban Reconstruction Project
LR	Land Readjustment
LRP	Land Readjustment Politics
MUDH	Ministry of Urban Development and Housing
SDG	Sustainable Development Goals (2016–2030)
UN	United Nations
UN-Habitat	United Nations Human Settlements Programme
USAID	United States Agency for International Development

Abstract

One of the key issues of many underdeveloped countries is improving living conditions in urban areas. This thesis specifically examines challenging urban contexts, which are restricted by weak legal, financial, political, socio-cultural, land and urban administration and where security concerns also exist. It analyses how land readjustment can be used to improve people's quality of life and enable the provision of basic social and public amenities such as roads, sewers, parks and green space, schools, health care, power and water supply. As a self-financed land management tool, land readjustment allows for urban areas that have grown organically in an unplanned manner to be reorganised and readjusted, with the new plan enabling better services to the community.

The thesis is based on the case study of informal urban settlements in Kabul, Afghanistan. This allows for a substantive model to be developed which explains LR in challenging contexts bringing together insights from a global literature review and interviews with practitioners and policy makers. A systematic theoretical model for LR is also put forward. The findings are both useful for the local policy and helpful in informing other similar settlements. They can provide in-depth insights and policy recommendations to achieve Goal 11 of the United Nations' Sustainable Development Goals (SDG 11) — making cities inclusive, safe, resilient, and sustainable — in challenging contexts.

Furthermore, a Customised Land Readjustment (CLR) framework is developed based on 14 criteria. This involves the integrated implementation of specific management, financial, legal, and technical strategies that ensure the provision of required infrastructure and land tenure security, which, in turn, support the improvement of quality of life while maintaining the spatial integrity of the community. Such a new theoretical approach allows for land readjustment and its challenges to be better understood.

The CLR framework can provide a practical way to incorporate the principal requirements of SDG 11 in challenging contexts. It can assist urban policy makers in targeting tangible objectives such as the provision of basic infrastructure in line with this goal in Kabul and other similar settings. This can lead to managing LR with the minimum number of legal, social, economic, and cultural issues, and thus significantly improve the current living conditions in these contexts.

Keywords: Customised land readjustment, challenging contexts, sustainability and the sustainable development goals, Kabul, Afghanistan.

Chapter 1: Introduction

1.1 Introduction

This chapter introduces the main components of this thesis. It starts with identifying the aims and questions of this thesis, followed by discussing its significance. Then, the research methodology is explained, including methods of data collection and analysis. The research contributions are discussed next, followed by introducing six major criteria for interpreting the findings. After discussing these criteria, the importance of the findings is highlighted. Finally, the structure of this thesis is identified while explaining the key concepts of each chapter.

1.2 Research Aims and Questions

With a case study in Kabul, this research aims to develop and evaluate a theoretical framework for land readjustment (LR) through a qualitative analytical method to guide and support urban decision makers with the LR process in challenging contexts in line with Goal 11 of the United Nations' Sustainable Development Goals (SDG 11) (2016–2030). Land readjustment has proved to be an effective and efficient urban development and management tool in many developed and developing countries, including Japan (Yanase 2001a; Sorensen 2007; Doebele 1982), Germany (Davy 2007), Australia (Archer 1980), Thailand (Archer 1992), and India (Mathur 2012). However, it is still not clear if LR is a suitable and effective tool when it comes to: contexts with little or no legal support and framework for LR; complex urban land ownership, such as various types of informal land documents which are not recognised by the government; vast majority of urban dwellers being informal landowners; weak national and local public institutions in terms of technical capacity, urban policy and management; financial issues such as extreme budget constraints and unstable land markets; socio-cultural factors, such as resistance to change and lack of trust on public agencies; and security conditions and terrorism.

Therefore, as there is not enough understanding of LR in terms of such contexts, this thesis intends to develop a substantive theory to make this process clearer to the relevant stakeholders, such as the local and national urban policy makers and the residents living in these contexts. Therefore, this thesis aims to show how LR can be

enabled through a theoretical framework thus helping to achieve the SDG 11 in line with global trends and agendas.

To achieve the above aim, this thesis seeks answers to the following questions:

Main Question: How can **land readjustment (LR)** be used in **challenging contexts**?

Sub-Question: How can the output of this thesis contribute towards achieving the **Sustainable Development Goal 11 (SDG 11)** — make cities and human settlements inclusive, safe, resilient and sustainable — in challenging contexts?

In spite of extensive research, LR success significantly varies across the globe (Yilmaz, Çağdaş and Demir 2015). This could be due to applying LR theory from successful contexts without considering the differences in contextual conditions (Cain, Weber and Festo 2018). Therefore, it seems that there is a mismatch between theory and practice. This could be because a theory–practice gap exists (Van de Ven and Johnson 2006; Schon 1987) or it could be that existing theory has not effectively informed practice (Ghoshal 1987). In situations of challenging contexts, it seems the second is true as the existing LR theories do not provide adequate insights to guide the LR process in these contexts. As the available LR theories are very fragmented, it is extremely difficult to apply them in such unique situations. Thus, this research gains significance as it examines how the challenging contexts can affect LR and how it can be applied in such contexts. This provides a significant theoretical and practical contribution which can improve LR success in these areas.

1.3 Research Methodology

This thesis employs a case study (Yin 2014; Denzin and Lincoln 2000; Creswell 2007; Stake 1995) as the research strategy and the coding technique as detailed by Glaser (1965) and Saldaña (2013) for the method of data collection and analysis. Using a single case study, the aim is to investigate and examine the research question in its real-world context through pure qualitative data and develop a substantive theory (Glaser 1965; George 2005; Smith and Geoffrey 1968) for LR in challenging contexts. This can generate a better understanding of the situation (Mills, Durepos, and Wiebe 2009) and provide the ground for a formal theory (Strauss 1987).

1.3.1 Data Collection

The primary data were collected from individuals and organisations through 26 semi-structured interviews as well as observation. The secondary data were gathered from archival records and documents such as government reports. Furthermore, three principles of data collection for a case study were followed during this process as triangulation: to develop converging lines of inquiry and strengthen credibility, creating a case study database, and maintaining a chain of evidence (Yin 2014).

1.3.1.1 Interviews: Twenty-six semi-structured interviews were carried out as the primary data beside the secondary data to identify the core concepts of LR in a challenging context. The main purpose of the interviews was to incorporate the views and opinions of all LR stakeholders (including the informal residents, relevant officials at Kabul Municipality as the policy makers and LR developer, private sector and experts for technical assistance). The interviewees were all part of the current context who could assist in developing a realistic theoretical framework based on their practical experience. A list of the interview questions is available in Appendix 3.

1.3.1.2 Observation: As part of the primary data, this research intended to discover and incorporate the real characteristics of the case area as well as attitudes and feelings of residents into the proposed theory. These behavioural features assisted the investigator in deeper understanding of the context and, consequently, a better and realistic policy and theoretical insights for LR.

1.3.1.3 Archival records as secondary data: Archived records including survey data are significant parts of the primary data collection process. The most important secondary source of data used in this research is a comprehensive urban survey (as shown in Table 4.2 in the methodology chapter) conducted jointly by the urban development authorities of the Afghan government, Australian Government, and UN-Habitat. Having this information enriched the primary data and significantly reduced the time and efforts of the interviews with the case area residents.

1.3.1.4 Documents review: A wide range of documents were studied and analysed in this case study to complete the primary data collected through interviews. The Land Readjustment and Urban Development Procedure, which is prepared by the land

readjustment division of the City Planning Department of Kabul Municipality, was also used in this study. This government document provides details on how LR should be undertaken in the Kabul context. Other more general literature sources on LR were also reviewed. Fortunately, most of these data were available through Curtin University library. Regular review of the existing literature was undertaken throughout this study to completion, to maintain the significance of the topic and to include the latest progress and rival theories.

1.3.2 Data Analysis

The data gathered through multiple sources of evidence in this study were analysed in accordance with the coding techniques as detailed by Saldaña (2013). As the steps of analysis, all interview and observation data were transcribed, coded, and categorised through NVivo software as shown in Figure 1.1, followed by testing and combining other complementary evidence to address the research questions.

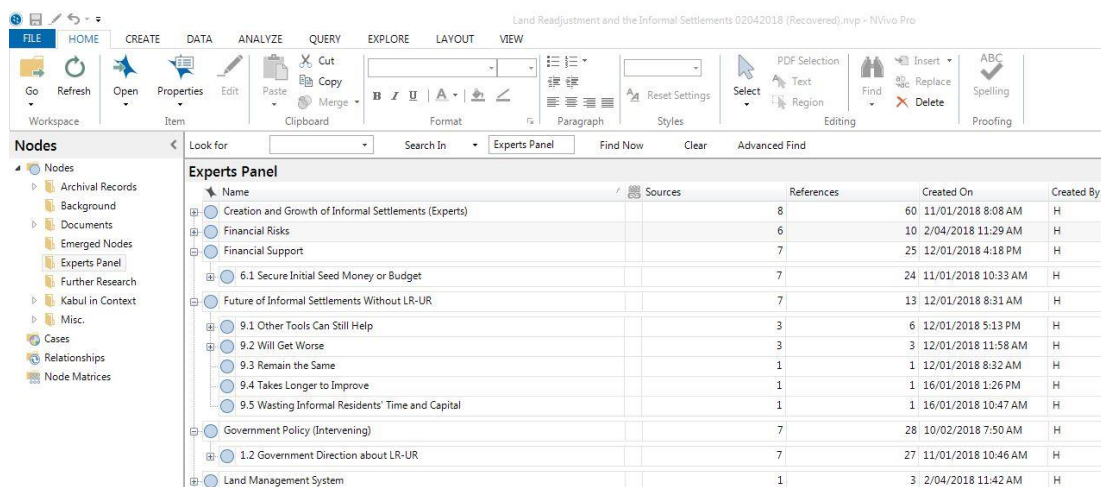


Figure 1.1: A Snapshot of How all Data is Coded and Categorised in NVivo Software. (See Chapter 4 for further details of the data analysis process.)

1.4 Contribution of this Research

The contribution of this research can be divided into two major categories, namely theoretical contribution and policy contribution. First, the output of this study can add to theoretical insights of LR in terms of challenging contexts by developing a theoretical model for LR in such contexts. This innovative approach enables LR to be

theorised in a simple and easy-to-understand process for urban policy makers and community residents and, therefore, can foster and promote LR understanding and application in challenging contexts. This is a unique aspect of LR which has not been well researched to date. Therefore, this study will have global applicability based on a systematic theoretical framework.

Second, the findings of this research can also assist urban policy makers in targeting tangible objectives such as the provision of basic infrastructure and achieving the United Nations' Sustainable Development Goals (SDGs) in challenging contexts. This can lead to managing LR with the minimum number of legal, social, economic, and cultural issues and significantly improve the current living condition in these contexts.

1.5 Criteria for Interpreting the Research Findings

The aim of this research is to discover how LR can be used in challenging contexts. During data analysis, 25 categories emerged that are introduced in Chapter 4. These categories were then grouped in six components to form the inductive substantive theory of customised land readjustment (CLR) in challenging contexts. The findings are interpreted in a qualitative manner based on these six major criteria as suggested by Creswell (2007): Main Focus, antecedent conditions, strategies and actions, contextual conditions, intervening conditions, and outcome conditions. These criteria illustrate what exactly needs to be done to solve the problem (Main Focus), what factors can hinder or risk achieving the Main Focus (antecedent conditions), what needs to be done to achieve the Main Focus (strategies and actions), what factors can influence these strategies and actions (context and intervening conditions), and what would be the results of the Main Focus (outcome conditions).

1.6 Structure of This Thesis

This study follows the linear analytic structure as detailed by Creswell (2007) and begins with stating the issue/problem, literature review, research method, findings, discussion and conclusion. Chapter 1 states the research objectives of the study including research problems/questions, significance of this study, a brief research methodology for data collection and analysis, contributions, criteria for the findings' interpretation, and structure of the thesis.

Chapter 2 covers the case study context and background. In particular, it presents a summary of land administration system in Afghanistan and explains the history of informal settlements in this context. This history includes a clear definition of informal settlement, discussion about creation and growth of informal settlements, introduction of major typologies of informal settlements based on land tenure and planning, importance of ethnic politics, and discussion about the significant role of informal residents in community development. In addition to the history, the government policy and measures towards informal settlements are discussed, along with land readjustment challenges and requirements in this context.

In Chapter 3, the LR literature is reviewed and major terminologies are defined in further detail, including LR and the challenging context. This research divides LR literature in three main periods, namely the early era of LR research (1970s), contextualisation period (1980s and 1990s), and LR research in the 21st century to the present date. After a detailed overview and discussion of LR research in all these periods, the gaps in LR research and literature are discussed.

Chapter 4 explains the research methodology including research design, data collection and analysis methods. This research adopts the case study as the research method and employs four methods of data collection such as semi-structured interviews, archival records, documents, and investigator's observation. Then, the principles of data collection are explained, followed by elaborating the data analysis process including sampling and analytic procedure. Ethics of the research are also discussed at the end of this chapter.

Chapter 5 presents the findings of the research. The findings are explained in six major paradigms as suggested by Creswell (2007). These include the research Main Focus, antecedent conditions, strategies and actions, contextual conditions, intervening conditions, and outcome conditions.

Chapter 6 discusses how the findings contribute to LR theory, policy, and practice. The most important theoretical contribution is the development of CLR model in challenging contexts, which is not currently available in the LR literature. Furthermore, discussion follows about how the findings can contribute to the

development of appropriate policies for LR towards achieving Goal 11 of the United Nations' Sustainable Development Goals (SDG 11).

Finally, Chapter 7 concludes by clarifying the extent to which this thesis has achieved its aims and objectives along with providing recommendations to other researchers about further works in this area of research.

1.7 Chapter Summary

This chapter presented a brief overview of the thesis by introducing the research aims and questions, significance, methodology, contribution, discussion, and importance of the research findings. The main purpose of this thesis is to discover how LR can be used in challenging contexts with complicated legal, political, administrative, and socio-cultural conditions. This is particularly significant as LR seems to be an effective and most comprehensive tool to improve the living conditions in challenging contexts. Therefore, as the LR literature does not provide a sufficient theoretical framework in such contexts, this research aims to explore and develop a substantive theory for LR in these contexts through a case study in Kabul, Afghanistan. Furthermore, this research aims to examine how this theory can assist LR to achieve SDG 11 — making cities inclusive, safe, resilient, and sustainable (SDGs 2018).

Chapter 2: Kabul in Context

2.1 Introduction

This chapter provides background information about Kabul — the research context for this study. First, the land administration system in Afghanistan is discussed, followed by describing the history of informal settlements in the country's capital. This helps explain and define the notion of informal settlements, together with the main causes for their formation and growth. Then, four types of informal settlements in Kabul based on legal land tenure are introduced. These are: squatter settlements; informal settlements with customary land documents on private lands; settlements developed on 'grabbed lands'¹ or lands distributed by land grabbers; and informal settlements with murky legal status (Gebremedhin 2005). Furthermore, the latest types of informal settlements based on a planning criterion are also presented, which distinguished between planned; quasi-planned; unplanned; densely built-up, unplanned; and prohibited, unplanned informal settlements (Haziq 2017). The importance of ethnic politics and participation of local communities in the development of informal settlements is also covered.

Kabul's urban development framework as well as policies and measures for informal settlements are discussed next. They cover intergovernmental conflicts for formalisation, denial, tolerance, upgrading, demolition, and displacement of informal residents. The last sections of the chapter present the history of land readjustment in Kabul, followed by an explanation of the current security and terrorism condition in the city.

¹ Land Grabbers are defined as individuals and entities were in charge of important government roles or were connected to powerful political figures and warlords and misused their power by occupying large amounts of public and private lands for their personal benefit.

2.2 Why Kabul?

Kabul is a significant case as it has all the characteristics of a challenging context, including complexities in urban land ownership, a vast number of informal settlements, as well as being challenged by terrorism and insecurity. It is among those world capital cities with extreme deficiencies in land management, urban local governance, urban development budget, and security, especially during the last few decades (UN-Habitat 2015b). Because of this, LR has been emphasised recently to improve the situation. This study can provide the decision makers with the required tools and on-time systematic advice to smooth the LR implementation in a city where the majority of the landowners are informal (Kabul-Municipality 2018). Furthermore, the investigator's related work experience in this area and solid understanding of LR situation and problems, should provide significant assistance in primary data collection and analysis. Using the case study of Kabul, the research will provide a real-world evaluation and better understanding of LR through a systematic theoretical contribution, which could be used in other cities with similar challenges. The global need for such understanding is a major priority in academic literature and global aid arenas such as the Sustainable Development Goals.

2.3 Land Administration System in Afghanistan

The Afghan land administration system is complex. This complexity is due to a fragmented legal framework for land and property rights developed over several regimes and periods which contains formal (constitutional and civil), customary and religious law (Katawazi 2013; Khan 2010; USAID 2013). In the formal law, land and property rights are stipulated and described in several legal documents, including the municipal law, constitution of Afghanistan, national land policy, land management law, subnational governance policy and the internally displaced persons (IDPs) policy (UN-HABITAT 2015b). However, the country's land administration and judicial institutions have always suffered from low-capacity and not enough authoritative power to control and manage the land rights and natural resources (USAID 2013, 3). As a result, property rights are managed through an intricate combination of informal, religious, and formal laws (Khan 2010, 2). This has created the ground for land grabbers and powerful commanders to illegally occupy public and private lands.

There are thousands of provisions stated in terms of land and property rights in Afghanistan's Civil Code of 1977, which is one of the country's main legislative texts (Katawazi 2013, 3). Since then, despite numerous attempts to cover these rights appropriately through the constitution of Afghanistan in 2004, the national land policy in 2007, and the land management law in 2008, around 90% of Afghans still rely on customary local mechanisms for their property rights and land conflicts (USAID 2013, 1). Khan (2010, 2) also states that the majority of Afghan landholders do not possess formal documents, except some informal customary deeds with poor explanation of their land and properties. This is while customary land ownership is still not formally recognised by the law in Afghanistan (Gaston and Dang 2015, 372). In this regard, Heegde, Hilhorst and Porchet (2011, 4) highlights that:

“Thousands of people now buy land through an informal system, such as buying plots in private housing developments, which are often set up by armed commanders on government lands. They receive receipts for their purchases but not formal title deeds. Many do not consider this a problem indicating how poorly the legal system is viewed. At the same time, Afghans place great store by legal title deeds. Only those with substantial means can now acquire these, given the levels of rent-seeking required. The documentation system is in any event problematic.”

Heegde, Hilhorst and Porchet (2011) further adds that less than 10% of the rural properties and 30% of urban settlements have legal land documents, with most of these registered deeds being outdated and incorrect.

Article 5(5) of the Land Management Law (LMA) makes certain provisions for the customary landowners to convert their informal ownership to a formal one. It specifies three criteria for customary land ownership to receive formal recognition: an original valid deed from the seller, the customary land document to be prepared before 1975, and a declaration form registered with AMLAK — the former name of the Afghanistan Land Authority (now known as ARAZI) prior to 1978. Nevertheless, in the case of Kabul, as the process of informal ownership was accelerated, especially during the last decade, many bona fide land owners did not meet the date requirements mentioned in the above criteria. This led to an amendment to this law as a fundamental Catch-22: to establish formal legal ownership based on customary documents, one of the previous

landowners must already have a formal legal ownership as established in an original formal land document. If still landowners cannot meet any of these requirements, then their ownership can be verified formally through *adverse possession*. This term indicates that the landowner needs to provide enough evidence that they have had possession over the land for at least 35 years. The evidence must include construction, testimony of neighbours, and other conditions for that time (Gaston and Dang 2015, 372).

Under such complicated laws and procedures, the literature calls for a comprehensive legal support to clear the legal issues of land ownership in informal settlements:

“Due to the varied nature of the legal situations that exist in informal settlements, it is difficult to contemplate a one-fit-for-all type of standard solution to the different legal situations. There may be a need for a legislative measure that treats the cases of legitimate de facto owners, land grabbers, those who bought land from land grabbers in good or bad faith, the squatters and others in a different but coherently justified manner” (Gebremedhin 2005, 3).

The importance of a legal reform in land rights and the administration system is further highlighted in the discussion about the vast expansion of informal settlements in Kabul.

2.4 History of Informal Settlements in Kabul

Informal settlements are not a new phenomenon in Kabul; however, in the last two decades the living condition of these settlements has worsened. In this section, a definition of informal settlements is provided, followed by an explanation of the main causes for their creation and growth. Different types for Kabul’s informal settlements are explained in terms of land tenure and urban planning, as well as the importance of ethnic politics and participation of local communities in their community development.

2.4.1 Informal Settlements

UN-HABITAT (2015a, 1) defines informal settlements as:

“... residential areas where 1) inhabitants have no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing, 2) the neighbourhoods usually lack, or are cut off from, basic services and city infrastructure and 3) the housing may not comply with current planning and building regulations, and is often situated in geographically and environmentally hazardous areas.”

Kabul Municipality, which is the local urban authority, defines informal settlements as those settlements that are not constructed in accordance with the detailed plans of the Third Kabul Master Plan (Haziq 2017). So far, Kabul has had four master plans developed in 1964, 1970, 1978, and 2012. Haziq (2017, 10) states that according to Kabul Municipality, 76% of the residential areas were considered informal settlements in 2008 and 74% of Kabul’s city population lived in these settlements in that year. This shows that the majority of Kabul settlements are considered informal in the eyes of Kabul Municipality as they do not meet the detailed plan requirement.

In the latest Master Plan of Kabul, approved in 2012, the method of detailed planning was changed to zoning where Kabul Municipality only needs to determine general requirements for urban construction development in the various zones. This method reduces the burden on Kabul Municipality as it does not require it to make detailed plans for every settlement. However, the problem of informal settlements has remained unsolved.

All definitions of informal settlements contain one of these three main criteria, namely: land tenure insecurity; lack of basic services and infrastructure (REACH 2016, 5); and, not meeting the current planning and building regulations. Therefore, these are the main features of informal settlements that are adopted and discussed in this thesis.

2.4.2 Creation and Growth of Informal Settlements in Kabul

The World Bank (2005, 1) highlights that “since 1990 the majority of Kabul’s new migrants are informally housed. While this has prevented an even larger crisis of homelessness, informal development has led to legal and regulatory violations, including violations of property rights and rights of way, and has left insufficient space for infrastructure and social facilities”. Several reasons are put forward in the literature for the creation and growth of informal settlements in Kabul, including displacement

and migration, government deficiency in providing enough land and houses, and misuse by land grabbers (Gebremedhin 2005, 4; Haziq 2017). These are discussed in turn below.

2.4.2.1 Displacement and migration

One of the main reasons for the creation and growth of informal settlements has been the displacement and migration of many rural dwellers to Kabul, who were in search of a more secure place to survive. Gebremedhin (2005, 4) believes that the informal settlement in Kabul has a much longer history than the recent four decades as in most cities around the world; however, there was a considerable wave of migration from rural to urban areas since the start of the recent war in the late 1970s. According to Gebremedhin (2005), the collapse of the social order as a result of civil conflicts and unrest triggered the development of informal settlements to the current level. In addition, repatriation of Afghan refugees from neighbouring countries such as Iran and Pakistan intensified the problem as many of them chose to live in Kabul because of safety and security concerns in the other cities as well as for better access to the job market.

2.4.2.2 Inability of the government to provide enough land and houses

Another reason for the creation and expansion of the informal settlements seems to be the inability of the municipal government to provide adequate serviced land and housing (Gebremedhin 2005, 4). This was due to the limited technical and human capacity in planning, as well as shortcomings in policy, management, and financial abilities.

2.4.2.3 Land grabbers

Land grabbers also had a key role in the development of informal settlements in many areas in Kabul. These individuals and entities were in charge of important government roles or were connected to powerful political figures and warlords and misused their power by occupying large amounts of public and private lands for their personal benefit. The security system was not able to cope with this illegal activity and hence it has become an accepted area of land use that must now be seen as part of the city.

Due to these reasons, informal settlement has grown rapidly in Kabul during the last two decades and has created major problems, including insufficient basic infrastructure and substandard quality of life with little or no formal land tenure security. Before discussing the types of informal settlements in terms of physical characteristics, it is important to understand how they differ in terms of land title and tenure.

2.4.3 Types of Informal Settlements Based on Tenure

Gebremedhin (2005) identified four types of informal settlements in Kabul based on tenure arrangements, namely: squatter settlements; settlements constructed on de facto private land; informal houses built on grabbed lands or accommodated by land grabbers; and settlements with murky legal status. He states that:

“... classifying settlements with respect to tenure arrangements is imperative for appropriately addressing the specific land tenure problems that are prevalent in different types of informal settlements. Based on the mode of land acquisition, four broad types of informal settlement can be identified in the unplanned areas of Kabul: squatter settlements on public lands; settlements where most houses were built on privately owned land; settlements where most houses were built on grabbed land or land bought from land grabbers; and settlements where there is a murky legal situation” (Gebremedhin 2005, 4).

These four types of informal settlements are explained from a legal land tenure perspective.

2.4.3.1 Squatter settlements

The first type of informal settlement according to Gebremedhin (2005), is squatter settlements. These settlements are those residences that are developed on public land illegally without government permission. After a relatively long period of civil wars in Afghanistan, a large number of internally displaced persons (IDPs) and Afghan returnees squatted on government lands, including the hillsides, where they constructed their houses. Gebremedhin (2005) further discusses that this group, which squatted on public properties, constitutes the majority of informal settlements in Kabul. Although article 1992 of the Afghan civil code allows Afghan citizens to acquire and own barren land with no owner (which is called Zamin-e-Bayer in Dari language), this must be with the permission of the government, otherwise the

occupation of such lands is considered illegal. In terms of selling such occupied public lands, although it is in line with the property rights as detailed in the Constitution of Afghanistan, the Afghan government has an extremely complicated procedure which discourages many informal landowners to go through this process.

2.4.3.2 *Informal settlements with customary land documents on private lands*

One of the most popular types of informal settlements in Kabul are those that are built on private lands. Although most of these settlers do not have a legal land title deed, they still claim ownership against their properties. Gebremedhin (2005) highlights that most of these landowners have customary land title deeds. The Afghan government does not recognise these customary deeds as legal documents as stipulated by article 481 of the Afghan civil code and article 7 of the 2003 Presidential Decree, issue number 83, which define private land whose ownership can be legally proven. Thus, informal settlers are unable to meet this requirement to receive formal deeds.

2.4.3.3 *Settlements developed on grabbed lands or land distributed by land grabbers*

Land grabbing is one of the most prevalent issues in the informal settlements of Kabul. In this regard, Gebremedhin (2005) states that:

“Grabbing of private and public land is a phenomenon that is intricately linked to the history of the country’s conflict. This phenomenon has become one of the worst and complex social, legal, and political problems surrounding property right. According to many accounts, the problem of appropriation of large areas of land by powerful armed men is a phenomenon that emerged after the fall of the communist government in 1992. The land grabbers have appropriated land not only to build houses for themselves but also to distribute the land they grabbed for consideration. Unlike ordinary squatters land grabbers normally appropriate a large size of land that is way larger than they need to build a personal house to accommodate their own family” (Gebremedhin 2005, 5).

Despite several laws against land grabbing (Article 24 of Chapter 3, Decree on Distribution and Sale of Land; Article 13 of Decree on Housing Affairs), this issue

continues to remain one of the most challenging in informal settlements. Gebremedhin (2005, 8) believes that this problem may have a political root:

“As it stands now, the question of land grabbing appears to be primarily a political problem. Disarming of armed militias is required before addressing this problem in any meaningful way. This in turn will presuppose consolidation of state power and political will on the part of the government to protect public land from land grabbers. Any legislative measure that aims at addressing the question of land appropriation should be accompanied or preceded by the aforementioned requirements.”

2.4.3.4 *Informal settlements with murky legal situation*

The last type of informal settlements from a tenure aspect is those with unclear legal status. Gebremedhin (2005) divides these settlements into two groups: the ones that only need to complete the legal formalities to receive their legal land title deeds, and those whose land use was changed more than 50 years ago and have become part of an urban area. Regarding the first group, Gebremedhin (2005) explains that these landowners are reluctant to proceed with formalising their documents as this seems very complex, time-consuming and a corrupted procedure. Therefore, they consider their current customary land documents sufficient for the moment.

The second group involves traditional landowners. These landowners transformed their rural or agricultural lands into urban due to reasons, such as drought, conflict, social change, urbanisation, or market opportunities, without following the legal requirements. As most of these lands have subsequently been subdivided and sold to different landowners again, without following the official formalisation procedure, the new landowners are still considered informal.

Therefore, tenure insecurity in informal settlements is one of the major challenges. Gebremedhin (2005, 25) argues that tenure security can be improved in Kabul through two main approaches: granting immediate property titles to de facto informal landowners, or a step-by-step regularisation. He points out that the first approach is suitable for planned informal settlements where minimal or no physical improvement is required. However, given the wide range of informal settlement types in Kabul, the inadequate legal support coupled with the lack of financial and human capacity, can make this process almost impossible.

The second approach is based on a step-by-step procedure through an integrated method. Gebremedhin (2005, 25) highlights that this method can facilitate provision of land tenure security as well as improve the low-quality public infrastructure in the community. Once adequate legal support is obtained to prevent forced eviction, the problems of urban planning and environmental issues can be researched and tackled.

In this approach, spatial arrangements are being carried out to enable basic required infrastructure and facilities for the community, such as widening roads and footpaths. This can also lead to minimising land disputes, especially in Kabul where the current laws are unable to manage the large scale of potential incidents. Finally, it allows enough time for the informal communities and the municipal administration to determine the level of service delivery, the capacity of the informal settlements for improvement, and the quality of development activities step by step.

Gebremedhin (2005,18) further argues that the issues of land tenure and provision of basic services in informal settlements in Kabul should be integrated so that these settlements can be included in and considered as formal planning areas in the city. This can be a realistic approach as besides formalising the area, the quality of basic infrastructure can also improve. Therefore, fundamental improvement of the informal settlements in Kabul is only possible when both land tenure and basic infrastructure issues are addressed simultaneously.

In addition to the land tenure aspect, the informal settlements in Kabul have been also divided based on urban planning criteria, which is discussed below.

2.4.4 Types of Informal Settlements Based on Planning

Haziq (2017) classifies Kabul's informal settlements in five major types in terms of planning and development. These are *planned*; *quasi-planned*; *unplanned*; *densely built, unplanned*; and *prohibited, unplanned* informal settlements.

2.4.4.1 *Planned informal settlements*

The *planned informal settlements* are those that are developed according to a proper detailed plan, some of which are even approved by government agencies other than Kabul Municipality, such as the Ministry of Urban Development and Housing (MUDH) or Kabul Governor Office. However, they are still considered informal settlements as they have not followed the planning procedure of Kabul Municipality

in the construction stage. According to Haziq (2017, 44), this conflict is due to the lack of a clearly defined institutional urban planning framework which identifies the roles of each urban development agency in terms of mass housing projects. If this legal and policy issue is resolved, these settlements require almost no or minimal physical improvement to be considered as formal settlements in terms of safety and planning.

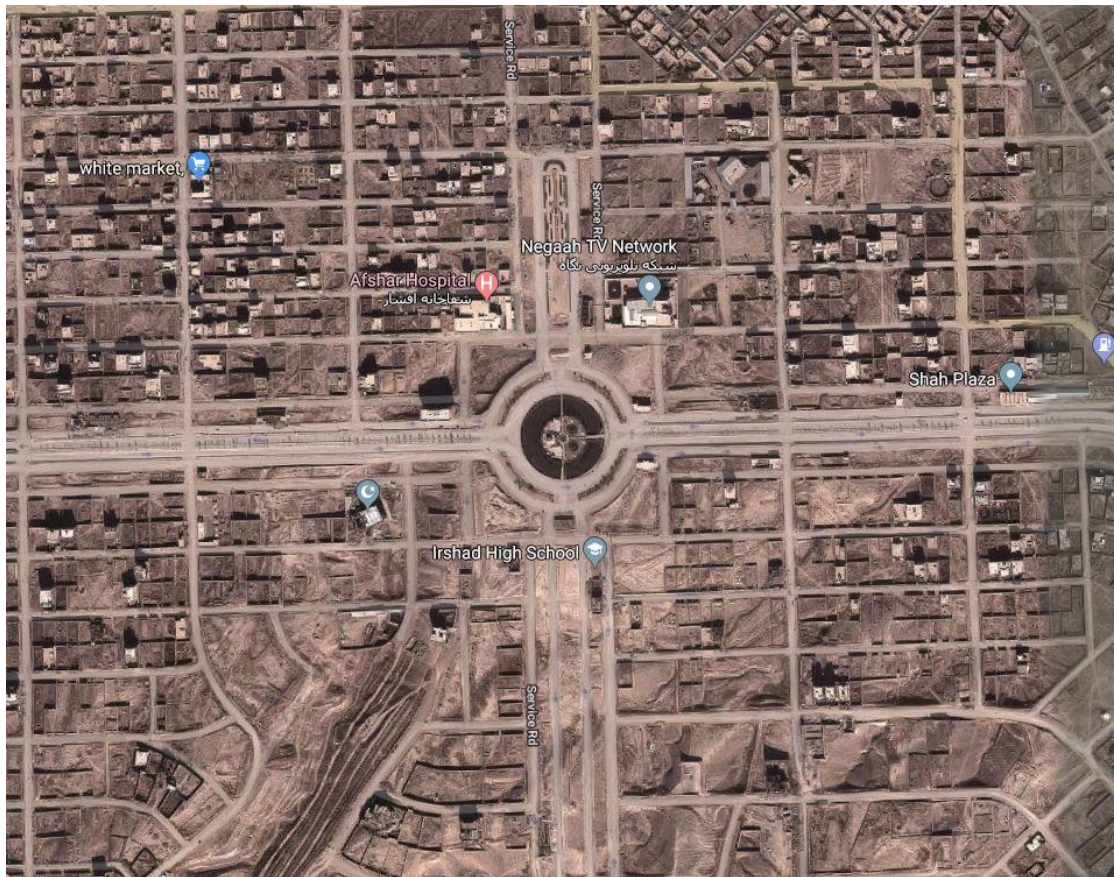


Figure 2.1: Planned Informal Settlements. Source: Adapted from Google Earth.

Figure 2.1 illustrates an example of these settlements. The community is well-planned and most of the houses have access to wide-enough roads, schools and health care facilities. Only very minimal physical change is required for such a settlement to be considered a formal area.

2.4.4.2 *Quasi-planned informal settlements*

Quasi-planned informal settlements are those developed mostly in the proximity of formal settlements, such as Tapaye Haji Mohammad Dad in district 10 of Kabul city (see Figure 2.2). These semi-planned informal settlements have grown gradually around the Haji Mohammad Dad hill in district 10 of Kabul; however, the wider area

is planned and formal. Such settlements also require little physical improvement to be considered planned settlements after resolving the legal issues about the land (Haziq 2017).



Figure 2.2: Quasi-Planned Informal Settlements in Kabul. Source: Adapted from Google Earth.

2.4.4.3 Unplanned informal settlements

The third type of informal settlements in Kabul are unplanned informal settlements. These types of settlements require more improvements than the quasi-planned informal settlements as most of them do not meet the building regulations and often lack key public and social infrastructure, such as wide roads, urban water, sewer system, health centres, parks and greenery. Haziq (2017) states that this type of informal settlement was created mostly due to conversion of farmlands to residential land use and the expansion of planned informal settlements to provide refuge for internally displaced persons (IDPs).



Figure 2.3: Unplanned Informal Settlements. Source: Figure 4.3 Haziq (2017, 49), adapted from Google Earth.

Figure 2.3 demonstrates a sample of such settlements. It shows that there aren't enough wide tertiary roads in the community. This is considered a major problem as it is quite difficult to travel inside such neighbourhoods, especially in emergency situations.

2.4.4.4 Densely built, unplanned informal settlements

Densely built, unplanned informal settlements are the fourth type of informal settlements in Kabul. These settlements were developed throughout the years in proximity to urban cores with no suitable road network and other basic infrastructure. According to Haziq (2017, 50), land readjustment and urban redevelopment should be considered to improve such areas:

“In order to improve the living environment in these informal settlements, total redevelopment of the area has to be considered through implementation of land readjustment and urban redevelopment projects, this category of informal settlements is the one with most issues facing living environment and daily life of the residents, therefore, these settlements have to be highly in focus and priority for formalisation process for the (national) government and local government such as municipality as it is well established that mostly vulnerable people living in these areas, and these settlements host most of informal dwellers in terms of population and covers large part of Kabul city.”

Figure 2.4 depicts a schematic view of this type of informal settlements in Kabul.



Figure 2.4: Densely Built, Unplanned Informal Settlements. Source: Adapted from Google Earth.

Haziq (2017, 51) believes that LR and urban redevelopment are the only options to improve these settlements as it is almost impossible to bring basic and social infrastructure. He explains that these areas have several major shortcomings such as insufficient public infrastructure — no proper wide road networks, drainage and sewer system, parks and green space, hospitals, and schools. Furthermore, most of these neighbourhoods are developed very densely, which makes it almost impossible to keep the social fabric of the community while bringing the required infrastructure. Thus, these areas need some effective tools, such as urban redevelopment and LR, to improve systematically and sustainably.

2.4.4.5 Prohibited, unplanned informal settlements

The last type of informal settlement includes those informal settlements where there is a legal restriction for development due to a risk of natural disasters or environmental issues. Such settlements, which have been usually taken by squatters or by land grabbers and IDPs, may be located around mountains, close to rivers or historical

areas, or in open and recreational space (Haziq 2017). As these areas fall under natural hazard and risk prevention zones, development is not permitted due to technical and legal issues.



Figure 2.5: Prohibited, Unplanned Informal Settlements. Source: Figure 4.6 Haziq (2017, 52), adapted from Google Earth.

Figure 2.5 shows an example of such areas. There is a vast number of houses that have been constructed in a hazardous zone, which is prone to flooding. Despite technical and legal restrictions and risks, the residents have chosen to live in the area and the government is unable to remove them from the site due to different financial, political, and social reasons.

2.4.5 Ethnic Politics

Afghanistan is comprised of several ethnic groups. Pashtuns, Tajiks, Hazaras, and Uzbeks are the largest ethnic groups in the country. The ethnic conflict became brutal during the civil wars from the late 1970s. As a result, Kabul city was divided into several parts based on fighting between ethnic groups. The fight then intensified between the three main groups in Kabul and the Hazaras were pushed to the west, Pashtuns to the south and east, and Tajiks to the north. Tens of thousands of people

were killed during these brutal civil wars, which stopped after occupation of the city by Taliban militias and eventually these civil wars ended following the US-led invasion of 2001. However, due to this dark history, people from the same ethnic group still try to live with their fellow ethnic groups as they feel more secure, even in informal settlements.

Living in the same ethnic group is also perceived to provide better social and economic benefits for the informal residents. Haziq (2015, 23) states that:

“Ethnic background, family ties and marriages are the most dominant cultural factors that influence the majority of the dwellers to live in informal settlements. Ethnic background encourages rural-urban migrants to settle near people they are either related [to] or introduced by a relative. This may help them to have an active social life as well as finding [a] new line of work through their introduction and already acquired status.”

Thus, as the ethnic issue was a sensitive post-war matter and could easily burst into conflict again, the government didn't try to make it worse by stopping informal settlements and even in some cases, such as Omid-e-Sabz Township, cooperated in the formalisation process (Haziq 2017). This small town located in the south-west of Kabul was considered an informal settlement; however, it was approved as a formal development by the MUDH, despite the disagreement by Kabul Municipality as the local government authority. Haziq (2017, 60) writes:

“The approval of Omid-e-Sabz Township has been mostly a political decision rather than technical ... the process of formalisation has to be based on technical criterion rather than just a political decision in order to become a reference for future projects of similar nature.”

This demonstrates that ethnic politics play a significant role in the informal settlements and can influence, and in some cases disregard, or override, other important criteria.

2.4.6 Participation of Local Communities in Development

Local communities have had a major role in the development of their informal settlements (Gebremedhin 2005). With the assistance of the United Nations Human Settlement Program (UN-HABITAT), several community development councils

(CDCs or *Shuras* in Dari language) were formed and mobilised to support development activities in their neighbourhoods. Although these CDCs were, to some extent, successful in upgrading their communities, they have been unable to improve key services, such as drinking water, power, and sewer networks. Having said that, these CDCs have demonstrated considerable achievement in consensus building in their communities and have been able to convince and persuade their fellow informal landowners to contribute some portions of their lands for the public good, such as pavements and roads:

“There were instances where upgrading of physical infrastructure such as footpaths and roads, the unplanned nature and proximity of the houses to each other required readjustment of individual boundaries. The communities were able to persuade individual owners to give up part of their land for the common good of the community. The Shuras were instrumental in persuading individual owners of land to give up part of their holding to the extent necessary to improve footpaths or road access” (Gebremedhin 2005, 9).

Therefore, community residents have proven to play a key role in developing the informal settlements.

2.5 Urban Development Framework

Urban development in Afghanistan is guided by five frameworks which outline the key developments (UN-HABITAT 2015b). These frameworks are the Afghanistan National Development Strategy (ANDS 2008–2013), National Priority Program No. 4 for Local Governance (May 2012), National Priority Program for Urban Management and Supporting Programme (UMSP — not officially endorsed), National Action Plan for Women of Afghanistan (NAPWA — 2008–2018), and the New Deal for Engagement in Fragile States (2011). Based on the Realising Self-Reliance (RSR) statement made at the London Conference on Afghanistan in 2014, it seems that the urban agenda is becoming a significant matter to the Afghan government (UN-HABITAT 2015b). This statement indicates that the new policy of the Afghan government will be turning cities into the economic drivers for development through enhancing the living conditions and improving the quality of services in their urban areas.

This is a promising shift in viewing urbanisation as it can lead to development of further policies and actions to improve urban livelihood in the country.

2.6 Available Policies and Measures

Afghanistan lacks a national urban policy to determine the government direction in urban management and development (UN-HABITAT 2015b). As a result, informal settlements are treated differently by the relevant urban authorities, as discussed earlier in this chapter. For instance, Kabul Municipality considers Omid-e-Sabz Township as an informal settlement, while the Ministry of Urban Development and Housing (MUDH) officially recognises it as a formal township (Haziq 2017, 60–62). These conflicting policies and measures towards informal settlements can be divided into six major categories, namely: formalisation, denial, tolerance, upgrading, demolition, and displacement.

2.6.1 Formalisation

This policy measure refers to formal recognition of existing informal settlements. Often this is not a straightforward process because of intergovernmental conflict (Haziq 2017) between Kabul Municipality as the local urban authority and the MUDH as a national urban decision maker. An example of such settlements is the Omid-e-Sabz Township in southern Kabul, which was mentioned earlier. Kabul Municipality refuses to consider this small town as a formal settlement as it does not comply with the Master Plan of Kabul city and it is not developed based on its conventional “detailed plans” system; however, MUDH approved it as a formal township.

2.6.2 Denial (Inaction)

The current condition of many informal settlements in Kabul demonstrates that they have been ignored in the legalisation process by the relevant Afghan government authorities in the past 30 years. There are several reasons for denying their existence related to the policies of the Afghan government towards such settlements. Haziq (2017, 28) states that the Afghan government’s policy is to broaden the boundaries of Kabul city through distribution of formal land parcels, rather than enhancing the quality of life in the currently dense informal areas, which may encourage and invite more people into these settlements.

This policy has not been clearly stated in any formal documents. However, several recent government residential development projects such as Dashti Padola and Deh-Sabz New City in the boundary of Kabul, along with the government's inaction in legalising informal settlements, can be considered progress towards such a policy for some of these settlements (Haziq 2017).

2.6.3 Tolerance

Due to the unstable political, security, and economic conditions of the country and other reasons, such as the possibility of chaos and lack of planning and enforcement capacity, the relevant urban authorities claim that they have tolerated the creation and growth of informal settlements in Kabul. The informal landowners, however, believe the government is denying their existence and does not provide them with basic services. Therefore, it may be considered tolerance from the government side or denial from the informal community perspective.

2.6.4 Informal Settlements Upgrading Programs

There have been several important projects led jointly by the Afghan government and international donor agencies such as World Bank, UN-Habitat, Japan International Cooperation Agency (JICA), to improve and upgrade informal settlements in Kabul. The Kabul Urban Reconstruction Project (KURP 2004–2014) was such an effort by the World Bank aimed at improving major urban infrastructure in vulnerable communities in Kabul. The objective of KURP was:

"To upgrade urban infrastructure and improve the delivery of basic urban services in under-serviced communities in Kabul Municipality" (World Bank 2014).

This project initially comprised six major components, including: neighbourhood upgrading in Kabul Municipality; capacity building in a methodology for regularising land tenure; supporting Afghan urban agencies in engineering and management; overall capacity development for Kabul Municipality; developing a structure plan and a future urban project; and improving the main roads, sewer network, and traffic management in Kabul (World Bank 2014). However, in the revised version, two components, namely capacity building in methodology for regularising land tenure and

improving the main roads, sewer network, and traffic management in Kabul were removed from the project (World Bank 2014).

With a total cost of US\$33.8 million, KURP claims that it has achieved its objectives in terms of reconstruction and rehabilitation of urban services and facilities:

“Urban area was upgraded on 618 ha, representing an achievement of 62% of the original target of 1000 ha. This included improved roads, drainage, water supply and sanitation, solid waste management, and street lighting. In particular, 124.5 km of secondary and tertiary roads were constructed (the original component of construction of 160 km of main roads, drainage, and traffic management, which was supposed to be funded by donors, was cancelled). 5,121 new house or public tap connections were provided under the project; 3,264 connections, however, did not have water supply by project closure ...” (World Bank 2014, Section 7).

Furthermore, KURP has had a positive impact on informal settlements through integration of informal under-served communities into the urban fabric:

“With relation to integration of the selected neighbourhoods into the urban fabric, the ICR adds that the implementation of urban upgrading in Kabul positively impacted the opposition at the local and national level to service improvements in informal and unplanned areas. Visible results of service delivery improvements demonstrated the viability of urban upgrading as a relevant intervention in Afghanistan’s urban context for integration of under-served residential areas into the main fabric of the city” (World Bank 2014, 23).

Another well-known urban upgrading project is the Kabul Solidarity Program (KSP 2011 – ongoing). This community-driven development project is aimed at improving basic infrastructure, empowering and persuading community residents to participate and contribute to the development of their community, and enhancing the capacity of local urban authorities (UN-Habitat 2018).

As main outputs, this project succeeded in establishing neighbourhood development councils (NDCs) and clusters for enhancing community infrastructure and services. In

addition, it developed the capacity of Kabul Municipality to manage urban upgrading more efficiently and effectively in terms of budgeting and governance (UN-Habitat 2018).

Although most of the development made through such upgrading programs was not sustainable, they succeeded in mitigating the issues of informal settlements in terms of provision of some basic services, such as concreting tertiary roads and digging water wells for residents. In terms of community involvement and cooperation, the KSP succeeded in establishing a trustworthy relationship between the local authorities and communities with effective cooperation and contribution of community residents in KSP projects. This was a considerable achievement of the program as it can pave the way towards participatory and more sustainable development.

2.6.5 Demolition

Demolition has not been a popular government policy in informal settlements in Kabul; however, there have been several cases where the relevant local body (namely Kabul Municipality) applied it in some informal settlements. One of these attempts occurred in district 1 of Kabul city, where the municipality believed that many of the area's residents were using their residential houses as business units and made illegal construction development in their properties for this purpose. The director of the Construction Control Department of Kabul Municipality said at the time that they will do their best to demolish these (informally developed) houses, which were both illegal and created problems in the neighbourhood. Residential houses that are used for business and illegal multi-storey buildings are among the demolition priorities (Azadi 2016).

However, the area's residents reacted severely to demolition. For example, one of the residents, whose house was on the demolition agenda, said to a news agency at the time that the municipality staff were there for extortion purposes. He claimed that he has lost thousands of dollars of his store goods in a fire incident and nobody came to help. According to him, thousands of poor families lived in the informal area and it was unfair to stop them making a living (Azadi 2016). In addition, the other shop owners of the area warned that they would lay down in front of the bulldozers and would never allow their properties to be destroyed. As these tensions increased, Kabul Municipality suspended demolition in the area.

This shows that demolition has never been a successful policy related to informal settlements. The government is unable to undertake demolition due to the backlash from the informal communities and media exposure. Such issues with demolition are regularly found in other informal settlements around the world (for example: Teferi and Newman 2018).

2.6.6 Permanent Displacement (Land Acquisition)

When compared to demolition, displacement of informal residents has been undertaken in several cases, especially for the development of major roads in some informal settlements. This is often referred to as “land acquisition” in Afghanistan, whereby the acquired land is used for the development of public infrastructure and other public purposes (Land Acquisition Law 2016). As most informal landowners do not receive fair compensation, including equivalent substitute land, this process has been extremely challenging and slow in the informal settlements.

2.7 Land Readjustment in Kabul

Land readjustment does not have a long history in Afghanistan and particularly in Kabul. Although the term “land readjustment” is mentioned in the first urban development policy of Afghanistan in 2004, in practice it was initiated by Japanese experts in Kabul in 2010. In the past three decades, the conventional way of developing informal settlement land in the country has been through land acquisition; however, Kabul Municipality is unable to acquire the whole informal lands for urban development due to financial problems and other social consequences.

The third Master Plan of Kabul city was made for only two million people in 1978 (Haziq 2017, 15); however, currently the population of Kabul city is approximately six million people (Collier, Manwaring, and Blake 2018, 3), of whom 70% are estimated to be informal landowners in urban areas (Kabul Municipality 2018; Collier, Manwaring, and Blake 2018, 2). The limited budget of Kabul Municipality for city development and the poor social and economic conditions of the informal settlements have made urban decision makers consider LR for the first time as a main tool for urban development and management in Kabul. The World Economic and Social Survey conducted by the United Nations in 2013 defines one of the three major

challenges of sustainable development in the world beyond 2015 as “Sustainable Cities”, highlighting that “rapid urbanization, especially in developing countries, calls for major changes in the way in which urban development is *designed* and *managed*” (World Economic 2013). This need to bring about new approaches to land management, such as LR, has gained increasing importance and is supported in Kabul.

2.7.1 International Support for Land Readjustment in Kabul

Kabul Municipality started to use LR as a major self-financed technique to develop urban areas in the city through an agreement signed with the Japan International Cooperation Agency (JICA), which provides humanitarian technical support. In 2010, the Greater Kabul Development Project was formed to assist and advise the municipality and other urban development officials on various urban development projects, including road construction, sanitation, water supply management, Kabul master plan revision, urban upgrading, environmental issues, and LR in the form of various sub-projects.

One of these sub-projects was allocated to LR in two phases (2012–2015 for phase one and 2016–2019 for phase two) under the above project as the Human Resource Development for Urban Development and Urban Management (UDH) to train and enhance the knowledge and skills of Kabul Municipality officials and Dehsabzbarikab City Development Authority (DCDA) in terms of urban development issues, with a major focus on LR. Since the start of this sub-project in 2012, 22 training programs were conducted by the Japanese experts for the above authorities on LR and other related issues in India, Turkey, and Japan. In order to practise the acquired knowledge and skills, Kabul Municipality, with the cooperation of JICA, initiated the first LR pilot-project feasibility studies in the Baghe Ali Mardan area in Kabul in 2014. This area was chosen based on various technical and socio-economic surveys to ensure its suitability and applicability. Since then, these studies have been ongoing on the site.

2.7.2 Legal Support for Land Readjustment in Kabul

The only legal support for LR is a by-law document called the “Land Readjustment and Urban Redevelopment Procedure”, which was developed and approved by Kabul Municipality on 22 November 2017. This document is prepared in two chapters and 35 articles and clarifies key technical and legal procedures for land readjustment and urban redevelopment projects in Kabul.

Twenty-one out of the 35 articles are about LR. These articles shed light on technical, financial, legal, and management issues of LR in Kabul. Technical issues include the conditions for selecting the LR project area, conducting property surveys, determining the contribution rates, preparation of re-plotting plans, development of infrastructure and public facilities provision. Financial issues of LR have also been discussed in this procedure in four articles, including development costs for public infrastructure, compensation costs, administrative costs of the LR department, and sale of financial land. Two articles explore the legal issues, including identification of land ownership and project results. However, there is no provision for recognising grabbed lands after LR, unless the formal land clearance is undertaken.

Formation of LR councils, project action plan, resettlement of landowners, approval of replotting plans, determining the responsibilities and obligations of Kabul Municipality and its LR department, along with identification of rights and responsibilities of landowners and the private sector are among the management issues of LR in this procedure (LR and UR Procedure/By-law 2017 available in the Appendix 5).

Although LR has been implemented successfully without a legislation in some contexts around the world, however, the author believes that a formal legislation is a must. Considering the current slow progress of LR in the Afghan context due to several reasons including political and security instability, it seems that a formal legislation might take some time, perhaps a few more years until a LR pilot project is undertaken in the country.

2.7.3 Need for Theoretical Framework and Insight

The need for a comprehensive theoretical framework and insight for LR is obvious in Kabul context. For example, LRRD (2006, 9) states that “On a governance level, it is difficult for urban authorities to make progress in the reconstruction process because of weaknesses in the Afghan urban development and financial capacity, lack of proper urban tools to deal with Kabul’s informal settlement issues, outdated legal, administrative and technical frameworks and significant shortcomings by the main urban institutional actors, including the Kabul Municipality and the MUDH. In general, it appears that the Kabul Municipality is in denial with these problems which is causing major problems for development in Kabul”. As the problem of informal

settlements in Kabul falls under the responsibility of Kabul Municipality, the denial of the problem does not solve it. When proposing land readjustment as a solution in Kabul Urban Policy Notes in 2004, no one recommended a framework or a guide on how to implement it. Therefore, it requires a realistic, systematic, and closely examined theoretical framework to assist urban policy makers in decision making about LR. The complexity of the issues is exacerbated further by the unstable security situation in Kabul and the country.

2.8 Terrorism and Security Concerns

Terrorism is defined as “the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation” (GTI 2018). The Global Terrorism Index (GTI) is a worldwide report which evaluates the effects of terrorism for 99.7% of the globe’s population, covering 163 countries (GTI 2018). Based on all five published reports on the GTI since 2012 (including its latest one published in November 2018), Afghanistan has been rated in the top-five countries most affected by terrorism (GTI 2018).

Kabul is one of the most dangerous capital cities in the world in terms of terrorism. Only in the last 10 years, more than 45 terrorist attacks have occurred in Kabul, resulting in many casualties (BBC 2018; TOLO 2018). These attacks targeted the international security forces (Alford 2009; Kabul Suicide 2010; Harooni and Shalizi 2011), Afghan security forces (Goldstein 2014; Salahuddin 2018; Farmer and Mirza 2018), foreign embassies (Wafa 2008; Al Jazeera 2009; Harooni and Shalizi 2011; Taylor and Shalizi 2012; Rasmussen 2017), Afghan government agencies and high-rank officials (Opiel 2009; Tevernise 2009; BBC 2010; Kharsany and Mashal 2011; Taylor and Shalizi 2012; Nordland 2013; Hodge and Amiri 2013; Popalzai and Mullen 2015; Constable 2018), civil international aid workers (BBC 2008; Associate Press 2010; Ben 2010; Suicide 2014; Graham-Harrison 2014), and certain ethnic and religious groups (Baktash and Rodriguez 2011; Visser 2016; Najafizada 2017; Nelson 2018; Fedschun 2018). They were not aimed at the informal settlements, but the insecurity factor strongly impacts on urban development policy and practice in Kabul.

Despite this, the Afghan government and the international community aim to improve the livelihood of Kabul residents as much as possible through providing basic infrastructure and services and at the same time promoting a sense of cooperation among Afghan communities. This can lead communities to assist in building their neighbourhoods and move towards living better and achieving sustainable development goals.

2.9 Chapter Summary

This chapter presented key information related to the context of the thesis. It started with highlighting why Kabul was chosen for this case study, followed by introducing the land administration system of Afghanistan and explaining the recent history of informal settlements in Kabul, the urban development framework, policies and measures taken so far to manage informal settlements, and the issues of insecurity and terrorism. The land administration system in Kabul was shown to be outdated and, thus, most residents rely on customary (informal) land documents, which are not officially recognised by the municipal government. In addition, four types of informal settlements were discussed from a land tenure perspective (Gebremedhin 2005) and five types of these settlements from a planning aspect (Haziq 2017). It was pointed out that both the legal and technical aspects of informal settlements are important in developing these areas. The importance of ethnic politics and participation of informal communities in development activities were also highlighted.

After explaining how urban development is managed in Afghanistan, six main policies and measures taken by the municipal government towards informal settlements were introduced. These are: intergovernmental conflict in formalisation; denial; tolerance; upgrading; demolition; and permanent displacement of informal residents. While none of these policies and measures could assist informal settlements to improve significantly and sustainably, LR as a more comprehensive tool was introduced in this context. Insecurity and terrorism were the final issues discussed in this chapter in order to shed light on the real context which can be influenced by such external forces. The next chapter discusses the available and most up-to-date literature relevant to this thesis to identify the research gap and its importance.

Chapter 3: Literature Review

3.1 Introduction

This chapter examines how LR research has been carried out over the last five decades and how LR theories have formed worldwide. It does this by reviewing the LR literature based on historical (chronological) and theoretical perspectives (Webster and Watson 2002; Hart 2018). From a historical viewpoint, the chapter investigates when the LR concept emerged in the literature for the first time and how its theory evolved until the present day. This can significantly assist in identifying the future trend of this phenomenon (Randolph 2009; Ridley 2012). During analysis of the literature in each time period, the major theoretical development of LR is highlighted and the relationship between these theories is discussed. The chapter then concentrates on two significant concepts: the challenging contexts and the Sustainable Development Goals (SDGs) to examine whether the current LR theories provide enough insights on these two critical contemporary issues.

Divided into four sections, this chapter defines LR, followed by a discussion of three key turning points in the recent 50 years of LR research and literature: the early period of LR research, contextualisation period, and LR in the 21st century. Then, the key ideas from the literature are highlighted, followed by describing a recent global LR evaluation framework. Challenging contexts of LR are defined and discussed, followed by identifying two major gaps in the LR literature: the need for further theoretical insight on challenging contexts for LR and the relationship between LR in challenging contexts and the United Nations' Sustainable Development Goals (SDGs).

3.2 What is Land Readjustment?

Land readjustment (LR), which is also known as urban land consolidation (Lin 2010), land assembly (Seele 1974), and land pooling (Archer 1980), is an urban land management tool, which aims to combine land parcels for more effective planning as well as provide a financial system for cost recovery of public infrastructure, and share the benefits between landholders and developers (Home 2007, 460). In LR,

“landowners collectively leave land for streets and other public places, build the required infrastructure wholly or partly and adapt existing boundaries to the new plan” (Larsson 1997, 141). The new readjusted land plots are distributed based on each resident’s original land plot area and location, the land value after readjustment, and the contribution rate². Figure 3.1 illustrates how LR can improve a community.

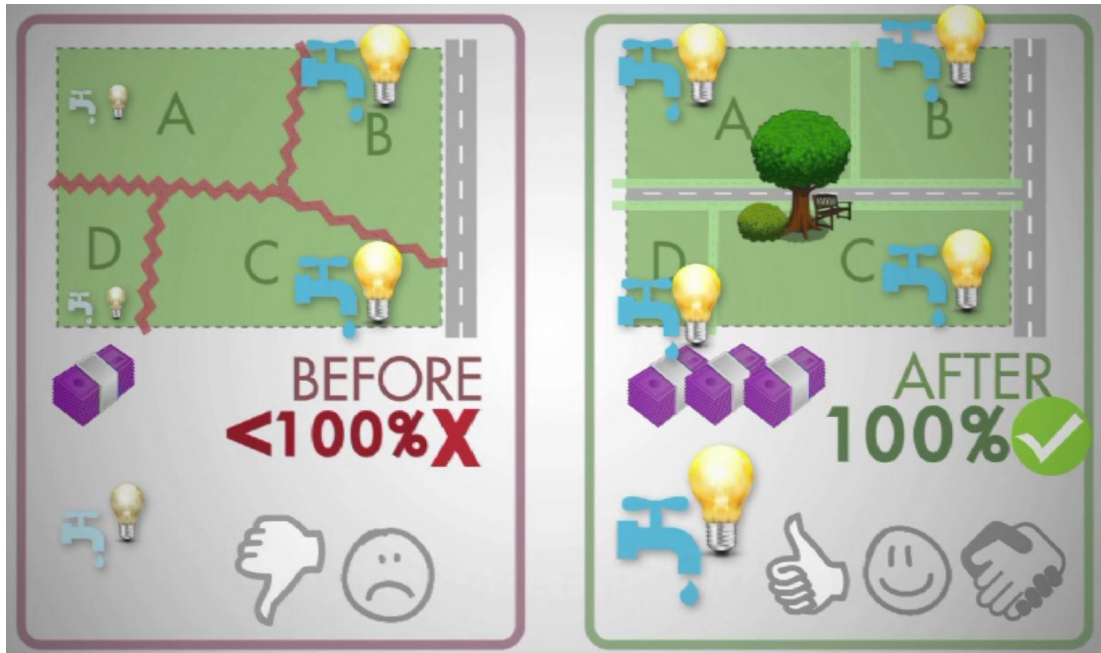


Figure 3.1: Land Readjustment Benefits. Source: Bangkok 2010.

As indicated in the Figure 3.1, LR provides five major benefits for the landowners. First, it leads to substantial increase in property values because of the provision of basic infrastructure. Second, it maximises the efficiency of land utility and reduces land conflicts. Third, LR provides a fair share of benefits from infrastructure development such as utility. Fourth, the underprivileged landowners, especially those with no road access, can enjoy a better quality of life and better living environment. Fifth, LR creates shared social responsibility for collective project activities.

Land Readjustment is different to land expropriation or the traditional land acquisition process in which a government agency needs to acquire (purchase) the land from private landowners to be able to develop each public facility, for example, a road or

² The contribution rate is the rate of land contribution which each landowner needs to contribute to the LR process to be used for several purposes including developing existing or creating new basic public infrastructure such as roads, green space, and other necessary amenities in the community. In addition, a proportion of these land contributions will be allocated to a “reserve land” or “financial land” to be sold for covering the infrastructure and other administrative costs of LR.

park. In LR, in addition to providing the basic public infrastructure such as roads, the land parcels are also readjusted with a fair share of public facilities (as shown in Figure 3.1) and increased value of the readjusted lands.



Figure 3.2: Land Readjustment vs Land Acquisition

Project 3: Planning issue, land readjustment of Kampung in Malaysia urban areas, 2011, <http://wumodiPlanning300.blogspot.com.au/2011/11/planning-issue-land-readjustment-of.html>

Figure 3.2 illustrates the main differences between LR and land acquisition. In the land acquisition process, landowners A and F lose most of their land and have to leave the area to provide space for a basic public infrastructure (road). This seems unfair as other landowners can remain in the community and enjoy the benefits of the new infrastructure. Therefore, despite the high costs of infrastructure development, which are usually borne by government, the land acquisition process is very controversial and most landowners resist it (Mittal 2014). However, in LR, all remaining landowners receive a fair share of the benefits, such as road access and other infrastructure (parks and community spaces) and continue to live in their community.

By comparison, LR does not exert financial burden on the government as the cost of infrastructure provision is borne by selling financial land (also called reserve land) taken at the replotting stage. Although this is not always the case with all LR projects, this self-financing feature is one of the core concepts of land readjustment (Yilmaz,

Çağdaş and Demir 2015). Besides the financial or reserve land, the contributed lands by the landowners are dedicated for three other purposes as well: developing roads, parks and greenery, and other public infrastructure, as shown in Figure 3.3.



Figure 3.3: Usage of Contributed Land in LR. Source: Bangkok 2010.

Note: these shares might change depending on condition of each case.

3.3 Urban Land Readjustment Research

In this section, the theoretical development of LR since the 1970s is reviewed to examine the extent to which LR theory and research effectively inform practice. First, the early period of LR academic research is discussed, followed by LR contextualisation period during the 1980s and 1990s. Then, the new era and agenda of LR is argued in relation to the 21st century research.

3.3.1 Land Readjustment Research in the 1970s — Early Period of Academic Research

The earliest peer-reviewed published research on urban LR (Doebele 1976) started in the 1970s. Apart from the grey literature (unpublished and in the form of government reports), Archer (1978, 397) defines land pooling (urban LR) as a technique used for consolidating private land parcels in order to make them planned, subdivided, with provision of required urban services and all costs to be shared among all landowners and recovered through a land value capture process.

The early theoretical and policy implications of LR can be summarised in 10 major concepts: (1) LR as a compulsory process, (2) temporary ownership of private landholdings by the government until each land parcel is adjusted, (3) LR as a

government initiative, (4) support and pressure by landowners on the government to complete LR as soon as possible, (5) cost recovery mainly through land value capture — increasing the land price after readjustment, (6) LR a tool to promote urban development efficiency and equity, (7) intergovernmental coordination for LR, (8) no cash compensation to be paid to landowners, (9) obtaining short-term loans for infrastructure provision, and (10) determine LR project size based on the amount and availability of loans (Archer 1978).

In a Western Australian context, Archer (1978) described the nature and characteristics of LR (known as land pooling in the Australian context) in the urban fringe of the Perth metropolitan area and made a series of recommendations to improve its application in practice. He believed that land pooling/readjustment is a viable tool in this context from financial, administrative, and political perspectives for developing private land plots and has the potential to be used in developing countries (Archer 1978, 407).

Archer (1978) also proposes that adoption of a pricing policy and a standardised approach for readjustment schemes, wider application of LR on larger scales, and using LR in a more systematic approach for further development of metropolitan areas can improve urban development in Perth and maximise the potential of LR. While the LR concept was still at its early research stage at the time, the above theoretical and policy implications played a significant role in development of LR theory and research worldwide.

3.3.2 Land Readjustment Research in the 1980s and 1990s — Contextualisation Period

Land readjustment research was further developed during the 1980s and 1990s, with a focus on contextualisation for each context. Although some might argue that context-based research of LR was initiated before this period, the available published scholarly sources on LR indicate that feasibility research in each context boomed during these two decades — see, for example, Maher (1982); Seele (1982); Nagamine (1986); Acharya (1988); Archer (1992); Archer (1994); Larsson (1997); Agrawal (1999); Sorensen (1999); Doebele (1982).

Nagamine (1986, 52) defined LR in a Japanese context as a tool for enhancing public welfare through altering the land shape, construction, and bringing public facilities to

improve the site utility. He found that LR is transferrable to other Asian countries, provided that the strengths and weaknesses of this tool are considered and well-evaluated based on the context. Nagamine's (1986) research adds two theoretical implications for LR. First, the effects of the land market condition and property rights on LR finance, and second, the wide applicability of LR because there is no obligation for building reconstruction. He explains that the land market status and property right laws can force local authorities to contribute more financially to LR. Furthermore, as LR only deals with basic infrastructure provision such as roads and transferring land ownership, rather than reconstruction of private buildings, it can be applied to any type of urban land use.

Nagamine (1986, 57–58) also discusses several policy implications. He states that the LR criteria should be adjusted based on the minimum requirements of the majority of the poor, rather than fancy development standards. In addition, he emphasised that ready-made models cannot assist LR in any context. Instead, LR can achieve a doable solution through a learning trial and error approach between the local government and landowners. However, the author agrees that LR should be applied as a strategic tool to influence the urban development path through using the coercive power of local government in persuading or pushing landowners towards LR.

A land registration system, land speculation and low affordable housing are other significant issues in LR. Nagamine (1986) strongly believes that a clear land registration system is a must for its LR success. He also adds that local government should enforce strong control over land speculation in areas where the price of land is low, and most landowners are private. The progress of LR in peri-urban areas has been slow and this could be due to reluctance of farmland owners to develop their lands after LR to enjoy speculative benefits. This can be managed through an effective property taxation. In terms of low-cost housing, the author highlights that LR's assistance in the provision of affordable and social housing in Japan has been very low, which requires effective negotiation between the local authorities and landowners to set aside a certain amount of land for this purpose. In the case of government policy providing social housing through LR in the urban fringe for low-income families, a government subsidy could be a viable method, as practised in South Korea (Doebele 1982; Acharya 1988).

Transferability of the LR tool was examined by Acharya (1988) in south Asian contexts. He found that the construction of roads is the most suitable approach to make land developable and increase its supply. This finding is important because it can assist with better policy making for LR. Furthermore, he noticed that without a strong political will, the persuasion and participation of landholders, the development agency, and the public sector as stakeholders, LR cannot yield the expected outcomes, even with the most comprehensive technical plans (Acharya 1988, 116). At the same time, he acknowledges that LR is not a good tool to solve all urban land development issues in all contexts and recommends care should be taken in using LR based on its strengths and weaknesses as well as different socio-economic and political conditions in each context. This indicates that LR requires to be customised, based on the requirements and circumstances of each context.

Challenged by little control over land use and insufficient public infrastructure, LR can be a suitable tool to assist with urban development in Thailand (Archer 1992). The author introduces four interrelated factors that can make LR successful. These factors are: expert project management, appropriate preparation for the LR project, understanding and support from landowners, and choosing a suitable LR site. It seems that the social issues of LR, including management and landowners' support, are among the key factors that can influence LR success. The findings also call for legislation for LR, an accredited implementing agency, volunteer and compulsory participation, if needed, an LR scheme, legal distinction between land pooling and land readjustment in terms of land ownership, and using LR for partial land subdivision (not final layout), depending on the case.

In the context of Thailand, Archer (1992) further argues that LR can bring several benefits. These benefits are important because they can encourage landowners to participate in the LR process voluntarily. The advantages include: using land assembly as a tool to provide economic sites for development; providing a good alternative to costly land acquisition; bringing basic infrastructure such as roads, sewer and water supply; creating less resistance for implementing urban zoning plans; sharing cost and benefits fairly; ensuring timely land development; and facilitating development obstacles and blockage.

Archer (1994) states that urban LR (known as urban land consolidation in Indonesia) is one of the main tools that can respond to the fast expansion of the Jakarta metropolitan area. The paper assesses the feasibility of LR in the Jakarta metropolitan area and recommends that an LR program needs to be formulated to raise the amount of urban land in municipalities and urban regions around Jakarta (Archer 1994, 37). This is one of the major reasons for LR application in areas where the urbanisation rate is high, including in the majority of developing countries.

After reviewing LR models in Germany, France, Western Australia and Japan, Larsson (1997, 148) argues that this tool seems to be an effective alternative for situations where landowners are banned from individual development, where there is a need for rearrangement of an old urban community, when vast infrastructure facilities are required in a community, or when none of the stakeholders (landowners or local authority) have enough resources to undertake development alone.

As most developing countries with a high rate of urbanisation are experiencing the above situations, Larsson (1997) strongly advocates the possibility and suitability of LR in such contexts, provided that the self-financing feature of LR remains a key component of this process to cover provision of local infrastructure costs. This is an important aspect of LR theory in these contexts, because it would be less likely that the local government could bear considerable infrastructure expenses of LR. Therefore, it can be said that the self-funding advantage of LR is extremely significant for developing countries faced with financial difficulties.

Agrawal (1999) conducts a comparative analysis between several Asian countries with LR experience to find out how this tool can be applied more effectively in the Indonesian context. According to the findings, several changes in the LR policy and implementation procedure are needed. These changes are significant as they can facilitate voluntary participation and resettlements of the community. Amendments in the LR policy include: providing unwilling landowners with the right to opt-out; involving landowners in planning, design and implementation processes; paying enough compensation to affected landowners; taking care of vulnerable groups such as squatters; and fair distribution of gains and losses (Agrawal 1999, 317–318).

Changes in the implementation process in Indonesia include: setting a clear objective for LR; developing a mechanism for public participation to ensure constant landowners' involvement in all decisions, LR transparency, and a redress system; sharing costs and benefits equitably in the implementation stage, and making a comprehensive framework for all institutions involved in LR to make sure their roles and responsibilities are well cleared (Agrawal 1999, 318). These can be considered as important strategies in achieving an equitable LR which is supported by the communities.

Overall, LR research focused on contextualisation in the last two decades of the 20th century, to examine how LR can be implemented efficiently and successfully within each context. The success criteria and requirements were defined based on each country's context in terms of economic, social, legal, cultural, and institutional conditions.

3.3.3 Land Readjustment Research in the 21st Century — Evolution of Global Land Readjustment Success Factors and Challenges

Although the contextualisation process continued during this period, the major turning point of LR research in the beginning of 21st century is the evolution of global success factors for LR and identification of its contemporary challenges. These significant factors are reviewed in this section.

In Nepal, Karki (2004) reviewed the experiences of LR (known as land pooling) in Kathmandu Valley. There were 11 LR projects conducted successfully in this area, which show LR is a workable urban development tool in this country. However, the author also points out several shortcomings of LR practice in this context. These limitations can prevent LR from success and therefore are very significant. From a technical aspect, lack of coordination among LR project staff and the related local organisations providing the land record information including cadastral maps, unfair distribution of urban infrastructure and facilities by the state, irregular-shaped land parcels with no open space and planned network of roads with inadequate right of way were the most important concerns.

Furthermore, missing financial support such as government subsidies for the vulnerable, lack of a revolving fund to cover the project costs in the case of a delay in

providing the funds from the initial source, and land speculation problems due to missing regulations were among the most important financial and legal concerns. These challenges are considered as a major threat to LR and can significantly reduce its effectiveness and efficiency.

In terms of social issues, concerns such as implementation difficulties due to the unavailability of an effective community education section in each LR project as well as miscommunication and negotiation with the landowners in preparation and finalising the LR scheme were highlighted. In addition, the findings indicate that the unavailability of a valley-wide LR strategy, inexperienced managers, and lack of a discussion forum for sharing experiences from different LR projects in the country were among the management concerns. In the end, the lack of an annual evaluation report besides the annual progress report by the LR project managers to maintain an official record of the project experience, was also stated (Karki 2004).

In each context, there are certain factors that limit LR's applicability and efficiency. Turk (2005) analyses these factors in the Turkish context and emphasises that they have to be eliminated to let LR happen successfully. According to the author, these factors are: complicated legal system; planning, political, and economic constraints; issues with administration and management; landownership structure; land registration; technical limitations; landowners' resistance and conflict in the redistribution stage; recent modifications in expropriation law which complicates LR; lack of a land value criterion for distribution; and effects of other methods in the LR process.

These important theoretical insights indicate that LR needs to solve many problems to improve its applicability in practice. Hence, the question is how this can be done. The author further recommends to improve LR efficiency that: provision of voluntary LR models in the law; using a planning-integrated strategy; transforming shared properties into single ones; and adjusting legal issues to make cadastre records match with physical plans. Furthermore, establishing a Development Plan Fund, from the government to cover all LR implementation costs and increasing the quality and quantity of qualified LR professionals, can assist in this regard. The role of community participants should also be considered by involving and engaging landowners through public announcements and informational sessions and applying different expropriation

processes compared to conventional methods. In terms of financial issues, monetary contribution by landowners is recommended in case land contribution is not possible due to planning structures and the government should use both methods of monetary and land compensation, if required (Turk 2005, 40).

In conclusion, Turk (2005) reiterates the three factors that make LR successful as emphasised several times in the LR research. First, a flexible legal structure that provides LR with multiple ways for planning and implementation. Successful LR practices worldwide indicate that flexibility in execution of LR through national or local public agencies, semi-public, or landowner associations is an important factor for LR to succeed. Second, strong public participation, support, and consensus at all steps of LR is one of the key success factors. This factor was one of the major issues in the contextualisation period of LR, underlined by several researchers such as Larsson (1993) and Sorensen (2000). Third, integration of LR with the city master plan in terms of infrastructure provision, choosing the most suitable LR size and area, calculation of land contribution rates, and redistribution of the readjusted land parcels.

3.3.3.1 Influence of urban planning theories

Public participation in urban LR seems to be influenced by urban planning theories (Campbell and Fainstein 2003). Blueprint planning is an urban planning theory which was developed during the Industrial Revolution through the rational planning movement between 1890 and 1960. Based on this theory, a small group of experts was in charge of improving the key spatial plans such as traffic movement, setting standards for residential buildings, sunlight catchment, and closeness to green areas (Hall 2014). In such a top-down approach, the participation of the general public in the planning process was ignored and eventually this caused the movement to decline in around the middle of the twentieth century due to several national backlashes in the United States (Black 2003).

Although the concept of public participation was incorporated in the synoptic planning system, which emerged after the blueprint planning method, this became less significant after a while as it was believed that the public interest is very easy to predict and therefore needs the lowest attention in the planning process (Lane 2005). The available literature indicates that LR in some countries such as Germany is somehow influenced by such a theory where LR is governed by the government from “initiative

to planning and implementation” (Larsson 1997, 142) with minimum public participation.

In contrast, the contemporary theories of urban planning, such as participatory planning, emphasise the importance of the whole community participation in strategic planning and management processes, which can also lead to community development (Fainstein 2000). In this approach, all views and opinions are considered, conflicts are managed and vulnerable groups find the opportunity to take part in the planning process (Forester 1999). Although not entirely, it seems that the participatory planning theory has strongly influenced LR in countries such as Japan where public participation is key in the LR process (Sorensen 2007).

Blueprint planning is also criticized by Newman, Kosonen and Kenworthy (2016) in their Theory of Urban Fabrics which suggests that the Modernist period of planning from the 1920’s insisted there was only one kind of acceptable land use which was based on modernist architecture in both high rise and low rise, with car dependence assumed. The older forms of walking urban fabric (with their density and narrow streets) and transit urban fabric (with their corridors of medium density) are however returning into favour and are seen to have organic qualities that ought to be respected and regenerated. The value of informal settlements in their organic walking city formats can be built on using LR far better than the modernist approach of clearing everything and starting again.

There are several comparative studies of various aspects of LR around the globe. Home (2007) reviews LR practice in several countries worldwide from Japan to the Middle East and Europe and concludes that if land use and development are controlled by the government and provision of accredited land titles is guaranteed, then LR can be considered a useful tool of land management in the contemporary world. These two factors are extremely important in LR as without government control over land use LR process may be misused by other interest groups (namely landowners and developers) and at the same time LR may not gain enough support from landowners if the provision of formal land title deeds is not confirmed. In addition, flexible LR implementation in terms of choosing the implementer (developer), involving local communities in the process, not applying a full expropriation, and expert local planning skills are among the main factors that can assist LR to be fruitful.

Land readjustment also has important implications for nations which have experienced conflict and war in the past. Home (2007, 479) states that as LR removes the former layout of urban infrastructure and land ownership, the unpleasant history of the past can be somehow forgotten or at least mitigated in those communities, for example, Lebanon after the civil wars and Japan after the Second World War. This section is expanded further towards the end of the literature survey as it is critical to the thesis.

In terms of social and cultural issues of urban land readjustment, Sorensen (2007, 111) notices that provision of basic public services such as roads, sewer system, parks, has been used as a major incentive in Japan to obtain the consent of landowners for LR. He further states that unavailability of an alternative that provides similar benefits has made the government and the residents to proceed with this tool. In addition, weak measures for controlling land development, challenges in land ownership patterns, land market liquidity problems, and limited publicly owned lands have contributed to using this tool as the only option to improve the situation.

Sorensen (2007, 110) mentions another major finding from his research related to the role of landowners' opposition and consent in LR. Resistance and objections by landowners have caused many LR projects (such as Saitama) in Japan to fail as the government had chosen to proceed without the required consensus (Sorensen 2000, 51). The author argues that the cost–benefit balance and perception of LR seem to differ as the controlling mechanism for land development, land market, and social and economic contexts are different. However, lessons can be learned from the reactions of landowners to LR plans organised by the local government bodies, especially those that failed due to landowners' rejection.

Land readjustment has been also practised and researched in the Netherlands. Needham (2007) describes and analyses four types of LR practised or disseminated widely in the country and concludes that **certain institutional conditions** must be met before LR becomes successful. The first major condition is trustable, fair, and honest public authorities. When the landowners do not trust the local government, it is less likely that local bodies, such as municipalities, would be able to succeed in LR implementation and deal with considerable amounts of land and financial resources (Needham 2007, 130).

The second condition for LR is the lack of a better way for financing. According to the Dutch regulations, the benefiting implementing body is required to pay for the infrastructure costs. While municipalities are not always in charge of all LR planning and implementation processes to secure finance beforehand, developers have to sell the financial land quickly to be able to finance the project. From a land economics perspective, particularly from the lens of public sector economics, LR must be economically efficient and equitable to improve social welfare based on the theory of welfare economics (Deardorff 2014). This also means that the government needs to intervene in LR through putting in place government policies which bring public goods such as roads, sewer system in the community in a cost-effective way based on a cost–benefit analysis approach (Hemakumara 2017).

The last condition is the utilitarian attitude in regard to land and land ownership. This requires landowners to decide about LR based not on emotion, but on their land value and the transaction expenses of land exchange. If the proposed LR is not in their favour, they simply go for that type of land development that guarantees a higher return for them (Needham 2007, 131).

Davy (2007) reviews the legal issues of LR in Germany. Davy (2007, 54) argues that although the law allows compulsory LR, the urban planning system is encouraged to establish a trustworthy relationship with the community residents, negotiate with, and come to a win–win solution and consensus before using authoritative force.

In Israel, Alterman (2007) adopts a similar approach to Davy (2007) in his research, which focuses on the legal issues of LR and its relationship with property rights. He specifies five reasons for the suitability of LR in Israel and discusses how it can be advantageous in providing public services compared to other alternative tools. Unlike in Germany, the 1936 Town Planning Ordinance did not allow for replotting without the consent of all landowners until 1957, when this law was amended to enable the government to carry out LR, even without the agreement of all or most landowners (Alterman 2007, 59). The author believes that this legal change led to the expansion of LR from a limited to a widely applied practice.

With 93% of the land in Israel being government-owned, it might appear that this country may not need the LR tool for the provision of public services. However,

Alterman (2007) elaborates that most of these lands are leased out for a long term (for several generations) to be used for a variety of purposes, including residential, commercial, or industrial. Therefore, they are treated similarly to private land in the market as well as in the court (Alterman 2003). As limitations for LR, the author specifies two main challenges: the legal complexities pertaining to the maximum allocation for public use, and the lengthy, time-consuming process. The legal challenge has increased predominantly due to the enhanced protection of property rights and ambiguity in the constitutional protection of property law in defining the 40% compulsory land dedication for public use.

However, despite shortcomings and limitations, Alterman (2007) believes that LR is an economic tool for local government in urban planning, especially for those that are challenged financially. Furthermore, he identifies several lessons that are potentially transferable to other countries: the broad spectrum of land tenure where LR has been successful in both government-owned and privately owned lands, the contribution of LR in increased demographic and economic growth of Israel, the comparability with other alternative tools available and implemented in the country, the property-friendly feature of LR in countries where property rights are strict, and the increased trend of LR use over the past few decades for a variety of purposes, such as provision of public services, environmental issues, urban reconstruction and regeneration, and many more.

Land readjustment is the main tool for urban development in Japan (Sorensen 2007; Doebele 1982). In this country, it is aimed at controlling urban sprawl, developing new towns, rehabilitating urban areas, developing complex urban infrastructure, and reconstructing areas affected by disasters (Souza, Ochi and Hosono 2018). However, Sorensen (2007, 109) argues that unlike popular belief, most Japanese landowners do not feel satisfied with and do not find fair the balance of costs and benefits of LR for their communities. This can suggest that, even in Japan, where the title and tenure of land are clear and where there is the highest number of successful LR projects, LR management is still challenging from the legal and technical perspectives (for example, Yanase 2015).

Contrary to the Japanese LR management model, which is mainly governed by the public sector, a Chinese study on LR shows that “it is possible to engage in urban redevelopment in an innovative manner, provided that government support is available

in the areas of positive policies and flexible planning regimes” (Li and Li 2007, 97). This study compares the LR governance with the principles of firm (corporate) governance under the Williamson model and concludes that “it is possible for the minority partners (the landowners) to gain extra value for themselves from joining the LR scheme, instead of being just subordinate to the absorbing firm (the public sector or developers)” (Li and Li 2007, 81). The authors draw this conclusion because developers and the public sector in China tend to avoid involving the landowners in the urban renewal process for a number of reasons such as “management problems and the profit sharing” (Li and Li 2007).

Needham (2007, 126) believes that there are four **major financial variables** that determine the financial success of LR: the costs of acquisitions, services and infrastructure costs, interest costs, and income gained from the disposal of land. The municipality may decide to set aside some of the land for social housing with cheaper prices, mix the land use in the area and increase its income, develop the LR site intensively or extensively, determine the standard of servicing the land, and specify in what time period to complete the LR project, including to reduce the interest charges, if applicable.

3.3.3.2 Comparing land readjustment in different international contexts

Turk (2008) discusses the key conditions for efficient and effective LR practice in **international contexts** and introduces **nine conditions** for its success. These include: legal framework, cost recovery or self-financing, sharing the benefits and costs, including infrastructure costs, effective planning, participation of landowners, technical staff and management, land ownership structure, and good quality cadastral records. It can be seen that as LR research moves forward, various aspects become more obvious and organised. These nine conditions illustrate the major aspects of the LR process and the level of its success highly depends on the quality of each one.

Another major research of LR in the 21st century is carried out on LR conceptualisation within the Chinese context. Zhang (2008) describes LR as a tool in the hands of the government and divides it into two categories: urban land re-planning for renewal purposes and urban land development to be used in peri-urban areas. He

states that LR's aims at the macro level are: to meet the demand for urban land resources, smooth socio-economic development, improve the balance in land use within the planning sector, and maintain harmony in landscape and spatial views. At the micro level, these objectives are: the provision of land for urban development, making land use sustainable, promoting the efficiency of land and land value, carrying out urban plans and assisting in developing further urban plans.

There are four theoretical and policy implications in Zhang's (2008) study. First, he discusses that readjustment of land titles means reallocation of economic resources among stakeholders, conflict between benefited groups and others, redistribution of land sources among various sectors and national economic system. Second, as a result of the fragmented land market, LR needs to be supported financially by the government. Third, LR has always generated extra property value. To make this more sustainable, most of the capital gains from LR should be spent on the LR area and the rest should be invested on other LR projects using a government mechanism. Fourth, urban LR is impossible without a legal framework, largely due to the increasing conflicts in land use.

Land readjustment has been researched by many scholars in Turkey (for example, Erdem and Meshur 2009; Turk 2007, 2005; Turk and Altres 2011; Kucukmehmetoglu and Geymen 2016; Uzun and Celik Simsek 2018). Erdem and Meshur (2009) argue that LR legislation, in particular the law for LR and other relevant laws, seems to be insufficient for the Turkish context. According to the authors, problems such as ignoring landowners in the LR process, redistributing land based on area instead of value, issues related to the readjusted land plot such as scale and size, and including unrelated professions in the planning authorities by law are among the most important problems of LR in Turkey.

Çete (2010) also reviews good LR practices in Turkey and explains the LR process, highlighting the strengths and weaknesses of this process. As part of the strengths, LR in Turkey does not terminate the landownership, but allows the owners to maintain most of their lands. This could result in less opposition and confrontation towards LR by the landowners.

In order to examine the **LR applicability for renewing urban built-up areas** in Turkey, Turk and Altres (2011) conducted a survey in metropolitan areas and large cities including Istanbul. The authors categorised the LR models in three categories: readjustment for plan implementation models as practised in Germany and Turkey, joint land development models as carried out in Sweden and France, and land pooling models associated with countries like Japan and South Korea (Turk and Altres 2011, 8). The findings indicate that LR is a suitable tool to improve inner city areas in Turkey. In this regard, using the threat about expropriation seems to be more effective than expropriation itself as it helps to reach consensus in the case of illegal land uses in renewal areas. Direct expropriation may cause social resistance and also increase the compensation costs to be paid to landowners. The findings also confirm that LR can be used effectively with the renewal of various housing types. This study proposes that LR should be aimed at higher density through the floor area ratio or surplus plot ratio as an encouraging policy to ease LR implementation in renewal areas (Turk and Altres 2011, 18).

In terms of limitations of LR in this context, Turk and Altres (2011) advise that land price is required to increase after renewal, otherwise supplementary funds are needed. Furthermore, there should be a demand for the readjusted plots in the real estate market to increase their value. Financial and technical support are among the major requirements that should be taken into account, especially when LR is to be used in new international contexts. Another constraint for LR could be the lack of a culture of collective action in a specific context, without which the implementation and success of LR could not be easily achieved.

India is another country in the region where LR is applied successfully. There are several cases of good LR practices in this country. Mathur (2012) shares the experiences of Gujarat with four good lessons: revenue from previous LR projects to be used for financing infrastructure and services in the new project area through employing a revolving fund system; not including the land ownership disputes into LR process; providing good compensation system for the affected landowners; and build infrastructure early to encourage landowners' participation in the LR process.

Landowners' participation in LR has been one of the most significant concerns for utilising this tool in urban areas (Sorensen 2000). Yau (2012) discusses the importance

of the **homeowners' willingness** in LR through a structured survey and focus group data. Findings from the survey suggest that 'compensation issues' are the most important concern for 47% of the respondents, followed by 'rehousing issues' for 15% of them (Yau 2012, 10). In response to compensation concerns, 43% of the surveyed landowners preferred partnership with the LR redevelopment agent, followed by exchanging flat-for-flat deal at 39% and cash compensation at 18% (Yau 2012, 12). The findings also reveal that 66% of the respondents are willing to proceed with LR, even if their properties are to be completely redeveloped (flat-for-flat approach).

Other findings from this study show a positive relationship between neighbourhood attachment and willingness to participate in neighbourhood improvement affairs (Yau 2012, 13). This means that if the residents have a strong attachment to their neighbourhood and really want to continue living there, they participate and contribute more towards the development and improvement of their community.

While residents accepted temporary displacement during LR, the lower efficiency ratio and smaller size of the new flat, almost all of them (94%) rejected the option to participate in LR if they were not permitted to participate in the decision-making process for the project, especially decisions relevant to their property valuation (Yau 2012, 13). The author indicates that participation of landowners in their property valuation process can ensure the landowners that their properties are not undervalued at the start and not overvalued after the project.

Land readjustment has been a successful tool in housing projects in Iran. Zabihi and Khiavy (2012) evaluate how LR has been implemented in the Joibareh project in Isfahan province. Their findings suggest that public participation is one of the key concepts in LR, providing landowners the opportunity to share their thoughts during their lands' transformation process, although this participation was limited without a well-defined cost-benefit method.

Furthermore, Zabihi and Khiavy (2012, 2189–2190) provide their recommendations as: the Joibareh participatory housing project to conform with the Iranian legal system and to be defined based on urban planning standards, include opinions and suggestions by the community residents during drafting the LR project, a fairer land contribution

rate to be introduced and enforced by the law, and land for public use to be purchased compulsorily, if necessary, to smooth the LR implementation.

Some more research in Ahmadabad city, India, shows how the self-financing feature of LR has contributed to the development of a 47-mile ring road, creating 46 planned neighbourhoods with no displaced landowners and a 200-foot (60.96 metres) right of way (Mittal 2014). The study suggests six lessons can be learned from this case: major requirements for LR, usability and suitability of LR in large and small scales depending on a well-prepared plan, higher consensus rate of LR with planned development, better acceptance rate for LR compared to land acquisition, the importance of political leadership, and voluntary land contribution resulting from creating trustworthy relationships with communities and participatory planning (Mittal 2014, 321–322).

The first lesson refers to major LR prerequisites, which include the need for a legal backup or regulatory policy, good real estate market, and solid political leadership and government support. The author emphasises that these three conditions are mandatory for successful LR. Second, the author infers that if LR has worked well for an extensive 47-mile road, it can certainly work when developing any small or large public amenities, such as urban parks, university campus sites, land required for airports and so on. Third, LR can facilitate planned urban development more than any other development tool through involving landowners in the process and establishing a bottom-up consensus. Although persuading thousands of landowners in 46 neighbourhoods was a challenging job, this study proved this to be possible. Fourth, the acceptability of LR is higher than land acquisition as, unlike land acquisition, all benefits are returned to the landholders at the end of LR process. This minimises any reluctance to commit, which is very frequent in the acquisition method and saves cost and time for implementation. Fifth, this case demonstrated that any legal, political, or social issues of LR can be managed through strong political leadership to realise the project. Finally, landowners' participation in LR, developing the community's trust and participatory planning are among those important lessons that can lead to voluntary contribution of land to LR (Mittal 2014, 322).

Mittal (2014) concludes that the lessons of this case can be applicable and useful for places where there is an established legal mechanism for LR and the context calls for

a capital-intensive technique for land development due to budget limitations. While there is not enough legal support for LR in many developing countries, there is a strong need for a capital-intensive method to develop urban land. Therefore, the question remains whether LR can still be used in such contexts or not.

3.3.3.3 Land readjustment as a tool for areas affected by natural disasters

In their qualitative case study, Hong and Brain (2012) investigate how LR can work with rebuilding areas affected by natural disasters, such as an earthquake in Chile. The findings indicate that although LR could be challenging in contexts where the LR idea is new, it can still serve as an efficient tool for post-disaster reconstruction, including earthquake damage. This study proposes useful theoretical and policy implications for LR. It highlights that LR has influenced public policy in terms of post-disaster reconstruction and instead of paying individual subsidies to affected landowners, the government tries to use LR to rebuild the neighbourhood. In addition, the findings suggest that cooperation between LR stakeholders and collective action to solve problems seem to be more efficient than taking a sole top-down or a bottom-up approach towards improving disaster-affected areas through LR.

However, Hong and Brain (2012, 8) also describe convincing landowners for LR as a major challenge due to five reasons. First, landowners do not have enough information about LR and in addition there is not a good showcase available to convince them. Second, there is limited support and coordination for arranging community meetings to involve landowners. Third, some landowners are unwilling to rebuild their earthquake-affected properties as they are waiting for higher offers from land developers. To tackle this, laws on land speculation are needed in Chile. Fourth, unaffected houses do not want to participate and contribute land to LR as their properties are undamaged. Fifth, figuring out social issues through collective action is not a practised norm in Chile and landowners firmly expect the government to provide publicly funded resettlements rather than community-based initiatives.

3.3.3.4 Land value capture

Land value capture is one of the main features of land readjustment (Gozalvo Zamorano and Muñoz Gielen 2017; Muñoz Gielen 2014). Muñoz Gielen (2014) addresses this feature by discussing how local governments can transfer the costs of

developing public infrastructure and affordable housing to LR developers through the land value capture technique. The findings of Muñoz Gielen's (2014) research are presented in the form of a model that determines the power relations among public agencies and landholders/developers, which eventually results in public value capture. This model was developed based on an explorative approach through nine case studies in urban regeneration in three European Union countries: three in England, four in Spain, and four in the Netherlands.

Comparing these cases, the author concludes that LR regulation has been the success factor for LR in Spain, which has resulted in better land value capture to finance the LR costs smoothly (Muñoz Gielen 2014, 75). In the case of the Netherlands, the government needs to subsidise infrastructure provision due to the lack of sufficient LR regulation, compared to Spain. For the cases in England, the situation appears to be better than the Netherlands, despite lacking regulation for LR due to higher real estate prices and the use of the regulatory power of the government to convince residents about the future government contribution.

3.3.3.5 Compulsory land readjustment

The findings from Muñoz Gielen (2014, 75) indicate that LR theory and policy in urban areas should not be viewed based on the policy network theory which considers a modest rather than a dominant role in urban policy making and implementation. Based on the policy network theory, the author argues that the unavoidable veto power of private actors in policy making and implementation can be overlooked by compulsory LR, as demonstrated in Spain. This is because LR has been a successful tool financially and from a time perspective in the case studies in Spain, despite the compulsory government LR policy.

The available literature on LR indicates that the vast majority of LR research has been carried out on technical urban planning issues (Archer 1994; Durovic and Nikolic 2016). Supriatna and van der Molen (2014) reviewed the possibilities of LR in Jakarta's informal settlements in Indonesia, known as 'the Kampung' in the local context and proposed a plan for LR implementation. The authors argue that LR may mobilise and engage the physical and social resources of the community voluntarily or compulsorily, provide financial assistance and benefits through the help of financial land and land value capture, and clarify the intricate and murky land tenure rights, such

as unregistered customary possession in Indonesia (Supriatna and van der Molen 2014, 389–390).

Supriatna and van der Molen (2014) suggest several important points should be considered in the LR process in Jakarta’s informal settlements. These are: using legally binding LR plans; having the pre-emptive right of purchasing Kampung lands by the governing local body; freezing any development activity that adds value to the land (such as land transfer, subdivision, and improvement during the LR process and implementation); distributing the development benefits and costs fairly; land titles preservation; landowners and leaseholders participating in the LR process; and considering social housing aspects. These should be done through a pilot project to examine how LR can fit in this context and how to maximise the benefits for both Kampung dwellers and the government (Supriatna and van der Molen 2014, 395).

3.3.3.6 Land and property valuation

In Portugal, Condessa et al. (2015) state that, despite the availability of legal support, LR has not been successful enough, mainly due to problems in **land and property valuation**. The authors claim that their developed LR model based on a case study in Sines city can improve LR performance in the Portuguese context, which is considered hostile in terms of cultural, legal, and economic issues. In this regard, the authors explain:

“Under a generally hostile environment to LR, shaped by a predominant non-cooperative culture, a falling real estate market and a weak and loose legal framework regarding dispute resolution mechanisms and land and property valuation methods, it is, therefore, of critical importance to promote common ground for reaching cooperation and commitment between landowners, developers and local government” (Condessa et al. 2015, 406).

Therefore, the seven-step quantitative LR model of Condessa et al. (2015) is expected to assist landowners and developers to better understand the urbanisation process, which can ultimately result in easier management by the local government body. In addition, through sharing the benefits and costs in an equitable way, the model considers average valuation for compensation and charges based on the floor area value, not only the floor area itself (Condessa et al. 2015, 400).

3.3.3.7 Legislation for land readjustment

Muñoz Gielen (2016, 86) also discusses how the recent proposal for urban LR legislation in Portugal may not correspond to the needs and expectations in practice as it constrains the LR development agencies to only those benefiting support from the majority of landholders. This can negatively impact the LR process and, as claimed by the Dutch government, may not successfully achieve 100% landowner support.

Legislation for urban LR is one of the current issues in the Netherlands (van Der Krabben and Lenferink 2018; Holtslag-Broekhof 2017; Muñoz Gielen 2016). Holtslag-Broekhof (2017) explores the expected features of the urban LR law that needs to be developed. Using 11 case studies where urban LR has been the major urban policy, the findings show that urban LR has been successful in adding value in three main domains: sharing financial costs, risks, and benefits; reshaping and relocating community residents; and lower development expenses compared to land acquisition. These suggest that the urban LR law should have three main characteristics: enable the division of costs and risks of LR among landowners, let the government act more as a facilitator, and provide various methods for the landowners to reach agreement on replotting and restructuring the land plots. According to the findings, the current context calls for mandatory exchange of land in the expected urban LR law under special conditions to provide additional added value over other existing land assembly tools in the country.

In relation to the new proposal for urban LR legislation in the Netherlands, van Der Krabben and Lenferink (2018) investigate why the government is interested to introduce urban LR as a new land policy and how stakeholders might respond to this new policy. Through two case studies they argue that the legislation for urban LR itself is unlikely to advance a better paradigm for land policy in the country. However, it may still assist with redistribution of development risks between the public and private sector, including the landowners.

Therefore, the major factors that determine LR effectiveness in this context are: the legal conditions (mandatory versus voluntary LR), institutional conditions (availability of a better alternative for the local government, top-down versus bottom-up approach, and landholders' attitude towards government LR strategies), planning style (requirements for detailed plans for instance), and financial viability of LR plan.

Muñoz Gielen (2016, 86) also discusses that the recent proposal for urban LR legislation in Portugal may not correspond to the needs and expectations in practice as it constrains the LR development agencies to only those benefiting support from the majority of landholders. This can negatively impact the LR process and, as claimed by the Dutch government, may not succeed in achieving 100% landowner support.

Despite LR success in Spain, Muñoz Gielen (2014, 76) highlights that there have been weaknesses in how the local bodies dealt with land speculation issues in the Valencia case study. Therefore, policies and provision are required to prevent landowners from such actions.

3.3.3.8 Quantitative and mathematical approaches

To optimise LR practice in Turkey, Kucukmehmetoglu and Geymen (2016) developed a technique using quantitative and mathematical methods. This model enables replotting and reallocating of cadastral plans into standard calculated subdivision through equitable deduction of land from each landowner for public use. This is done through linear and mixed integer programming and complies with the local regulations. Furthermore, other features of this technique are the introduction of a set of evaluation criteria to demonstrate the advantage of this model over other existing ones and provision of a geographical outlook of the subdivided lots for comparison purposes.

Problems with cadastral maps and databases are another technical issue of LR research. Durovic and Nikolic (2016), in their case study of Bar city in Montenegro, found that provision of land for public facilities and infrastructure such as roads, parks, sewer, schools, can be challenging if there is no proper mechanism, such as an effective land management system in place. The authors consider the inaccuracies in urban cadastral maps among the most important challenges from a geographical dimension, especially during natural disasters, climate change, or unharnessed urbanisation. The outdated cadastral data resulting from many unreported and unregistered changes on the site, unclear boundaries of the cadastral plots with insufficient topographic details, and discrepancies between the registered surface title and the one received through calculation from the cadastral record are the major types of problem with cadastre information (Durovic and Nikolic 2016, 137). The paper

further argues that all these problems can be tackled by using a geographic information system (GIS) database to update the cadastral and topographic maps with quality data.

3.3.3.9 The non-negotiable obligations

Gozalvo Zamorano and Muñoz Gielen (2017) describe how non-negotiable obligations and conditions for landowners or property developers might affect LR in the Spanish context and examine whether developers (or landowners) can fulfil public infrastructure delivery. The non-negotiable obligations are those statutory contributions that landowners (or property developers) must make in return for the increased values of their properties resulting from public decisions on land-use rules (278).

The non-negotiable obligations of landowners or property developers in the Spanish context, which should be followed without any financial compensation are: meeting the minimum dimension and quality of on-site public infrastructure, ceding for large public infrastructure, such as parks (in development area) or highways (in outside development area) upon government plans, considering at least the minimum prescribed percentage for social housing in the area, and ceding 5–15% of the readjusted land for the municipality based on the national planning law (Gozalvo Zamorano and Muñoz Gielen 2017, 281–282).

Led through a passive (private) governance approach, the findings by Gozalvo Zamorano and Muñoz Gielen (2017) illustrate that LR has been a successful tool in providing a large portion of public value capture through non-negotiable developers' obligations. Furthermore, utilising statutory power, the municipalities in Spain are broadening the amount of non-negotiable developers' obligations to develop large public infrastructure (like in the Valencia case study) and increase the number of social housing through inclusionary zoning (Gielen 2017, 294).

3.3.3.10 PILaR mechanism

In Egypt, Soliman (2017) examines how the Participatory and Inclusive LR, known as the PILaR mechanism, can control informal settlement development in new urban land expansion and how it can minimise the divide between the planning policy and regulation requirements and informal landowners' needs. Through a case study in

Benha city, this study suggests that PILaR can be designed and achieved in practice with ‘technical enablement’. Once the gap between the community capacity and state policy is shortened, it will be possible to determine the important steps to improve the condition (Soliman 2017, 330).

The study describes seven limitations. First, a legal support is required for those houses in urban peripheral areas that do not have security of tenure. Second, a revision of the available General Strategic Urban Plan (GSUP), Detailed Plans for New Urban Land Expansion (DPNULE) and Unified Planning Law (UPL) from the viewpoint of local powers aspiring of control should be done. Third, the Land Readjustment Program (LRP) should be studied and understood well in terms of process, social network, and the needs of community residents for housing land plots. Fourth, immediate amendment of those procedures relevant to LR in the Real Estate Publicity Authority (REPA) and Land Survey Authority (LSA) is necessary as well as urgent provision of tools and mechanisms for establishing compatibility between the cadastral plans and LR development plans. Fifth, frequent changes of the municipality’s representative are a major cause for delay in the LR implementation. Sixth, unavailability of low-interest funds for financing LR and lack of operational local budget for the (LR) technical team (which was supported by UN-Habitat) is a major limitation. Seventh, raising or decreasing the rate of the PILaR success depends on the LR area size — the smaller the area, the more chance of success and vice versa (Soliman 2017, 330).

3.3.3.11 Consultative and planned interference

Using LR for reconstruction of urban areas affected by natural disasters such as an earthquake is one of its major applications and research topics throughout the world (Byahut and Mittal 2017; Fukushima 2017). Byahut and Mittal (2017) explore how consultative and planned inference through LR led to reconstruction of Bhuj city in India. The authors argue that there are several lessons that can be learned from this case study. Unlike in Japan, the Bhuj experience shows that LR is feasible to be used for post-disaster reconstruction within the current legislations. From a technical aspect, land deduction was shared among all landowners, with minimum displacement of residents and fast LR implementation. From a social aspect, the social fabric of the community was preserved, which enabled residents to continue living in their

neighbourhoods. The authors acknowledge that in order to succeed, LR needs to be customised in terms of strategies and solutions:

“For an emergency situation, land readjustment can be customized and the process be made more flexible and effective by combining with other strategies and solutions. A varying land appropriation policy in Bhuj is an example of a customized solution to local problems. Reduced land parcel sizes after appropriation can limit consensus and cause conflicts, and potential land value appreciation after land readjustment needs to be effectively communicated to landowners” (Byahut and Mittal 2017, 10).

Another important lesson is about the challenges of LR in such contexts. The unavailability of sufficient cadastre records, limited and unreliable land data, weak databases, pressure from the public, and the need to start reconstruction were among the most important challenges in the case of Bhuj LR. These caused serious delays in the project (Byahut and Mittal 2017).

3.3.3.12 The role of government policy in land readjustment

There has been a lot of research on urban LR in China (known as urban land consolidation). Tian, Guo, and Yin (2017) review the development of non-agriculture land in the case study in Shanghai since 1990 and illustrate the government policy on urban LR in relation to property rights and conversion between government and collective land. The study also determines the roles, costs, and benefits for each stakeholder involved in LR, including the municipal government, district and township government, local committees and community residents and factory owners (Tian, Guo and Yin 2017, 891).

Considering the intricate socio-economic circumstances, this study recommends that the process of policy making and implementation should be more flexible to let LR happen smoothly and successfully. In addition, the negatively affected landowners should be taken care of and their losses should be compensated sufficiently. Furthermore, the study shows that landowners in better locations of the city are reluctant to participate in LR as they are currently making substantial income from their properties through house rent. Similarly, the government is also reluctant to invest in areas where the economic investment opportunities is low (Tian, Guo and Yin 2017,

894). Finally, it concludes that facilitation of bottom-up participatory approach rather than a top-down and blueprint planning method is needed and reaching a mutual agreement is recommended to achieve equitable and sustainable urban development through LR.

3.3.3.13 Land readjustment management models

In the available literature on LR, Almeida et al. (2018) investigate how LR can be improved through **better management models** in Portugal. In this regard, the authors studied management models in seven developed countries: Australia, France, Japan, Germany, South Korea, Sweden and Spain and compared these international LR management models with three selected case studies in Almada, Coimbra, and Lisbon municipalities in Portugal, which have been managing responsibilities for LR. The data from these municipalities were obtained through semi-structured interviews. According to the findings, the facilitator role of the local government agency, availability of a managing body with an experts' panel, and legal requirements in terms of expropriation and land valuation are among the most significant factors to improve LR management.

The review of the international management model of LR indicates that it is managed by the landowners' association in Sweden, while this process is administered by the government agencies in Germany and Australia (Almeida et al. 2018, 1433). France, Japan and South Korea use two models for LR management: one through government agencies and the other by the landowners' association. However, besides public agencies and the landowners' association, LR management can be done by the private sector as well as in Spain (Almeida et al. 2018).

These international models were then compared to the Portuguese cases through five major characteristics: initiative and process leadership, stakeholders' relationships, competencies and management skills and power of the managing body, operation rules and regulations, and similarity with the mentioned international management models (Almeida et al. 2018, 1445). The comparison confirmed that all three LR management models can be effective in the Portuguese context. However, the authors acknowledge that differences in each country in terms of culture, politics, and institutional contexts can highly affect the LR management model (Almeida et al. 2018, 1446).

3.3.3.14 Recent land readjustment case studies

One of the latest research published on LR is by Souza, Ochi, and Hosono (2018). This research comprises two parts; the first one is about introducing the concepts of land readjustment and its practices in Japan, and the second one describes experiences of other countries through several case studies and future possibilities in these countries. After explaining the concepts and laws of LR in Japan, the Japanese method and procedures of this urban development technique are introduced and several successful LR cases in this country are discussed. Then, this study reviews the history of LR in Japan and explains how this tool has greatly assisted the post-disaster reconstruction caused by World War II and several major earthquakes, such as Great Kanto, Great Hanshin-Awaji, and the Great East Japan earthquakes.

In the second part of the research, Souza, Ochi, and Hosono (2018) review LR initiation and current progress in a range of countries including Afghanistan, Angola, Bhutan, Brazil, Colombia, Finland, Germany, India, Indonesia, Israel, Mongolia, Nepal, Netherlands, Sweden, Taiwan, Thailand, Turkey, United Kingdom, and Vietnam. As this research is funded and published by the research institute of the Japan International Cooperation Agency, known as JICA, the last part of the study discusses how LR was internationalised by this agency since 1980s and how the Japanese technical cooperation has assisted many countries worldwide, especially developing countries, in terms of LR.

After reviewing LR in the aforementioned countries in terms of legal roots, aims, organisation processes, outcomes, conflicts and deadlocks encountered during the implementation phase, Souza, Ochi, and Hosono (2018) acknowledge that there are multiple ways for LR to be implemented in different contexts and realities. They emphasise that LR should be a tool to secure land for the urban poor and, thus, instead of conversion of land to land, provisions must be taken to provide conversion of land to building floor as practised in Colombia and Mongolia.

In Angola, Cain, Weber, and Festo (2018) explain how LR can succeed in a challenging context despite the lack of a firm legal support and minimal participation culture in the urban planning process. These seem to be two extremely significant factors suggested and emphasised in the literature as critical success factors for LR. The authors point out that rising land markets and effective cooperation among key

interest groups (namely landowners and investors) are the reasons for LR success in such contexts.

3.4 Key Ideas from the Literature

In addition to the chronological development of LR theory as discussed in the previous section, the key ideas from the literature can be summarised into six topics as suggested by Creswell (2007): the main focus (or the focus area of LR); antecedents (or conditions preventing the main focus from success); strategies and actions (to help achieve the main focus); contexts (or unique conditions of each context that can influence strategies and actions); intervening conditions (including any condition that can promote or hinder achieving the strategies and actions); and outcomes (which outlines the achievements of LR). As the findings of this research are presented in form of a model containing these six interrelated topics, the key ideas of the literature have been categorised based on these components of the model to facilitate understanding and discussion of the main contribution of this thesis.

3.4.1 Main Focus

The literature proposes eight key areas for LR to focus on. These are: compulsory implementation of LR (Archer 1978; Alterman 2007); customisation based on (minimum) context requirements (Nagamine 1986; Acharya 1988; Byahut and Mittal 2017); resource management (Larsson 1997; Cete 2010; Suprianta and van der Molen 2014); multi-purpose usage (Archer 1992; Larsson 1997; Alterman 2007; Mittal 2014; Souza, Ochi and Hosono 2018); sustainable land use (Zhang 2008); LR finance (Turk 2005; Mathur 2012; Munoz-Gielen 2014); equitable land contribution (Kucukmehemtoglu and Geymen 2016); and participatory LR (Yau 2012; Mittal 2014; Soliman 2017). These are important because they direct the LR path in the existing literature.

3.4.2 Antecedents

The LR literature also specifies five conditions that can disrupt the LR success, namely management, socio-cultural, legal, financial, and technical conditions. Management challenges and risks can impact LR negatively at the initial stage. These challenges include: lack of enough government support (Acharya 1988; Mittal 2014); lack of

intergovernmental coordination in terms of financial, administrative, and political issues of LR (Archer 1978; Karki 2004); lack of strong political will and leadership (Acharya 1988; Turk 2005; Mittal 2014); transparency of the LR process (Agrawal 1999); miscommunication and negotiation with landowners (Karki 2004); lack of an overall strategy for LR (Karki 2004); lack of discussion forums and community meetings for sharing previous LR experience (Karki 2004; Hong and Brain 2012); concerns over trustworthiness, honesty, and fairness of governing public agencies (Needham 2007); rehousing and resettlement management issues (Yau 2012); inexperienced managers (Karki 2004); and lack of effective cooperation among key interest groups (Cain, Weber and Festo 2018). Understanding these conditions is vital as they can prevent LR from success.

3.4.3 Strategies and Actions

According to the literature, developing a mechanism to effectively involve and allow the participation of landowners in LR planning, design, and implementation is essential in this process (Agrawal 1999; Home 2007; Turk 2008; Zabihi and Khiavy 2012). LR transparency to landowners and intergovernmental coordination are another two significant aspects of the literature. These factors highlight the importance of effective communication and coordination in the LR process. These two elements were thoroughly researched in the LR literature and their significance was considered in several studies worldwide (Karki 2004; Turk 2005; Agrawal 1999; Supriatna and van der Molen 2014; Tian, Guo and Yin 2017; Soliman 2017).

The literature also argues that considering cooperation and collective action in problem solving and facilitating a bottom-up approach for consensus building are two important strategies that can guide LR towards success (Hong and Brain 2012; Mittal 2014; Tian, Guo and Yin 2017). In addition, it states that the government needs to act more as a facilitator in LR rather than an implementer (Holtslag-Broekhof 2017; Almeida et al. 2018).

In terms of financial issues, the literature advises certain actions such as: attempt to recover all LR costs through land value capture or sale of financial land (Archer 1978; Turk 2008); use government subsidy to do LR in urban peri-areas (Nagamine 1986); pay enough compensation to affected landowners (Agrawal 1999; Mathur 2012);

landowners to contribute financially to LR besides their land contribution (Turk 2005); include infrastructure costs in LR (Turk 2008); establish a revolving fund system (Mathur 2012); prioritise redevelopment (flat-for-flat) compensation strategy over partnership and cash compensation methods (Yau 2012); and consider average property valuation based on floor-area value, not just floor area to promote equitable cost–benefit sharing (Condessa et al. 2015).

In addition, the literature also proposes specific legal strategies for LR in urban areas. For instance, developing a flexible legal structure that enables multiple planning and implementation methods is among these key strategies (Turk 2005, 2008; Home 2007; Muñoz Gielen 2014; Tian, Guo and Yin 2017; Holtslag-Broekhof 2017).

Several technical actions and strategies have also been discussed throughout the LR literature. These include: avoiding the perception of LR as the only tool for every case (Archer 1992); maintaining doubt in LR's effectiveness at preventing urban sprawl in city and region levels (Sorensen 1999); integrating the LR plan with the city master plan to determine suitable LR size, land contribution rate, and redistribution of readjusted plots (Turk 2005); improving expert and effective planning skills (Turk 2008; Home 2007); and ensuring the availability of an appropriate number of technical staff (Turk 2008).

3.4.4 Contexts

The LR literature confirms that a land registration system and database are among the key issues of LR that can seriously affect its success (Turk 2005; Byahut and Mittal 2017). This confirms that this important condition must not be overlooked. In addition, the literature specifies a few more conditions which are relevant to the LR context. These include: amount of publicly owned lands (Sorensen 2007); level of legal support for LR in the context (Mittal 2014; Erdem and Meshur 2009; van Der Krabben and Lenferink 2018); level of financial and technical support for LR in the context (Turk and Altres 2011); collective-action culture (Turk and Altres 2011; Cain, Weber and Festo 2018; Almeida et al. 2018); urgency for a capital-intensive method in contexts with budget limitations (Mittal 2014); availability of non-negotiable obligations (Gozalvo Zamorano and Muñoz Gielen 2017); pressure from the community to

improve living conditions (Byahut and Mittal 2017); and quality and reliability of context cadastre records (Byahut and Mittal 2017).

3.4.5 Intervening Conditions

Almeida et al. (2018) introduce five major management criteria that can affect LR success. These include: initiative and process leadership, stakeholders' relationship, competency and management skills of the LR managing body, operation rules and regulations, and applying international management practice experience. The success of LR can be improved if these criteria are applied efficiently and effectively, otherwise they can impact on it negatively.

According to the LR literature, there are other similar conditions that can affect LR in different ways. These are: real estate market conditions and fluctuations (Turk and Altres 2011; Cain, Weber and Festo 2018); the availability of financial support, such as government subsidies and a revolving fund (Karki 2004); a proper evaluation mechanism (Karki 2004); the effects of other land management methods (Turk 2005); level of support and participation of landowners (Turk 2005); methods of sharing costs and benefits (Sorensen 2007); and the level of neighbourhood attachment of landowners (Yau 2012).

Although the market condition is further supported in the literature (Turk and Altres 2011; Cain, Weber and Festo 2018), there are two significant conditions found to be key in challenging contexts: government policy towards LR and political factors, including insecurity.

3.4.6 Outcomes

Outcome conditions have been also discussed in LR literature. Some of these consequences could be negative, such as unfair distribution of basic infrastructure after LR (Karki 2004); however, most of the outcomes are positive. These include: provision of new title deeds (Zhang 2008); reallocation of economic resources among stakeholders (Zhang 2008); reallocation of conflict between interest groups and others (Zhang 2008); reallocation of land sources among various public sectors (Zhang 2008); changing or mitigating the bad history of post-conflict nations through change

in layout and structure of community and provision of new infrastructure (Home 2007); clarifying the intricate and unclear land tenure rights (Supriatna and van der Molen 2014); and provision of social housing (Gozalvo Zamorano and Muñoz Gielen 2017).

3.5 Land Readjustment Evaluation Framework

Yilmaz, Çağdaş, and Demir (2015) reviewed a wide range of ISI journal articles on LR practices worldwide and developed an evaluation framework in four major levels: policy, management and operational, external factors, and review process. The authors state that the rate of LR success in global context can be evaluated through this framework. This is one of the major developments of LR research as it provides a comprehensive view of LR in normal conditions. However, as the authors acknowledge, it may not be applicable to those contexts where the land title and tenure are unclear.

3.5.1 Policy level

Land policy, legal, financial, and social aspects are among the major policy factors that must be taken into account at the policy level. In the land policy aspect, the good practice of LR in the world demonstrates factors including: existence of a government policy for LR, prevention of plot speculation, LR must be quick and simple to apply, plan-based systematic implementation, using sanctions for municipalities without implementation programs, including infrastructure development and costs in the LR plan, consideration for low-cost housing, existence of a development agency (public, private, or community-based), using land area as a distribution base for homogenous areas and land value for other areas.

From a legal perspective, LR good practice includes the following issues: full legal recognition of LR by the government, including all details in planning and management of the LR project; a recovery system for costs, land value capture, and method of allocation; ensuring flexibility of the LR procedure in terms of financial model and implementers in different urban areas; ensuring LR uniformity and integration with other relevant laws such as land acquisition; provisions to make sure original landowners remain in the project area; provisions for those landowners who may not be happy with participation in LR or want to leave the project; consideration

of the challenge of land ownership disputes; conversion of land co-ownership to sole-ownership under certain circumstances; setting standards for all LR activities and procedures including planning methods, subdivision, valuation systems, and so on; and provisions for compensating affected landowners as a result of distribution difference.

Based on the financial indicators of the model, the self-financing feature of the LR procedure seems to be its most important financial aspect. In addition, the government should be responsible to cream off the development benefits and increments of the captured land values as the cost payers share the project costs. Another important financial issue in LR is to ensure that low-interest loans are available to start the project. Upon completion of LR and sale of financial land, this borrowed amount should be repaid. Further to such loan sources, there should also be a variety of other methods, such as subsidies, to be used for LR.

The last policy aspect is for LR to ensure consideration of social issues. These include: participation in LR, transparency of the process, ensuring that the costs and benefits are estimated and shared equitably and equally among landowners, and promoting understanding and confidence of landowners about LR.

3.5.2 Management and operational level

Once the policy issues are addressed, LR needs to be implemented and managed properly to succeed. Global best practices in this regard demonstrate certain indicators, such as: sufficient technical staff in terms of quality and quantity, provision of technical on-the-job training programs, and enhancing coordination and cooperation in the project through making a platform for exchanging experience and information.

Technical principles also play a major role in LR success. These principles include: assessing feasibility and suitability of land, area, and scope for LR and determining appropriate timing for the project, delivering the optimum shape of the parcels after LR, modelling allocations based on either land area or value, and applying expert real estate appraisal skills and knowledge.

3.5.3 External factors

Good universal LR practices utilise certain factors for LR success, such as: capacity development for LR through workshops, training programs and seminars, involving

research and research institutes in LR, using GIS technology and database, using good-quality data during planning and valuation, sufficient cadastral records, and minimising the effects of other (detrimental) factors such as political concerns on LR (Yilmaz, Çağdaş and Demir 2015).

3.5.4 Review process

The last component of the LR model is the review process. Yilmaz, Çağdaş, and Demir (2015) argue that best LR practices in the world require a review mechanism for LR to improve and develop the LR method regularly. This can ensure that LR can be tailored, based on the needs and requirements of each context. Overall, this evaluation framework is a useful tool to explore LR in challenging contexts.

3.6 Sustainability and Land Readjustment

Sustainability and sustainable urban land use is one of the latest developments which has influenced urban LR theories around the world in four major areas: economics, ecology, politics, and culture (James 2014). The influence from this concept suggests that the success of LR is determined through the aforementioned four aspects. It means that LR must ensure all resources are adequately utilised to achieve its targets, natural capital (the environment) is taken into consideration, human relationships and coexistence are promoted, and cultural identity in achieving LR targets is valued.

Lin (2010) examines the ecological footprint of urban LR (known as urban land consolidation) in Taiwan. Introducing an urban ecological assessment model with a set of assessment criteria at four levels and 23 indicators and using a group decision-making procedure called “habitual domain analysis”, the author argues that the negative ecological impacts of LR can be removed through this model.

The model is developed to address three main concerns: sustainability, human, and ecological. These involve water resource management, energy use, and waste minimisation as sustainable concerns; land use such as suitability, capacity, and building coverage ratio, as well as design and characteristics such as landscape and facility convenience as human concerns; and green space, corridors, biodiversity and strategic landscape system as ecological concerns (Lin 2010, 99).

3.6.1 Sustainable Social Infrastructure

One aspect of land readjustment research has been the provision of sustainable social infrastructure, such as schools, through LR technique. Uzun and Celik Simsek (2018) indicate that the government of Turkey has had many financial and technical difficulties in terms of provision of land for such educational purposes. Therefore, the authors examined how LR can assist the government to secure enough land for schools without any financial burden. After a deep analysis of the contextual conditions and requirements in terms of student needs, property rights problems in allocating school lands, and cost–benefit analysis, the findings suggest that LR can make a significant contribution to the planning and implementation stages of sustainable school lands management.

3.6.2 Land Readjustment and the Sustainable Development Goals (SDGs)

Passed on September 25, 2015 by the United Nations, the Sustainable Development Goals (SDGs) aim to improve the livelihood of humans worldwide by 2030 through 17 global goals and 169 targets. In this regard, Goal 11 relates to “making cities and human settlements inclusive, safe, resilient, and sustainable” (UN-SDGs 2015–2030). In line with this goal, LR can promote inclusiveness through participation of community members in the economic and social development process, provide space for basic education and health care facilities, maintain the social, cultural, and economic fabric of the community, and distribute costs and benefits equitably (Souza, Ochi and Hosono 2018, 4). In addition, LR can impact safety, resilience, and sustainability through improving sewer systems along with the provision of green space, parks and other necessary facilities for safer, more resilient and sustainable communities which can also enhance environmental sustainability (Souza, Ochi and Hosono 2018, 5).

To assist in achieving Goal 11, the United Nations has specified several targets which can be addressed by LR to a certain degree. However, there is not yet a study in the LR literature to review this relationship in a challenging context. The targets are described below.

Goal 11 — Target 1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

Land readjustment can significantly assist in achieving this target as one of its main objectives is to improve unorganised land plots and informal settlements through provision of basic infrastructure and services (Larsson 1997). In addition, LR has the potential to help with social and low-cost housing depending on the policies in each context (Nagamine 1986).

Goal 11 — Target 2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

As the conditions of the roads in most challenging contexts are poor, LR can assist in achieving this target through improving their quality and safety (Acharya 1988). This can ease transportation in the community and provide better road access to all community members including old persons, people with disabilities, women, and children.

Goal 11 — Target 3: By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

As discussed, LR is a participatory approach which requires landowners to voluntarily contribute their land for the project and also provides opportunity for the community members to be involved in planning, designing, monitoring and implementation to make fundamental changes in their communities (Agrawal 1999). As these changes are considered permanent, such as the provision of roads, LR can significantly contribute towards sustainable urbanisation and human settlement planning.

Goal 11 — Target 4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage

Maintaining the cultural and social fabric of the community has been one of the core concepts in LR theories and it is strictly practised in many nations (Byahut and Mittal 2017). Therefore, it can be said that LR is a tool which keeps cultural issues in a high regard to maintain the social fabric of communities while addressing their needs in a sustainable manner.

Goal 11 — Target 5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

Providing facilities such as potable water is among those benefits that are possible through LR (Archer 1992). This can notably improve the quality of life in the community and significantly reduce the number of diseases related to water contamination.

Goal 11 — Target 6: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

As discussed earlier in the definition of land readjustment, a certain amount of reserve-land income can be dedicated to green and public space (Bangkok 2010). These facilities can be used by all community members, including women, children, older persons, and people with disabilities.

Goal 11 — Target 7: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels

Through effective policy making, LR has the potential to respond to natural disasters including earthquakes in an efficient and effective manner (Hong and Brain 2012). In this regard, this thesis also aims to assist urban policy makers in challenging contexts to take effective steps when using one of the most important resources, which is land, more efficiently and effectively. As there are many areas in challenging contexts prone to natural disasters, such as flood, and earthquake, the theoretical insights from this thesis can assist in understanding these contexts and formulating the most effective policies to achieve this goal.

As the SDGs — and Goal 11 in particular — are a recent phenomenon, there is not much research available in the body of LR literature about the importance of these goals and how they might be achieved through LR. However, in line with the SDG 11,

previous LR research indicates that sustainability has been one of the key issues of contemporary LR theories (Lin 2010).

3.7 Land Readjustment in Challenging Contexts

The term ‘challenging context’ in this research refers to those contexts where there are several major potential concerns for LR. These concerns include: unclear and murky legal framework; complexity in urban land ownership, such as various types of informal land documents which are not recognised by the government; vast majority of urban dwellers being informal landowners; weak local and national public institutions in terms of technical capacity, urban policy and management; financial issues such as extreme budget constraints and unstable land market; socio-cultural factors, such as resistance to change and lack of trust on public agencies; and security conditions and terrorism.

The theories and theoretical implications of LR research indicate that LR strongly depends on the context of each country (Sorensen 2007; Turk 2008). In other words, the diverse political, legal, financial, technical, socio-cultural, and environmental contexts have deeply impacted LR around the world. These influences and theoretical implications have guided LR to be customised to meet the requirements of each context to be successful.

Legal support has been one of the most fundamental requirements for LR to succeed (Turk 2005; Alterman 2007). Although there are some cases where LR has been applied without national legislation (Souza, Ochi and Hosono 2018), the majority of LR literature emphasises that legal backup is vital (Turk 2008; Yilmaz, Çağdaş and Demir 2015). This factor can highly facilitate LR’s progress and let the project begin smoothly. However, in contexts where this tool does not exist or is not well-established, LR may face serious challenges. For instance, due to the lack of legal support, it could be extremely difficult to initiate the project or proceed with further planning, land redistribution, or conflict resolution issues.

Complexity in land ownership could be another important challenge for LR (Sorensen 2007; Home 2007; Archer 1992). In contexts where the land title and tenure are clear, LR implementation encounters minimum titling problems but in unclear contexts this issue could be very problematic as the real landowner(s) must be known and formally

recognised by the relevant government agency to facilitate provision of the readjusted land title deeds. This problem exists in many developing countries facing high urbanisation rates, such as Indonesia, Ethiopia, and Afghanistan. In addition, the variety of informal land documents may exacerbate the problem, because many of such documents require a complex investigation process to be accepted by the land title issuing authority.

Further to the land titling issue, the high number of informal landowners can also be a serious challenge (Nagamine 1986). In urban areas where most landowners are informal, LR could be very difficult. This is mainly because improving such vast informal areas requires a clear and comprehensive government strategy and policy, which can sometimes turn into a complicated political issue (Mittal 2014). Therefore, it can make LR challenging.

Another problematic issue can be weak local and national government agencies (Turk 2008). The available LR research indicates that the role of relevant government bodies in LR is extremely important in controlling and management (Almeida et al. 2018). However, not all governments have the strong technical capacity to effectively plan and manage this process. If LR is to be implemented in such contexts, it is necessary to investigate how it can deal with this issue and how it can be managed effectively for a favourable outcome.

While LR is a self-financed tool, it is still necessary that the government and the land market have a good and stable status (Sorensen 2007). In contexts where the government is facing financial hardship with serious budget limitations and with unstable land market, LR is expected to encounter serious challenges as it may not be possible to cover the operational costs of the project and recover the major infrastructure costs in full through the sale of LR 'reserve land' (Karki 2004).

The next challenge is related to socio-cultural issues. When landowners have a cooperative culture and trust their local bodies, LR process is relatively smooth (Needham 2007). However, it can be very hard in situations where landowners are resistant to change and do not trust their government agencies to bring those changes fairly. This makes LR more difficult in such contexts (Davy 2007; Mittal 2014).

In addition to all these challenges, insecurity and terrorism can also affect the LR process. Terrorism is currently considered an international threat and has already

affected some nations. Unfortunately, the current literature on LR does not cover the impact of this important factor as LR has rarely been practised in such contexts.

3.8 Gaps in Land Readjustment Research and Literature

The available literature on LR seems to be very fragmented, under-theorised and under-researched in certain contexts. Upon careful review and analysis of the literature, two main gaps were found. The first one is a theoretical gap for challenging contexts. As explained earlier, the challenging contexts have seven characteristics that separate them from other contexts. These are: lack of legislation, complexity in land ownership and documents, vast number of informal settlements, weak public organisations, extreme financial constraints and unstable land market, socio-cultural factors such as resistance to change and lack of trust in the government, and insecurity and terrorism. Although there is some fragmented research on certain concepts, they are not discussed in a comprehensive way to cover all aspects. For instance, Yilmaz, Çağdaş, and Demir (2015, 166) acknowledge that their LR evaluation framework is designed to evaluate and compare the LR system only in widely used areas where title and tenure of land are clear. However, in contexts where most urban dwellers do not have security of tenure with basic urban infrastructure, current LR research does not provide enough theoretical insights and support.

The second gap is insufficient research on the relationship between LR in challenging contexts and the United Nations' SDGs. The SDGs are one of the most important current global agendas which require all countries to incorporate these goals into their national policy priorities and take every step to achieve them by 2030. As LR is a tool with the potential ability to create a comprehensive change in communities in a sustainable manner, it is considered an important technique in achieving the SDGs. There is some recent research on how LR might assist in achieving the SDGs (Souza, Ochi and Hosono 2018); however, there is absolutely no research to examine this important relationship in challenging contexts.

These two gaps are important because LR seems to be a workable tool in challenging contexts and if enough theoretical insights are provided with incorporation of the SDGs, it can significantly improve these special contexts in line with the global trend. Therefore, this research intends to develop a tool for understanding LR in challenging

informal contexts through an innovative model which is not currently addressed in the existing literature.

3.9 Chapter Summary

This chapter presented and discussed the history of LR research with explanation of its theoretical framework worldwide. In addition, the LR success criteria were introduced in four major levels: policy, management and operational, external, and review process, followed by highlighting the importance of LR in terms of the United Nations' SDGs. Two gaps in the literature were identified and discussed. The following chapter explains how this research is set out to fill these research gaps by discussing the methodological approaches to determine the most suitable methods for data collection and analysis.

Chapter 4: Methodology

4.1 Introduction

This chapter explains how this research is carried out in terms of data collection, analysis, ethical issues and reporting style. The research design, which includes case study preparation, protocol and database, is discussed, followed by an explanation about how the required data are collected, what data collection principles are applied, how the data are analysed, what ethical issues were considered, and finally how the findings are reported. This thesis seeks answers to the following questions:

Main Question: How can **land readjustment (LR)** be used in **challenging contexts** in developing countries?

Sub-Question: How can the output of this thesis contribute towards achieving the **Sustainable Development Goal 11 (SDG 11)** — make cities and human settlements inclusive, safe, resilient and sustainable, in challenging contexts?

With a case study in Kabul, this research aims to develop and evaluate a specific theoretical framework for LR through a qualitative analytical method to guide and support urban decision makers with the LR process in challenging contexts more broadly. At the same time, it intends to assist in developing policies towards achieving the SDGs to make these contexts a better place to live.

4.2 Research Design

This thesis employs case study (Yin 2014; Denzin and Lincoln 2000; Creswell 2007; Stake 1995) as the research strategy and the coding technique as detailed by Saldaña (2013) as the method of data collection and analysis. Using a single case study, the aim is to investigate and examine the research question in its real-world context through pure qualitative data and develop a substantive theory (Glaser 1965; George 2005; Smith and Geoffrey 1968) for LR in challenging contexts. This can generate a better understanding of the situation (Mills, Durepos, and Wiebe 2009) and also provide the ground for a formal theory (Strauss 1987). The rationale for choosing the

case is explained below, followed by the research question, tools for quality measurement, case study protocol and database.

There were two reasons for selecting Kabul as a case study. First, among the world's capital cities Kabul is an extreme and unusual case in terms of the size of its informal settlements. According to Kabul Municipality (2018), more than 70% of the city has been developed informally. While urban development tools, such as urban upgrading, have failed to correspond to Kabul's notorious informal urbanisation, LR recently attracted the attention of the country's local policy makers. This led to the creation of a unique procedure for LR and urban redevelopment approved by the administrative board of Kabul Municipality on 22 November 2017 to tackle the problem of informal settlements. Therefore, this case was chosen based on its uniqueness (Stake 1995) and importance (Yin 2014) to assist with the future policy direction of LR in informal settlements in Kabul. Second, accessibility of the case (Creswell 2007) to the researcher as an Afghan national was a significant factor that enabled this research. It should be noted that this case is extremely hard to access for empirical research because of security concerns for international researchers and lack of financial and/or technical capacity for local researchers. Through this inductive research, invaluable information is found which reveals the specific characteristics and requirements of informal settlements for LR in Kabul.

4.2.1 Tests of Quality

In order to maintain the quality of this thesis, the below three measures are discussed to ensure the findings are accurate, consistent, and of high quality.

4.2.1.1 *Credibility*

One of the tools to measure the quality of a case study is usually through the 'internal validity' or credibility tool. This tool identifies whether the correct operational measures for the research concepts are used. Yin (2014, 47) believes that three tactics can increase this in case studies: using multiple sources of evidence (during data collection), which is known as "data source triangulation" (Stake 1995); establishing a chain of evidence (during data collection), which is also known as "external audits" (Erlandson 1993; Lincoln and Guba 1985; Merriam 1988; Creswell 2007; Miles and Huberman 1994) or "investigator triangulation" (Stake 1995, 113; Denzin 1989); and draft review of the case study report by key informants (during the composition stage),

which is regarded as “contestability” (Stake 1995, 112), “peer review” (Glesne 2016; Erlandson 1993; Anzul et al. 2003; Merriam 2016, 1988) or “peer debriefing sessions” (Lincoln and Guba 1985).

This research employed all three aforementioned tactics to enhance the research credibility. Several data sources, including interviews, observations, and document review were used for data source triangulation and all acquired data was stored in a computer-assisted software (NVivo) in a systematic order to maintain the investigator triangulation. In addition, the final draft of the findings was reviewed by five of the research participants (three LR experts and two officials from Kabul Municipality) to ensure contestability through peer review.

4.2.1.2 *Transferability*

External validity or transferability is a test of generalisability of the research findings and determines whether these results can be generalised to other situations and circumstances. In this regard, Yin (2014, 40) highlights that:

“A fatal flaw in doing case studies is to consider statistical generalization to be the way of generalizing the findings from your case study. This is because your case or cases are not ‘sampling units’ and also will be too small in number to serve as an adequately sized sample to represent any larger population. Rather than thinking about your case as a sample, you should think of it as the opportunity to shed empirical light about some theoretical concepts or principles, not unlike the motive of a laboratory investigator in conceiving of and then conducting a new experiment. In this sense, both a case study and an experiment may have an interest in going beyond the specific case or experiment. Both kinds of studies are likely to strive for generalizable findings or lesson learned — that is, analytic generalization — that go beyond the setting for the specific case or specific experiment that had been studied”.

Furthermore, Lipset, Trow, and Coleman (1956, 419–420), three famous social scientists, also discuss in their single case study that “generalizing” is the goal, not “particularizing” analysis. Similarly, Denzin and Lincoln (2000, 435–449) consider optimisation of understanding of the case as a goal rather than inferring generalisation from it. They tend to place more emphasis on lessons learned from a single case study. Therefore, based on the above arguments, the findings of this case study will be analytically generalisable, not statistically.

4.2.1.3 *Dependability*

Dependability or reliability is referred to a process in which the results of a research remain the same if repeated (Yin 2014; Creswell 2007). Akin to ensuring credibility, the reliability of the research can also be tested through investigator triangulation (Denzin 1989; Stake 1995) or external audits (Lincoln and Guba 1985; Miles and Huberman 1994; Merriam 2016). Yin (2014, 48–49) believes that “*there are two major tactics to overcome the challenges of reliability: first is the use of a case study protocol to deal with the documentation problem in detail and second, the development of a case study database*”. He further adds that “*a good guideline for doing case studies is therefore to conduct the research so that an auditor could in principle repeat the procedures and hopefully arrive at the same results*” (Yin 2014, 49). For this purpose, a case study protocol is developed and applied followed by a case study database for research reliability accreditation. These two significant tools are discussed below.

4.2.2 Case Study Preparation and Protocol

Prior to starting data collection, a set of preparation activities was undertaken as well as the research ethics approval to increase the effectiveness and reliability of the case study. These preparations included familiarisation with the necessary skills and attributes of a good case study researcher and development of a case study protocol, which are discussed in the following.

4.2.2.1 *Desired skills and values*

In order to conduct a quality case study, Yin (2014, 73) introduces five desired attributes for a skilful investigator: “(1) asking good questions and interpret the answers fairly, (2) be a good listener and not trapped by existing ideologies or preconceptions, (3) stay adaptive, so that newly encountered situations can be seen as opportunities, not threats, (4) have a firm grasp of the issues being studied, even when in an exploratory mode, and (5) avoid biases by being sensitive to contrary evidence, also knowing how to conduct research ethically”. All these skills and values were practised, developed and confirmed in several discussion sessions with the thesis supervisors before commencing data collection in order to obtain reliable information from the interviews. Then the case study protocol was developed.

4.2.2.2 *Case study protocol*

As stated earlier, developing a protocol is one of the best ways to increase the reliability of the case study (Tellis 1997). Yin (2014, 84–94) introduces four major sections for a case study protocol, namely: “(1) overview of the case study, (2) data collection procedures, (3) data collection questions, and (4) guide for the case study report”. All these sections are followed in this research, as explained below and the completed protocol for the Kabul case study is available in Appendix 3.

First, the protocol starts with highlighting the objectives of the thesis, followed by the research questions, key readings, and determination of its role in directing the case study investigator during data collection. Then the protocol continues with identifying the data collection procedures which cover coordination with the field contacts, making a data collection plan (including what type of evidence is required, who is to be interviewed, what events are to be observed, and what other documents should be studied while on site) and other necessary preparation before the fieldwork. Once the procedures are clear, the data collection questions are included in the protocol. Finally, the protocol is completed with the presentation of a guide for the findings and the case study report. This guide starts with an outline and format of the data, followed by explanation about how other documents have been used in the research along with referencing information. These four principal elements of the case study protocol are discussed in more detail below.

1. Overview of the case study

In the first part of the protocol, the objectives of the case study are stated, followed by the case study questions and the research participants’ information sheet, rationale for the case study, and essential readings related to the topic. The information sheet was developed in both English and Dari (the local language in Afghanistan) for the research participants, to provide them with some basic information about the investigated topic, the researcher, privacy and ethical issues relevant to the research. It also includes contact information for feedback about the research or any other communication, including the opportunity for a complaint directly to the ethics officer at the university, if such need arises. A copy of both the English and Dari versions of the information sheet is available in the case study protocol in Appendix 3.

2. *Data collection procedures*

As the data need to be collected from people and organisations in their everyday situations in a real-world context, a set of procedures and plan was necessary to obtain the required information and data during the short opportunity of field visits to Kabul. As such situations are quite different from a closed environment like a laboratory controlled entirely by the researcher, it is essential that the investigator has a clear and well-planned field procedure to be able to manage the real-world conditions and obtain the required data and evidence within the given time frame. Yin (2014, 89) highlights several major tasks in the data collection process to be included in the case study protocol:

*“Gaining access to key organizations or interviewees;
Having sufficient resources while doing fieldwork — including a personal computer, writing instruments, paper, paper clips, and a pre-established, quiet place to write notes privately;
Developing a procedure for calling for assistance and guidance, if needed, from other team members or colleagues;
Making a clear schedule of the data collection activities that are expected to be completed within specified periods of time; and
Providing for unanticipated events, including changes in the availability of interviewees as well as changes in your own energy, mood, and motivation while doing fieldwork.”*

Accordingly, these major tasks were undertaken for this study, as explained below:

Initial consent of the interviewees: Once the research ethics approval was obtained from Curtin University, a series of contacts was made through phone calls and emails with potential interviewees to obtain their initial consent to participate in the interview.

Fieldwork resources and technology: A personal laptop computer provided by Curtin University for the research fieldwork was used during the interviews, together with a voice recorder, and other necessary writing instruments.

The investigator had the privilege to use the *facilities and accommodations* at his home university in Kabul for the first phase of data collection in 2016 (please see the invitation letter by Avicenna University to the investigator in terms of fieldwork

cooperation and assistance). For the second phase of the data collection in 2017, the investigator had to follow a tougher procedure for gathering primary data set by the Curtin University Critical Incidents Team, due to security concerns in Kabul.

Procedures for assistance and guidance: In addition to local assistance and cooperation by the investigator's home university, all three supervisors of the thesis from Curtin University closely followed the fieldwork progress during each phase of fieldwork and provided constructive feedback through Skype and email.

Schedule for data collection activities: Prior to each interview phase, a specific fieldwork schedule was prepared by the investigator and confirmed by the thesis supervisors so that necessary data could be collected from the site.

Provisions for unforeseen circumstances: Doing a case study fieldwork in a country with high security risks requires a provision for unpredicted situations to be able to complete the work within the given time frame. As it happened, this was the main factor which increased the duration of both fieldwork trips because of several terrorist attacks and security threats. However, as such circumstances were predicted and expected in advance, the duration of the fieldwork was determined in accordance with these challenges.

3. *Data collection questions*

This is the core part of the protocol and represents the research line of inquiry. Yin (2014, 90–91) specifies five levels of questions for case studies:

“Level 1: Questions asked of specific interviewees;

Level 2: Questions asked of the case;

Level 3: Questions asked of the pattern of findings;

Level 4: Questions asked of an entire study — for example, calling on information beyond the case study evidence and including other literature or published data that may have been reviewed; and

Level 5: Normative questions about policy recommendations and conclusions, going beyond the narrow scope of the study.”

These five levels of questions highly assisted the investigator to develop the most suitable interview questions for the LR experts, the government officials from Kabul Municipality, and the informal landowners. Please see Appendix 3 for the interview questions.

4. *Guide for the case study report*

The last section of every case study protocol is a summary of the outline, format, and audience of the case study report (Yin 2014, 93). This should be compiled prior to the data collection. The thesis targets the urban policy makers in Afghanistan as one of its major audiences. Please see this guide in the case study protocol in Appendix 3.

4.2.3 Case Study Database

A case study database is created to organise and document the data collected for a case study. It is not only one of the significant techniques to increase the case study reliability, but also it is one of the four major principles of data collection (Yin 2014, 123). These principles are discussed in detail later in this chapter. Yin (2014) further argues that there are a few challenges in developing a good case study database that need to be addressed. These challenges are as follows:

“Organizing and putting ‘field notes’ in manner that other people, including the researcher, be able to retrieve them properly and efficiently at some later date could be problematic. In addition, retrieving and matching each document used during the data collection and analysis for the auditor could be confusing. The other challenge is that usually tabular materials such as survey and other quantitative data are not stored for later retrieval. Therefore, it is recommended that all new narrative materials in all forms be classified and organized so that one can find them easier”. (Yin 2014, 124)

These have been considered in this thesis in the following way: all primary and secondary data including all interview transcripts, audio records, maps, public reports, and letters, used in this thesis are stored and categorised in a computer-assisted qualitative data analysis software (CAQDAS) known as NVivo in order to enable other persons to inspect the entire database (Saldaña 2013; Strauss and Corbin 1990; Creswell 2007). Yin (2014, 124) further confirms that “the creation of a case study database markedly increases the reliability of the entire case study”.

4.3 Data Sources

Stake (1995) and Yin (2014) recommend interviews, document reviews, observation, and archival records as essential ways to gather data in case study research. In order to collect primary data for this research, a total of 26 interviews were carried out based on purposeful criterion-I sampling and purposeful snowball sampling (Patton 2002) between March 2016 and October 2017 during two fieldwork trips in Kabul. In addition, the investigator's observation during the fieldwork, along with document review and archival records, are used to support the interview findings.

4.3.1 Interviews

“Interview is one of the most common and powerful ways in which we try to understand fellow human beings” (Fontana and Frey 2000, 645). The primary source of data collection for this research are 26 semi-structured interviews conducted over a period of two years in Kabul. These interviews are transcribed from Dari and Japanese languages into English and then confirmed by all interview participants through email, face-to-face discussion and correction, and over the phone (please see Appendix 2 for further details on how the interview data are confirmed). In addition, a sample of interview transcriptions is available in Appendix 4. Table 4.1 demonstrates the interviewed persons for this research, which include: 11 local government officials, eight experts of the field, six informal landowners living in the informal settlements, and one authorised representative of the private sector (please see Appendix 1 for further details about each interviewee).

Table 4.1: Interview Participants

No.	Informant	Number	%
1	Local government officials from Kabul Municipality	11	42.3%
2	Land readjustment (LR) experts	8	30.7%
3	Informal landowners	6	23.1%
4	Private sector	1	3.9%
	Total	26	100%

Drever (1995) believes that semi-structured interviews are particularly suitable and a very flexible technique for case studies at such scope as the interviewee has a certain

degree of freedom to speak about their main concerns and express the issues according to their preference. Therefore, after developing the main questions, the interviews were conducted in a semi-structured format and it was left to the participants to discuss the issues from their personal viewpoint in the real-world context.

4.3.1.1 Interviews with local government officials

During two fieldwork trips on site, 11 government officials from Kabul Municipality were chosen for this study based on purposeful criterion-I sampling (Patton 2002). The objective of this type of sampling is to identify and choose individuals who meet important predetermined criterion(s) (Palinkas et al. 2015). The main criteria for choosing these officials were:

- Representing an authority for LR policy and/or planning and/or implementation.
- Having technical knowledge of LR.
- At least three years of work experience relevant to LR in any form (management, planning, technical, advisory).

These criteria directed the use of local government officials from the Department of City Planning and Implementation of Kabul Municipality as it is the governing authority for developing policy, procedure and plans for LR in Kabul city. The participants were selected among the senior management level as well as relevant operational staff.

4.3.1.2 Interviews with land readjustment experts

Eight LR experts were chosen for this study, based on the same sampling method used for choosing the government officials. The main criteria applied were:

- Deep technical knowledge of LR.
- Relevant academic education.
- Familiarity with the Kabul urban context, especially informal settlements.
- At least three years of work experience relevant to LR.

Although it wasn't a criterion, this study endeavoured to specifically target experts with peer-reviewed academic publications about LR, informal settlements and any relevant topic besides the aforementioned criteria.

4.3.1.3 *Interviews with informal landowners*

In order to triangulate the findings from the interviews with LR experts and government officials, six informal landowners in Kabul were also interviewed. These interviews sought to discover the views and opinions of informal landowners about LR in their communities.

The main criteria for selecting these interviewees were:

- Residing in informal settlements for the last three years as an informal landowner.
- Not in possession of an official land document issued by a government agency.
- Having informal land documents (which are not recognised by the government).
- Willing to participate in the interview.

The interviews in this part continued based on the purposeful snowball sampling method (Patton 2002; Yin 2014). The main reason for using the individual snowball sampling was the difficulty speaking to informal residents about their land issues, including title deeds. This matter has always been a complex and sensitive issue and most people refrain to speak about it with anyone. Following the above criteria and this limitation, six informal landowners were eventually qualified for interview.

These interviews were determined in the second phase of data collection for triangulation purposes to triangulate the findings from LR experts and the government officials' interviews and to compare what the informal landowners think about LR. The findings of the interviews from experts and government officials demonstrate that informal landowners can significantly affect LR through their understanding, approval and participation. In other words, understanding, approval and participation of informal landowners is one of the greatest challenges of LR in extreme cases of informal settlements. This finding was required to be supported and confirmed by the informal landowners; therefore, a separate questionnaire was designed for this purpose. In addition, the informal landowners were encouraged to express their opinions and views about LR in their communities, share major concerns, and present their recommendations to further strengthen the theory.

4.3.1.4 *Interview with a private LR consultancy company*

During the data collection, it was required to obtain critical information from the private sector, specifically a private company with LR expertise and experience in any form. This was to understand how the private sector thinks about LR in such contexts. After an extensive search, the investigator succeeded in interviewing a representative from a Japanese consultancy company who had LR experience in a Kabul context through providing LR-related training and capacity building programs. The interview was conducted via Skype through a certified interpreter and its transcription was confirmed through email on 14 August 2017 (please see Appendix 2).

4.3.2 **Archival Records**

The most important secondary source of data used in this research is a comprehensive urban survey (as shown in Table 4.2) conducted jointly by the urban development authorities of the Afghan government, Australian Government, and UN-Habitat.

Table 4.2: Archival Records Information

Type of archival records	Year published	Organisation	Remarks
State of Afghan Cities (volume 1 and 2)	2015	Jointly by The Ministry of Urban Development Affairs of Afghanistan, Kabul Municipality, and the Independent Directorate of Local Governance	This survey was supported by the Australian Government, Afghanistan government, and UN-Habitat.

4.3.3 **Document Analysis (Land Readjustment Procedure)**

The LR procedure, which is prepared by the LR Division of the City Planning Department of Kabul Municipality, was also used in this study. This government document provides details on how LR should be undertaken in the Kabul context. Other more general literature sources on LR were also reviewed.

4.3.4 Observations and Field Notes

In addition to the aforementioned sources of evidence, the investigator observed the informal settlements in Kabul during two fieldwork trips, namely during January–May 2016 and January–May 2017. During these direct observations of the case, the investigator took field notes and collected several photographs from the informal settlements. This served as complementary evidence and supporting data and significantly assisted in developing useful codes and concepts. Excerpts from the field notes were used in discussion of the main findings (several examples of these excerpts can be found in the next chapter).

4.4 Data Collection Principles

Yin (2014, 118) believes that there are four leading principles that are significant to any data collection process in case study research. He emphasises that if these rules are incorporated into a case study during data collection, its quality will increase substantially. These principles are explained as follows in the next three sub sections:

4.4.1 Using Multiple Sources of Evidence

Yin (2014, 105) believes that “there are six major sources of evidence that are most common in case study research: interviews, documentation, archival records, direct observation, participant-observation and physical artefacts”. This research benefited from four of these types of evidence during the data collection process, which are: (1) a total of 26 semi-structured interviews in Kabul, (2) archival records including the recent surveys in Afghanistan, (3) documents such as the LR procedure prepared by Kabul Municipality, and (4) direct observation. Given the nature of the research topic, the use of physical artefacts and participant observation was not appropriate. Yin (2014), and Golafshani (2003) believe that if the findings of the case study are corroborated with several sources of evidence and converge the same findings (data triangulation), this can help to strengthen its credibility.

4.4.2 Creating a Case Study Database

As discussed earlier, all primary and secondary data including interview transcripts, audio files of interviews, public reports, survey data, and documents used in this thesis are stored and categorised in a computer-assisted qualitative data analysis software (CAQDAS) known as NVivo. It is divided into five categories, namely: all interview audio files and transcripts, archival records and documents, photos and memos taken during the fieldwork, literature review, and the research administration including research ethic approvals. This can enable other researchers to easily understand the data collection and analysis process of this thesis.

4.4.3 Maintaining a Chain of Evidence

Yin (2014, 127) specifies that in order to increase the reliability of the research data, a chain of evidence should be maintained. This allows an external observer or reader of the thesis to follow a clear chain on how the evidence is used in each stage of the study, from the research question to the conclusion to support the findings. There are four important issues about this principle (Yin 2014, 127–128):

(1) The reader should be able to find adequate citation or footnotes about the relevant source of evidence for a specific finding and conclusion, which is followed in this thesis. (2) If inspected, the specific sources must contain the actual evidence as cited. Furthermore, the circumstances under which each evidence has been gathered, such as time and location of the interview, should be included in the method part, which is strictly adopted in this thesis. (3) All these circumstances should match with those declared in the case study protocol to show that the data collection has been done accordingly, which is an integral part of this study. (4) Finally, the link between the protocol questions and the original research questions should be obvious in a quick review, which is followed in this case study.

Overall, the ultimate and desired “chain of evidence” is achieved when the reader can find obvious cross-referencing to methodological procedures and to the outcome evidence after moving from one part of the case study to another. In this thesis, the research questions are clearly linked to the case study protocol and adequate citations are provided for each specific evidentiary source in the case study database.

4.5 Data Collection and Analysis

In data collection and analysis, this research adopts the coding technique explained by Saldaña (2013) — a clear coding system including open coding, axial coding, and selective coding — to guide the research analysis to develop a model for LR in challenging contexts. The main reason for using this technique is that it is widely accepted in qualitative research (Wells 1995; Tolhurst 2012) as well as being recommended for less experienced researchers due to its clear procedures in a coding system (Creswell 2007).

4.5.1 Analytic Tools

As Strauss and Corbin (1998, 218) recommend, there are several tools and techniques such as memos that can assist the researcher during the initial stage of the coding process. These memos can be in the form of theoretical notes and code notes. In addition, tools such as using questions, analysis of a word or phrase, red flags, and so on can assist with theoretical sensitivity.

4.5.1.1 Memos — theoretical notes

Memo writing is an essential part of qualitative analysis (Glaser 1998). This refers to writing ideas relevant to the research phenomenon that emerge during the coding process in order to assist in relating the emerged codes and concepts together in writing up the theory (Savin-Baden and Major 2013). Table 4.3 shows some examples of theoretical notes triggered by the interview transcripts.

Table 4.3: Examples of Theoretical Notes

Concept	Theoretical notes
LR implementer	Participants were requested to comment on whether the government should be the LR implementer in informal settlements. In this regard, some believed that the government should be the LR implementer as it has enough influence and legal power in such areas. However, some others stated that the government does not have enough financial and technical capacity to act as LR implementer. So, it seems that there are strong relationships between implementation, financial capacity, technical capacity, and legal power.
Financial support	Land readjustment is supposed to be a self-finance tool but why have almost all participants emphasised the financial support? It is because LR may not be able to fund the entire project costs through reserve land or financial land due to various reasons. Some participants spoke about the unstable land market. It seems that there is some relationship between the land market condition and financial support. If the condition of the land market improves, then it is more likely that the sale of financial land could cover the project cost and consequently lesser or no financial support may be required.

4.5.1.2 *Constant comparison*

Constant comparison is one of the key components of this study (Glaser and Strauss 1967). It refers to comparison of concepts and categories inside and between one another to facilitate the development of categories and establish stronger relationships between them. This was applied through comparing concepts with concepts, concepts with categories, as well as category with category during the data collection and analysis process to enrich the theoretical level of this thesis.

4.5.1.3 *Theoretical sensitivity*

In order to maintain a balance between creativity and the development of a good theory, Glaser (1978) discusses that the researcher should avoid using his or her previous personal and professional experience and literature in the data analysis process. This is referred to as “theoretical sensitivity”. Strauss and Corbin (1990) also argue that utilising this tool in theory development leads the analyst to view the research context and its relevant data in a new perspective and discover the data’s potential to build an inductive model which emerges from the body of data.

As Strauss and Corbin (1998) suggest, there are five specific ways which can be used to enhance theoretical sensitivity. These are: the use of questioning, analysing a particular word, phrase, or sentence, the flip-flop technique, making close-in and far-out comparisons, and waving the red flag. Table 4.4 demonstrates how these techniques are used in this research to enhance theoretical sensitivity.

Table 4.4: Examples of Enhancement of Theoretical Sensitivity

Techniques	Explanation on how the technique was used
Questioning	Community participation was emphasised by all participants as one of the key factors of LR in informal settlements. Why did all participants mention this factor? Who are the community members? Are they the informal landowners or everyone who currently lives in informal settlements? Why should they participate in LR? How do they benefit from LR? What measures have been taken or should be taken to attract community participation? What are the participation criteria? How can participation of the informal community in LR be ensured?
Analysing a word, phrase, sentence	During the interviews, all participants spoke about “informal landowners”. There are two types of informal landowners in Kabul. The first one is those private lands where there has been at least one formal principal landowner in the past, but the ownership has been exchanged without formal registration. Usually such lands can be cleared through the “reverse possession” procedure of Kabul Municipality. The second type is when the land belongs to the government, but it has been grabbed illegally by warlords or other influential land grabbers, partitioned and sold to ordinary residents. These informal lands cannot be cleared through the reverse possession process.
Waving the red flag	A few participants raised the issue that LR would “never” succeed in informal settlements without a specific government budget for the first few projects. This promptly created several questions such as: What happens if some donor agencies temporarily support LR financially? What if the local informal communities support LR with some investment? If the government can provide some subsidy or loan for LR, instead of a budget, then how would the scenario be changed?

4.5.2 Analytical Procedure

The analytical procedure for this thesis comprises three main components, namely open coding, axial coding, and selective coding (Saldaña 2013). These are the main steps in developing a theory (Glaser and Strauss 1967).

4.5.2.1 Open coding

Strauss and Corbin (1998, 61) define open coding as “the process of breaking down, examining, comparing, conceptualising, and categorising data”. This is the first step of the analytical procedure (Saldaña 2013). Therefore, all collected data were broken down into small pieces, each was labelled with a short name, and then all these descriptors were grouped into similar categories (Charmaz 2014). Once the interviews were transcribed, they were reviewed one by one to understand the main points discussed and highlight any new information, concept, idea, or situation. Then, all the transcripts were imported into NVivo, a well-known computer software for qualitative data analysis. Each interview was reviewed again and then labelled into several codes (nodes) based on significance, relevance to the research topic, frequency, and newness

(Saldaña 2013). The first level of coding was carried out based on the Initial (Open) Coding principle (Saldaña 2013; Strauss 1998; Charmaz 2014; Corbin and Strauss 2014; Glaser 1978). The below five steps including Table 4.5 and Table 4.6 demonstrate how open coding was carried out in this research.

Step 1: Find and underline key phrases in interview transcripts

In order to gather the primary data for this research, a total of 26 interviews were conducted between March 2016 and October 2017 during two fieldwork trips in Kabul. These interviews were then transcribed from Dari and Japanese languages into English and then confirmed by all the interview participants through email, face-to-face discussion and correction, and over the phone. Appendix 2 provides further information on how each interviewee presented their response. Furthermore, a sample of these interview transcriptions is available in Appendix 4.

Once the interviews were transcribed, they were individually reviewed by the investigator to understand the main points discussed and highlight any new information, concept, idea, or situation. Then, all the transcripts were imported into NVivo. Each interview was reviewed again line by line (Chesler 1987) and important information was underlined based on significance, relevance to the research topic, frequency, and newness (Saldaña 2013).

Step 2: Restate Key Terms

After underlining this key information, they were restated in fewer words and phrases so that they can be conceptualised or be grouped into similar concepts. Table 4.5 demonstrates a few examples of how this process was carried out.

Table 4.5: Examples of Paraphrasing Key Terms in Shorter Expressions

Underlined key statements in the transcripts	Restated key terms
<p>To me, LR as we know it in India (known as Town Planning Scheme or TPS) can definitely be applied in informal areas also but <u>it is mostly used in relatively open areas or peri-urban areas with ease</u>. Therefore, I guess <u>it is difficult to implement LR with its full benefit in informal settlements in Kabul</u>.</p>	<p>It is easier to do LR on peri-urban or open areas</p> <p>Difficult to do with full features in Kabul</p>
<p>Government can improve conditions by <u>retrofitting physical and social infrastructure facilities</u> in these settlements <u>adopting a lower than usual standard</u> due to <u>scarcity of space</u>. This may be achieved <u>through a regularisation process without much physical alteration in the layout of the area</u>.</p>	<p>Retrofitting physical and social infrastructure to improve conditions of informal settlements</p> <p>Adopting a lower than usual standard is recommended</p> <p>Scarcity of space as the main reason for reducing LR standards</p>
<p>In my opinion, land readjustment should be carried out <u>in the areas where land value increase is ensured</u> such as <u>suburban parts of the city, agricultural land use which is converted to urbanisation promotion area, etc.</u> In the central part of the city where land value has already increased and conducting land readjustment project does not affect much the land value, <u>other methods such as urban redevelopment, etc. should be considered</u> as it is well established that those urban cores have <u>the potential to increase Floor Area Ratio (FAR)</u>. However, in the areas located <u>in hazardous locations such as under the risk of flooding, landslide, etc.</u> using government subsidy to improve the situation through LR is recommended.</p>	<p>Land value as an important factor for LR</p> <p>Examples for LR target areas that result in land value increase</p> <p>Other methods such as urban redevelopment could be more promising in city centres in terms of land value increase</p> <p>Use government subsidy for LR in hazardous locations</p>
<p>In a country like Afghanistan where <u>land readjustment is being implemented for the first time and the mechanism is not well established</u>, <u>government</u> should be <u>LR performer</u>. However, when the mechanism is well established and the method is well disseminated among the <u>public/residents, implementation by landowners' association</u> and <u>private sector</u> should be considered.</p>	<p>LR mechanism is new and not well-developed in Afghanistan</p> <p>LR stakeholders and development agencies: government, landowners' association, private sector</p>
<p>The government should support LR projects <u>with initial seed money in the form of a loan</u>. As the financial mechanism of Afghanistan is not well established and these densely built-up informal settlements require money upfront, it is <u>not possible to sell the financial lands at first to make initial budget</u> for the project or even in some cases it is possible that there is no financial land thus the project will face problems for the procurement of initial budget required for construction. Of course, one way is to <u>provide subsidies by the government</u>; however, I don't think that is the only option. <u>Another option could be loans for the project which will be returned</u>. In Japan, also both subsidies and loan systems exist which UR (urban renaissance agency) used to take advantage of the system to loan the</p>	<p>Government to support LR with loans in the outset</p> <p>Providing government subsidy for LR as another option</p> <p>Providing loan for LR can be more effective as it can be returned and used in cycles for many projects.</p>

<p>budget (probably from post office saving) and return after the development. If the public (government) only provides subsidies, it would require more funds for further development; however, if it is in the form of a loan, <u>the same budget can be used in cycles for many projects.</u></p>	
<p style="text-align: center;">Underlined key statements in the transcripts</p>	<p style="text-align: center;">Restated key terms</p>
<p>If the government can <u>provide with and relocate the area residents to free housing services temporarily</u> until the LR project is finished, it can significantly accelerate the process of LR in the community. <u>A good showcase can significantly increase the popularity of LR and ease this process in other similar conditions.</u></p> <p>In addition, the local bodies must start <u>developing the main roads and other public amenities</u> across the city and the informal settlements in accordance with the new Kabul Master Plan to show its <u>commitment</u> to people.</p>	<p>Free temporary accommodation during LR can promote the speed of the project</p> <p>A good showcase for LR can make it popular and easy to implement in other similar contexts</p> <p>Developing main roads and other public amenities immediately can show government commitment in informal communities</p>
<p>Yes, you are right, especially <u>in the last three years the economic and financial condition</u> of the informal landowners in this neighbourhood has <u>not been good</u> and they <u>do not have that much money right away to develop their own lands</u>. In the last 13 years that I have been living here there have been <u>no recreation facilities, green space or a playground</u> so that our kids could play outside. Due to this, most of <u>our kids play on the street, which is not safe first, not healthy</u>, and also <u>creating a lot of noise</u>. Bringing such facilities in our neighbourhood could enhance the safety and health of our children and reduces the inconvenience for the residents.</p>	<p>Low financial capacity of informal landowners for developing their lands</p> <p>Certain social infrastructure such as recreation facilities, green space, and playgrounds are not available in the community</p> <p>Potential risks to children safety and health due to lack of certain infrastructure in the community</p> <p>Creating a lot of noise by kids playing on streets due to not having a playground</p>

Step 3: Shorten the restated phrases and develop concepts

After restating all underlined statements into shorter expressions as shown in Table 4.5, these phrases were also grouped together in terms of similarity and relevance to create concepts. An example of this process is shown in Table 4.6.

Table 4.6: Examples of Phrases Reduced to Concepts

Restated key phrases	Concepts
<p>Convincing informal landowners about LR Opinions and agreement of informal landowners is a key issue If landowners understand LR well, they contribute their land without hesitation Without approval of residents, it is impossible to implement LR The most challenging part is convincing the landowners It is quite essential that community residents understand LR It is hard to convince landowners to contribute a fixed portion of their lands to the project Without agreement of informal residents, LR will fail The project will not proceed without acceptance, cooperation, and approval of the informal community The landowners' understanding is not enough, they need to participate in LR through contributing a fixed portion of their land to the project</p>	<p>Community participation</p>
<p>The first step of LR is to determine the landowner LR cannot proceed without identifying land ownership Replotting could be challenging if the land is unclear Clearing land ownership is difficult and time consuming because the majority of land in informal settlements in Kabul is unclear</p>	<p>Land ownership clearance</p>
<p>A meeting between the Kabul mayor and the informal residents about LR The presence of high-rank government officials such as the Kabul mayor is essential at early stages of LR A strong political will must exist within Kabul Municipality about LR The mayor should go and talk to people about LR The president or his deputies must support LR through meeting with informal residents about LR Without a strong determination in government's top level, LR cannot succeed</p>	<p>Strong political will</p>

Step 4: Group similar concepts to form categories

In this step, all emerged concepts were grouped into 25 categories, as shown in Table 4.7.

The 25 categories of the CLR model emerged from the 205 concepts as shown in Table 4.7. According to the table, all interview data were coded through the open coding principles (Glaser 1978) and the output of this process was summarised in 205 concepts. Then, these concepts were grouped into 25 categories that formed the basic components of the CLR model.

Table 4.7: List of Concepts and Emerged Categories

Concepts	Categories
1. The LR team 2. Community residents 3. Japan International Cooperation Agency (JICA) 4. Private sector 5. Presidential Palace 6. City Planning Department 7. Kabul Municipality 8. Informal landowners 9. The government 10. Non-governmental organisations 11. Development agency	(1) LR stakeholders
12. Community participation 13. Consensus building 14. Doubt in issuing formal land title deeds 15. Fear of losing land 16. Illiterate residents 17. Lack of trust in government 18. Lifestyle issues 19. Not receiving fair compensation 20. Resistance against LR 21. Serious doubt in government intention 22. Unfair for small landowners	(2) Socio-cultural risks
23. Land ownership clearance 24. Legal backup 25. Lack of a legal framework 26. Challenges in areas occupied by land grabbers 27. Unavailability of principal landowners 28. LR may encourage more land grabbing 29. Informal land documents and ownership 30. Lack of a legal support (framework) 31. Government may not want to legalise grabbed lands 32. Lack of a clear procedure	(3) Legal risks
33. Financial mechanism 34. LR budget 35. Compensation costs 36. Bad national economy 37. Cost of temporary resettlements 38. Huge investment 39. Unfair rate for land contribution 40. Financial concerns at the start of first LR 41. Insufficient reserve land	(4) Financial risks

Concepts	Categories
42. Doubt in capacity for paying compensation 43. Might not have revenues for the government 44. Land valuation could be problematic 45. Budget 46. Land valuation system	
47. Land grabbers 48. Influence by politicians	(5) External risks
49. Lack of land database 50. Scarcity of land 51. Temporary resettlement 52. Duration of LR project 53. Doubt in technical capacity for implementation 54. Weak technical and human resource capacity of the Afghan government 55. Resettlement could be challenging 56. Not all infrastructures may improve 57. Reduction of principal land size	(6) Technical risks
58. Strong political will 59. Meeting with informal landowners 60. Enhance public awareness 61. Government as facilitator/coordinator 62. A good showcase for LR 63. Coordination 64. Immediate actions to stop further development of informal settlements 65. Government to secure enough budget to attract participation 66. Promote consensus building 67. Active government supports against disrupters 68. Create local councils 69. Support LR team 70. Government to take more management and supervision role 71. Transparency 72. Development of a comprehensive framework 73. Limit plot speculation 74. Ensure new land title documents at top management level 75. Make it fair for small land owners 76. Make LR a community-driven project 77. Promote LR understanding 78. Focus on LR planning methods 79. Adopt world's best practices 80. Collective action 81. Draw actionable plan 82. Create a good showcase for LR 83. Government commitment 84. Flexible procedure 85. Systematic support for LR in informal settlements 86. Act transparently 87. Good coordination and communication 88. Not displace residents until all LR steps planned and guaranteed 89. Build main roads to attract attention and trust of residents	(7) Management and leadership
90. Source of finance 91. Government investment 92. Support certain vulnerable groups 93. Loan vs subsidy 94. Initial financial support	(8) Financial support
95. A legal tool 96. Land ownership clearance 97. Need for a specific law for LR 98. Stop further illegal development of informal settlements	

Concepts	Categories
99. Ensure new land title deeds 100. Legislation	(9) Legal course of actions
101. Bottom-up approach in planning 102. Ease LR standards 103. A database 104. Technical capacity building 105. Develop technical capacity and human resources 106. Preparing a concept plan 107. Collaborative planning 108. Make flexible plans 109. Develop a resettlement mechanism and plan 110. Surveys 111. Use recent survey results 112. Use world's best practices from technical aspect 113. Ease standards 114. Create a database for land ownership	(10) Technical actions
115. No updated land registration system 116. Hard to stop fake land documents 117. No national urban policy 118. Infamous local government system	(11) Land policy and management
119. Increase in population 120. Deficit in policy, planning, and government capacity 121. Implementation and enforcement deficit (advised by LR experts) 122. Economic and market factors 123. Political factors and forces 124. Socio-cultural factors 125. Lack of laws and legislations 126. Land speculation 127. Land grabbers' influence 128. Deficit in control, and management 129. Regulatory policy 130. Lack of laws and legislations 131. Internal migrants	(12) Creation and growth of informal settlements
132. Further serious problems with basic infrastructure 133. Risk of earthquake 134. Difficult to imagine 135. Landowners' loss 136. Other tools such as upgrading, renewal, and regeneration can still help 137. Conditions remain the same 138. It takes longer to improve 139. Wasting informal residents' time and capital 140. Informal landowners will find their ways to survive and develop their communities	(13) Future of informal settlements without LR
141. Condition of roads 142. Parks, playgrounds, and green space 143. Electricity (power) 144. Underground sewer system 145. Urban water 146. Health centres and hospitals 147. Sanitation and solid wastes 148. Primary and secondary schools 149. Safety and security	(14) Status of existing public infrastructure in informal settlements
150. Prediction of land value after LR 151. Feasibility of bringing required infrastructure in informal communities 152. Ready for discussion	(15) Impression of informal landowners about LR
153. Effectiveness in other countries	

Concepts	Categories
154. Benefits of LR in comparison with land acquisition 155. A process by people for people 156. Self-financing feature 157. Comprehensiveness 158. Increase in land value 159. Provision of basic public and social infrastructure 160. Benefits of LR vs urban upgrading 161. A win-win approach 162. No other suitable alternative	(16) Suitability for Kabul
163. Government aim for LR 164. LR target areas 165. Temporary housing	(17) Government policy
166. Land value after LR 167. Land market	(18) Land value and market
168. LR may encourage more land grabbing 169. Government mafia as land grabbers and speculators 170. Illegal changes in cadastre plans by some high-rank politicians 171. Influential people 172. Insecurity and terrorism	(19) Political factors and insecurity
173. Better access to basic infrastructure 174. Public infrastructure improvement 175. Infrastructure priorities 176. Solving the problem of infrastructure 177. More hospitals 178. Main and side roads 179. Green space and parks 180. Sewer system 181. Hospitals and health centres 182. Urban water 183. Children's playground 184. Solid waste collection places	(20) Provision of infrastructure required by informal communities
185. Feel more secure after formalisation 186. Legalisation of lands 187. Solving the problem of current land documents 188. Real landowner	(21) Land tenure security
189. Better lifestyle 190. Spending time more efficiently 191. Children safety and security 192. Clean community 193. Fewer diseases	(22) Improvement in quality of life
194. No one will be removed from the site 195. No major relocation	(23) No dispersed community
196. Controlling the expansion of informal settlements 197. A win-win deal 198. Government financial benefit 199. Government revenue increase through levying formal property tax 200. Restore the bad image of local government	(24) Government benefits
201. Physical setup 202. Population characteristics 203. Legal and planning framework 204. Economic considerations 205. World's best practices and standards	(25) LR customisation

Step 5: Add properties and dimensions for the categories

Once the categories were formed, they need to be coded in terms of characteristics and dimensions to explore how each category can be evaluated and/or modified for generalisation purposes. Table 4.8 illustrates these features.

Table 4.8: Properties and Dimensions of Emerged Categories

Categories		Properties	Dimensions	
(1)	LR stakeholders	Relationship	Direct	Indirect
(2)	Socio-cultural risks	Impact	Low	High
(3)	Legal risks	Impact	Low	High
(4)	Financial risks	Impact	Low	High
(5)	External risks	Impact	Low	High
(6)	Technical risks	Impact	Low	High
(7)	Management strategy	Effectiveness Efficiency	Effective Efficient	Ineffective Inefficient
(8)	Financial strategy	Level	Enough	Not enough
(9)	Legal strategy	Legitimacy	Legal	Illegal
(10)	Technical strategy	Quality Time	Low Short	High Long
(11)	Land administration system	Policy Management	Applicable Effective	Inapplicable Ineffective
(12)	Creation and growth of informal settlements	Migration Regulatory policy Urban planning Enforcement Economic	Internal (internally displaced) Effective Responsive Weak Poor	External (repatriation of refugees) Ineffective Not responsive Strong Rich
(13)	Future of informal settlements without LR	Condition	Poor Clean	Excellent Dirty
(14)	Status of existing public infrastructure in informal settlements	Quality Quantity	Poor Enough	Excellent Not enough
(15)	Impression of informal landowners about LR	Possibility	Possible	Impossible
(16)	LR suitability for Kabul	Suitability	Suitable	Not suitable
(17)	Government policy	Policy type	Supportive	Disruptive
(18)	Land value and market	Level	Low	High
(19)	Political factors and insecurity	Impact	Low	High
(20)	Provision of infrastructure required by informal communities	Level	Satisfactory	Not satisfactory
(21)	Land tenure security	Recognition	Granted	Not granted
(22)	Improvement in quality of life	Level	Low	High
(23)	Avoid dispersing community	Landowners' satisfaction	Low	High
(24)	Government benefits	Financial goals	Low Achieved	High Not achieved
(25)	Customised land readjustment (CLR)	Practice Result	Success	Failure

4.5.2.2 *Axial coding*

In order to define and explain the phenomenon of the research more precisely and comprehensively, all categories should be related to the sub-categories according to their properties and dimensions (Strauss and Corbin 1998, 124). This is called “axial coding” (Saldaña 2013; Glaser 1978; Strauss 1998; Charmaz 2014, 2014; Boeije 2009). In other words, axial coding is a procedure for displaying the data in a new way, determining the internal relationships of the categories. These relationships can be established by grouping all emerged categories under six components of the axial coding (Saldaña 2013), as below:

The “Main Focus” — one of the emerged categories that can best explain the research phenomenon

Antecedents — which are those categories that influence the Main Focus and can prevent it from realisation

Strategies and Actions — refer to those categories that are about the actions resulted from the Main Focus

Contexts — specific circumstances of the context or broad conditions that may influence the strategies

Intervening Conditions — any circumstance or condition that may positively or negatively influence the strategies and actions

Consequences — which are the results of strategies and actions

Although these topics might be similar to the elements of the Grounded Theory methodology (Strauss and Corbin 1998), however, this study employs Case Study as the research methodology and solely applies the above qualitative coding principles as detailed by Saldaña (2013).

Table 4.9 depicts the emerged categories in two main components, namely conditions and strategies.

Table 4.9: Conditions and Strategies

Conditions	Strategies
(1) LR stakeholders	(21) Management and leadership
(2) Socio-cultural risks	(22) Financial support
(3) Legal risks	(23) Legal course of actions
(4) Financial risks	(24) Technical actions
(5) External risks	(25) LR customisation
(6) Technical risks	
(7) Land policy and management	
(8) Creation and growth of informal settlements	
(9) Future of informal settlements without LR	
(10) Status of existing infrastructure in informal settlements	
(11) Impression of informal landowners about LR	
(12) Suitability for Kabul	
(13) Government policy	
(14) Land value and market	
(15) Political factors and insecurity	
(16) Provision of infrastructure required by informal communities	
(17) Land tenure security	
(18) Improvement in quality of life	
(19) No dispersed community	
(20) Government benefits	

These relationships can be established by grouping all emerged categories under six components of the axial coding (Glaser 1978) as stated earlier in this chapter. The above 20 conditions are divided under four major conditions as shown in Table 4.10. According to the table, these four conditions determine the type and potential effects of each emerged category.

Table 4.10: Emerged Categories Translated into Antecedent, Contextual, Intervening, and Outcome Condition Groups

Antecedent conditions	Contextual conditions	Intervening conditions	Outcome conditions
(1) LR stakeholders (2) Socio-cultural risks (3) Legal risks (4) Financial risks (5) External risks (6) Technical risks	(7) Land policy and management (8) Creation and growth of informal settlements (9) Future of informal settlements (10) Status of existing infrastructure in informal settlements (11) Impression of informal landowners about LR (12) Suitability for Kabul	(13) Government policy (14) Land value and market (15) Political factors and insecurity	(16) Provision of required infrastructure by informal communities (17) Land tenure security (18) Improvement in quality of life (19) No dispersed community (20) Government benefits

4.5.2.3 *Selective coding*

Theoretical coding (Glaser 1978) also known as “selective coding” (Saldaña 2013) or “conceptual coding” (Charmaz 2014, 2006; Corbin and Strauss 2008; Glaser 1978, 2005; Stern and Porr 2011) is the final stage in developing theory. In this process, the core category that best describes the central phenomenon of the theory with meaningful relationships with all others should be chosen from the emerged categories.

This part of the research was the most challenging as all evolved categories were somehow essential components of the theory. Therefore, the researcher followed the Strauss and Corbin (1990) five criteria, as explained below, in order to determine the “LR customisation” as the core category.

1. *The core category must frequently appear throughout the data:* In other words, the core category must have been mentioned in all data or at least in most cases. All

participants of this research emphasised LR customisation in terms of the physical set-up, population characteristics and local community needs, legal and planning framework, economic considerations, and the world's best practices.

These concepts were constantly repeated throughout the interviews, which indicated that LR needs to be customised in order to be used effectively in Kabul's informal settlements. In particular, the participants informed that these changes should be applied in the physical set-up through modifications in features, layout, structure, and consideration of natural disaster risks. In addition, all participants emphasised that LR should be changed based on the population characteristics, such as the local community needs, density, land scarcity, norms, culture, and lifestyle. The legal and planning framework also needs to be modified in terms of land ownership, construction codes, standards, and preservation of historical areas. Economic considerations such as land value increase and government gains and losses must also be taken into account and modified accordingly. Finally, world's best practices should be used, where necessary, to assist in the successful implementation of LR in the informal settlements of Kabul.

2. *The core category must have a central role:* The other feature of the core category, as Strauss and Corbin (1990) recommends, is its central role among other categories. It needs to sit in the centre, with meaningful relationships with and support from the other categories. Table 4.11 demonstrates that the LR customisation is well related to and supported by the other categories and components of the theory.

Table 4.11: Emerged Categories in terms of Paradigm Components

Component	Description	Category
Main Focus	Central category about phenomenon	(1) LR customisation
Antecedents	Conditions that affect the phenomenon	(2) LR stakeholders (3) Socio-cultural risks (4) Legal risks (5) Financial risks (6) External risks (7) Technical risks
Strategies/Actions	Actions that derive from the phenomenon	(8) Management and leadership (9) Financial support (10) Legal course of actions (11) Technical actions
Contexts	Broad conditions that affect strategies	(12) Land policy and management (13) Creation and growth of informal settlements (14) Future of informal settlements without LR (15) Status of existing infrastructure in informal settlements (16) Impression of Informal landowners about LR (17) Measures making LR suitable in challenging contexts
Intervening conditions	Narrow conditions that affect strategies	(18) Government policy (19) Land value and market (20) Political factors and insecurity
Outcomes	Results of strategies	(21) Provision of infrastructure required by informal community (22) Land tenure security (23) Improvement in quality of life (24) No dispersed community (25) Government benefits

3. *The relationship between categories must be logical, consistent, and explained well:*

There is no data forcing in this research in terms of creating a relationship between the categories. As can be seen in Figure 5.1 in the Chapter 5, there is a logical and consistent relationship between all categories. The antecedent conditions, which are called the “customisation requirements” (CR) best describe the major requirements of the Main Focus of the research, LR customisation.

To realise the LR customisation, a series of strategies are required that are explained by “create a change” (CC). These strategies should be applied in management, finance, legal system, and technical issues. The contextual conditions impact LR

customisation through influencing the strategies. Issues such as the land management system, creation and growth of informal settlements, future of informal settlements, condition of current infrastructure, attitudes of informal landowners, and ethnic divide are categories in this section. Another three categories also impact the strategies positively or negatively as the intervening conditions, which are called “LR politics” (LRP). Government policy for LR, land value market, and political factors and insecurity are these intervening categories. Consequently, the customisation success criteria (CSC) consists of the remaining five categories that best explain the consequences of the strategies, including the provision of required infrastructure, land tenure security, improvement in quality of life, avoidance of community dispersal, and government benefits.

4. *The core category’s name should be succinct and sufficient:* This is due to further development of this core category in the future in other substantive cases for creating a more general and formal theory. The “LR customisation” was chosen based on the analysis of more than 32 concepts, as explained in the first criterion. This phrase sufficiently and effectively explains the main phenomenon of this research which emerged from the interview data.

5. *Refinement of the core category should lead to the growth of the theory and provide in-depth and powerful explanation:* The core category of this research explains how LR can be used in extreme informal settlements. Once this concept is refined in other substantive cases, it will be able to provide a solid explanation on LR applicability and suitability with extreme cases. As Strauss (1998) believe, this can assist the researcher to logically and systematically explore the topic in full depth.

4.6 Interpretation of the Findings

Findings of this research have been interpreted and analysed in a qualitative manner, based on the six topics (Creswell 2007) — the main focus, antecedents, strategies and actions, contexts, intervening conditions, and outcomes. For each interpretation, the source of evidence is mentioned and the rival explanations and theories are discussed. Chapter 5 presents the findings in this structure and Chapter 6 provides a detailed discussion of these findings.

4.7 Reporting Style of the Case Study Findings

4.7.1 Potential Audiences

This research will be beneficial to a range of audiences. These can include urban policy makers, especially in developing countries, including Afghanistan; and university professors, academics, and eminent researchers around the world who are interested in research on urban LR in challenging contexts. Furthermore, all people living in informal settlements in challenging contexts can also benefit from this research and can increase their understanding of how LR might work in their neighbourhoods. Finally, it can help other junior researchers and students to learn how a theory can be formulated through a case study approach in accordance with the professional standards.

4.7.2 Reporting Format: Single-case Study

The reporting of this case study is in a single-case study format explaining a model, along with relevant tables and diagrams. As this is a rich case-study, it is expected that at least three academic journal articles can be published out of this thesis, for example a literature review, a methodology paper, and the findings from the research. A generalised policy paper on LR in informal settlements could also be developed from the Kabul case study.

4.8 Ethics of the Research

This research has strictly adhered to the standard ethical research principles of Curtin University and obtained an ethics approval from the Human Research Ethics Committee prior to data collection. Below are two ethics-related considerations which are particularly relevant to the case study in Kabul.

4.8.1 Protecting the Research Participants

A clear procedure exists at Curtin University to protect humans in research. According to the rules of the University, all research that involved humans as a data source must obtain an ethics clearance prior to starting data collection. This procedure was aimed at protecting the research participants from any potential misuse and damage. Although both data collection phases of this thesis were evaluated as “low risk” by the Curtin Risk Assessment team prior to any data collection, maximum care was taken to protect participants of this research from any kind of harm and risk. For example, all

participants were interviewed in a safe place outside their workplace and their personal information, including name and job titles, is not used in the composition stage of the thesis. A copy of the Ethics Approval for this research is available in the case study protocol in Appendix 3.

Furthermore, special measures were also taken to protect the investigator during the two fieldwork trips, such as coordination with a local partner, satellite phone equipment to be used in emergency situations. These were organised by the Curtin Critical Risk Assessment Team at Curtin University.

4.8.2 Consent Form

As most of the primary data of this research was to be obtained through interviews, a consent form was prepared to obtain the interviewees' consent prior to the interview. The content of this form was shown and explained orally to each interviewee before signing the form. A sample of this consent form is available in Appendix 3.

4.9 Chapter Summary

This chapter shed light on how the research was conducted in terms of research design, preparation works, data collection and analysis, reporting style and ethical considerations. It employs a case study as the research strategy for data collection and analysis. For quality purposes, several tools are applied in terms of credibility, external validity (generalisability), and reliability of the research. These tools ensure the comprehensiveness of data through triangulation, systematic analysis by investigator triangulation and peer review, external validity through analytic generalisation, and reliability of the research by developing a case study protocol and database. The main data sources used in this research are 26 semi-structured interviews, one archival record, land readjustment procedure, and observation. Data collection principles recommended by Yin (2014) were applied in conducting the process. These principles include using multiple sources of evidence, creating a case study database, and maintaining a chain of evidence. Data collection and analysis were carried out as per the requirements of the adopted analytic procedure (Glaser 1967). This method of analysis was further clarified through a description of the specific method for data sampling, required tools during data analysis, and the analytical procedure covering open coding, axial coding, and selective coding. Finally, the method of interpretation of the findings and the reporting style were explained, with the ethical considerations followed in the study. The next chapter presents the main findings of this case study.

Chapter 5: Findings

5.1 Introduction

The aim of this research is to discover how LR can be used in challenging contexts. During data analysis, 25 categories emerged, as introduced in Chapter 4. These categories were then grouped in the six components below to form the inductive model of “customised land readjustment (CLR)” in challenging contexts. The six components of this theory are as follows:

- (1) **Main Focus** — customised land readjustment (CLR)
- (2) **Antecedent conditions** — customisation requirements (CR)
- (3) **Strategies and actions** — create a change (CC)
- (4) **Contextual conditions** —Kabul in context (KIC)
- (5) **Intervening conditions** — land readjustment politics (LRP) and
- (6) **Outcome conditions** — customisation success criteria (CSC)

Figure 5.1 illustrates the above elements with their inter-relationships. They are discussed in the sections to follow using excerpts from the interviews.

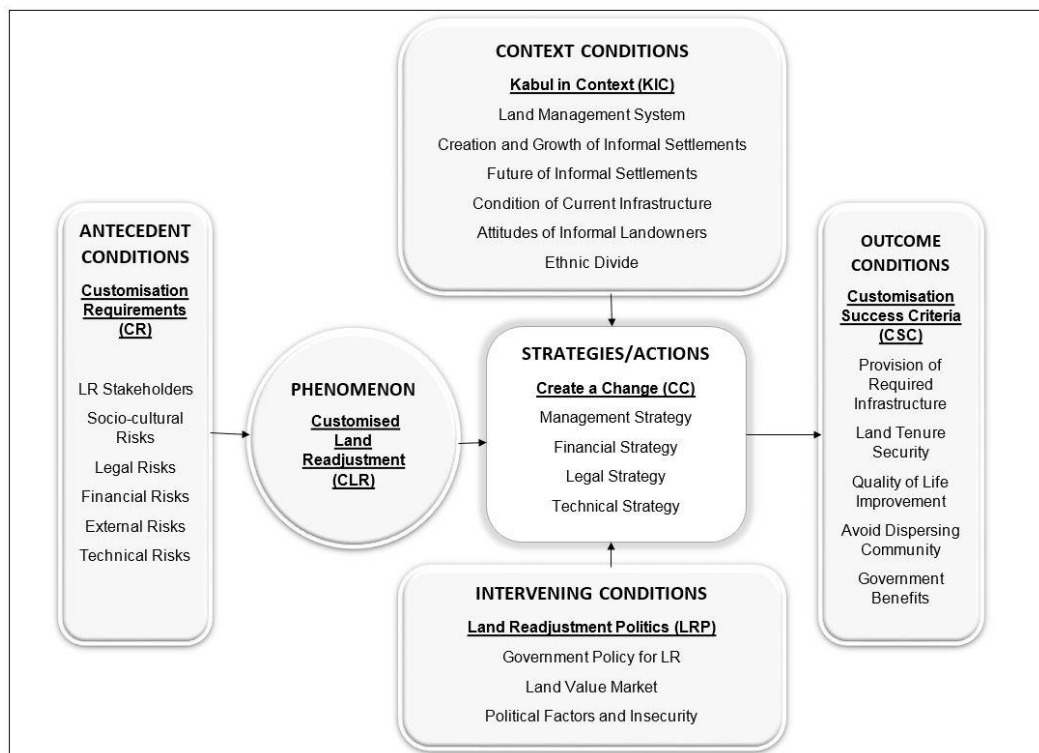


Figure 5.1: Paradigm Model of Land Readjustment in Informal Settlements.
Source: The Author

5.2 Main Focus — Customised Land Readjustment (CLR)

As discussed in Chapter 4, the Main Focus is the core element of this model that best explains its main idea. The findings of this research suggest 14 criteria for LR in challenging contexts in five major groups as: physical set-up, population characteristics, legal and planning framework, economic considerations, and world’s best practices, as shown in Figure 5.2 and Table 5.1.

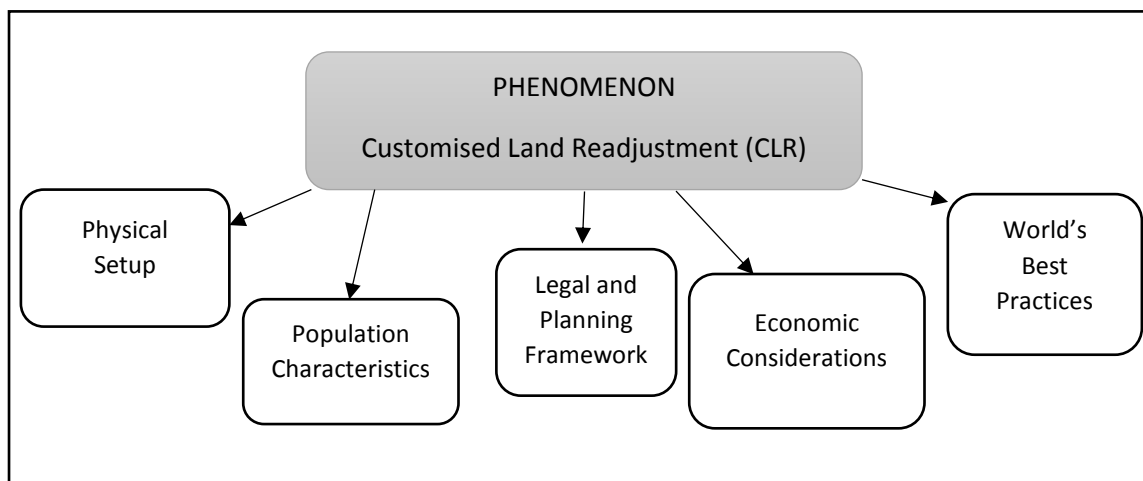


Figure 5.2: Phenomenon — Customised Land Readjustment (CLR)

Table 5.1: Main Focus Categories and Criteria

Main Focus category	LR customisation criteria
1. Physical set-up	1. Features 2. Layout and structure 3. Natural disaster risks
2. Population characteristics	4. Local community needs 5. Density 6. Land scarcity 7. Norms, culture, and lifestyle
3. Legal and planning framework	8. Land ownership 9. Building regulations and standards 10. Preservation of historical areas
4. Economic considerations	11. Land value increase 12. Government gains and losses
5. World’s best practices	13. World’s best practices 14. Standards

These are now explained in terms of the interviews conducted as part of this thesis.

5.2.1 Physical Set-up

5.2.1.1 Features

According to one of the international experts, LR needs to be customised in terms of its benefits and features to fit in informal settlements:

E01: To me, LR as we know in India (TPS) can definitely be applied in informal areas also but it is mostly used in relatively open areas or peri-urban areas with ease. Therefore, I guess it is difficult to implement LR with its full benefit in informal settlements in Kabul.

Another participant also emphasised tailoring LR features in informal settlements when he said:

G02: I can bring you an example in Mumbai of India where the government applied LR in some agricultural area with informal landowners. In that case the government just widened the road and provided the water supply in the area. Only that. And I think this is one type of the LR that could be implemented with least challenges. Therefore, I am of the opinion that we should do land readjustment in different areas differently.

5.2.1.2 Layout and structure

Some experts believed that LR should be customised, based on the layout of the informal settlements:

E01: Informal settlements can be of multiple types. Whether LR will be a good option depends on the types of informal settlement in question. If it is a well laid out settlement, LR may not be needed. Such settlements may be directly declared formal with minimal supplementary infrastructure services.

Or it was based on the type of informal houses in terms of structure:

E03: I believe LR is one of the tools to improve the situation of informal settlement in Kabul city. However, as the characteristics of informal settlements in Kabul city vary from settlements similar to what would be identified as slums to what would be similar to luxurious villas in other countries, there should be various schemes for regularisation of informal settlements based on each case.

5.2.1.3 Natural disaster risks

Another variation of LR with specific source of supplementary fund should focus on locations where the risk of natural disasters such as earthquake, fire, or flood is anticipated:

E03: However, in the areas located in hazardous locations such as under the risk of flooding, landslide, etc. using government subsidy to improve the situation through LR is recommended.

5.2.2 Population Characteristics

5.2.2.1 Local community needs

Two experts also commented that LR should be customised to respond to local community needs. In this customisation, several factors including the economic and socio-cultural conditions of the community must be taken into account:

E04: Yes, it is, provided that LR is localised and tailored to meet local needs through a clear policy and procedure which consider the economic, social and cultural situation of the community.

This was further emphasised by another senior expert, as below:

E05: We shouldn't make impossible plans. Even if not 100%, we can still succeed 60% or so and the LR can be customised to meet the local needs even if it results in easement in our planning standards.

This criterion was also mentioned by some of the government officials with a focus on understanding the specific challenges and problems in each informal community:

G03: I think we need to clearly define the informal areas, their characteristics, types and categories. Then we can understand the type of challenges we are facing in each category of informal settlement.

5.2.2.2 Density

Participants also raised the issue of density and population in informal settlements, which make LR difficult due to scarcity of land. One of the experts suggested the alternative way of urban redevelopment (UR) as part of LR customisation for success:

E05: ... if the area is very densely built, you have to move people to make room (space) for development. For those who agree to resettle, options could be given to resettle in apartments within the site or in a new site. Perhaps it is better to assign financial land of LR for UR (urban redevelopment) project and those who agree to transfer in the apartments are resettled there. As land readjustment is dealing only with the land, it is probably difficult in densely built-up areas.

5.2.2.3 Land scarcity

A similar idea was also presented by a government official. She recommended that LR needs to focus on those informal settlements with more vacant lands in order to obtain more space to be used for cost recovery of the project and provision of required infrastructure:

G04: Regarding the informal settlements in Kabul, we have some informal settlements which are not fully occupied by people. I would suggest that the government start LR from these areas as there is [a] higher chance of success and more vacant lands to be used for LR purposes such as redevelopment and building residential apartments to settle the residents. These taken lands can be used for financial land, parks and greenery, road, etc.

This was again supported by another government official:

G02: I am of the opinion that we should do land readjustment in different areas differently. For example, if we are to apply LR in the city centre in Kabul (where land is scarce and very valuable), we need to apply a specific method. If such [a] project is to be done in Arzan Qimat or Pole Charkhi areas (where more space is available), we need to employ some other methods and techniques (and strategies) with different work procedures.

Increase in the floor area ratio (FAR) was another alternative proposed by a local government officer in Kabul Municipality in response to density and population increase in Kabul:

G08: If we start LR now, we will be able to expand a very good underlying base for the future development of the city through vertical development. As the city population increases annually, the amount of serviced land would be scarce. Therefore, these readjusted land plots could be given more floor area ratio (FAR) so that they can build up more floors and provide more residential apartments. We are considering all of these issues in our future plans.

5.2.2.4 Norms, culture, and lifestyle

Social factors such as socio-cultural norms and lifestyle of the community are important criteria for implementing LR in settlements where the land title is still unclear:

E02: However, in some developing countries like India and some African countries where the land ownership is still not clear, they managed to find a

similar method in accordance with their norms, culture and lifestyles for LR implementation.

5.2.3 Legal and Planning Framework

5.2.3.1 Land ownership

Some experts and government officials proposed models for LR to be customised based on land ownership (which is considered a legal issue) and construction codes and standards (which is a technical matter).

The following government official also referred to planning and land ownership as two important criteria in his nominated three LR models in informal settlements:

G01: I believe LR is most suitable for the first two categories as below:

- a) Informal settlements located in planned areas like Shahre-naw*
- b) Informal settlements developed in private owned lands, such as Chelsoton, Morad Kheil, Yaka Toot, Ghalaye Zaman Khan, etc.*
- c) Informal settlements which are developed on government lands illegally, such as Tapeye Marjan, areas in district 17, areas in district 13, Tapeye Shirpoor, etc.*

5.2.3.2 Building regulations and standards

The experts suggest that conducting LR is most promising in those settlements where the land owners are informal (not recognised by the government as the real landowners), where settlements are not constructed in the planned designated area and do not meet the required construction codes and standards:

E02: Well I would say yes, especially in those informal settlements where the site is informal (illegal) and also unplanned. As the residents of such slums do not have official title deeds for their lands and also their properties are not developed based on construction standards and the city master plan, implementing LR would be most promising as there is high possibly more than 80% of the residents would say yes to LR to gain official land titles. In contrast, it is less likely that LR could succeed in those informal settlements where the land title is clear but the property is developed illegally as the price of land is rather higher in these areas (which makes it difficult to obtain enough financial land through land value capture) and also the residents do not want to lose any of their properties due to financial loss and the complicated process of new land documents later on ... LR can be tailored in three different models for areas where:

- a. Landowners are informal and residences are constructed unplanned (not based on Kabul master plan instruction and construction codes and standards)*

- b. *Landowners are informal but residences are constructed planned (based on Kabul master plan instructions and construction codes and standards)*
- c. *Landowners are formal but the residences are constructed unplanned. Proper models should be developed and investigated constantly to improve it as it goes.*

5.2.3.3 Preservation of historical areas

LR should be customised in a way to preserve ancient and historical areas of the city and still provide the community with further infrastructure:

G10: Those informal settlements which are occupied by the residents lately can and should be readjusted by LR to make the view of our city more beautiful. Also, for those historical and old areas which have existed since many decades ago, LR should be implemented in a more specific way to keep the nature of these places and also smooth the livelihood in the area with more public facilities and infrastructures.

5.2.4 Economic Considerations

5.2.4.1 Land value increase

This criterion emerged in conversation with the following two LR experts during their interviews. Increasing land value after LR due to legalising the area and provision of public and social infrastructure is a key success for such a project. This is particularly important because the cost of infrastructure provision, compensation, and any other associated expenses are supposed to be covered by selling the financial land taken at the replotting stage in the beginning of LR (as discussed in Chapter 2) and land value increase can ensure the project's financial success. In case this criterion cannot be met, one of the experts recommends that other tools such as land redevelopment can be used:

E03: In my opinion, land readjustment should be carried out in the areas where land value increase is ensured such as suburban parts of the city, agricultural land use which is converted to urbanisation promotion area, etc. In central parts of the city where land value has already increased and conducting land readjustment project does not affect much the land value, other methods such as urban redevelopment, etc. should be considered as it is well established that those urban cores have the potential to increase FAR — floor area ratio.

Another expert stated that if this criterion is not considered, the informal landowners may not participate in LR as they do not see any financial increment to their lands:

E02: ... it is less likely that LR [will] succeed in those informal settlements where the property is developed illegally in a planning area. This is because the price of land is already high in these areas before LR and therefore the residents do not want to risk losing any of their properties where no further value increase can be expected and yet they have to go through the complicated process of new land documents after LR.

5.2.4.2 Government gains and losses

Another significant challenge is the customisation of LR on usurped government lands. This could be the most difficult decision for the government to choose between sacrificing its usurped land for development of these informal settlements through LR and leaving them as they currently are:

E02: I would say that around 90% of those informal landowners (who have usurped or bought usurped lands of government) are a part of government or somehow attached to the government (government employee, high rank official or influential) and insist to legalise their lands without paying any big money or losing parts of their lands to the government. So, if we apply LR to legalise such informal settlements, then these landowners would benefit a lot, not the government. On the other hand, if the government chooses not to go ahead with LR, then the condition of the informal settlements remains the same. Therefore, the Afghan government needs to choose between sacrificing its lands to improve the situation or leave these areas as they are which could be exacerbated in future years.

As discussed in Chapter 2, the government is currently employing some other methods in informal settlements such as urban upgrading and land acquisition for improvement of these settlements; however, these tools are unable to solve the major infrastructure challenges of informal communities sustainably, effectively, and efficiently (UN-Habitat 2015). These usurped lands of government also include the hillsides and top in Kabul:

G02: Yes, it can but we need different strategies and techniques for LR in different parts of the city. For example, in the Shah Shahid area almost the whole land parcels belong to the residents while people living in the hillsides of the city are living there illegally without any proper documents. What we can do is to build residential blocks for them somewhere in the city and relocate them into these residential blocks. The blocks can be constructed by the private sector as social housing with the support of the government, so that the price of each residential unit be paid over the period of 20 to 30 years. Then we can

use those hills for green space. Therefore, as I said we need to employ different tactics and strategies toward different types of informal settlement.

5.2.5 World's Best Practices

5.2.5.1 Best global practices

Using successful international practice for developing a customised LR for Kabul was one of the significant issues discussed during the interview with one of the experts:

E02: I should mention that LR cases around the world are different in technical and legal contexts. India could be a good example for us in terms of technical issues, but the legal rights and systems are quite different with that of us, so we need to ensure that we develop our own model for all LR aspects.

5.2.5.2 Standards

In the case of informal settlements, LR standards are required to be softened to make them usable. The below expert recommended “a lower than usual standard” because of space limitation:

E01: Government can improve conditions by retrofitting physical and social infrastructure facilities in these settlements, adopting a lower than usual standard due to scarcity of space. This may be achieved through [the] regularisation process without much physical alteration in the layout of the area.

5.3 Antecedents — Customisation Requirements (CR)

Strauss and Corbin (1990, 96) define antecedents or causal conditions as “events, incidents, happenings that lead to occurrence or development of a phenomenon”. The findings of this research suggest six unique conditions that affect the Main Focus, as shown in Figure 5.3. These conditions are LR stakeholders, socio-cultural risks, legal risks, financial risks, external risks, and technical risks.

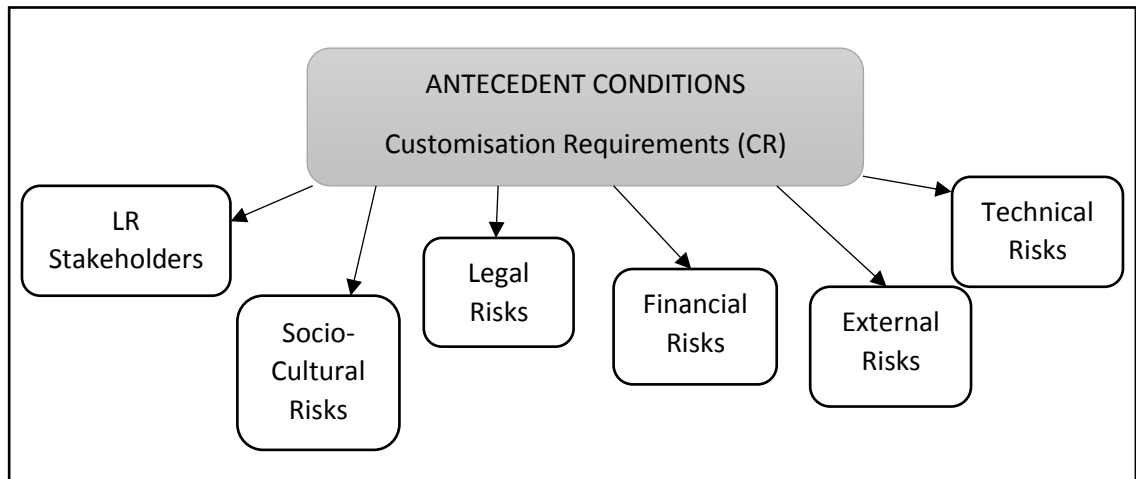


Figure 5.3: Antecedent Conditions — Customisation Requirements (CR)

As seen in Figure 5.3, these six conditions significantly influence the phenomenon of this research, CLR, and can prevent its success. These conditions are found in four levels: international, national, local, and individual, as discussed below.

5.3.1 Land Readjustment Stakeholders

5.3.1.1 International level: Provision of technical, financial, and social support

The role of international non-government organisations is extremely important at the early stage of LR through provision of technical and financial assistance. In this regard, one of the government officers stated that:

G10: The assistance from the non-governmental organisations would be very beneficial as well, especially in terms of financial or technical assistance. The Japan International Cooperation Agency (JICA) is an example of such organisations that has been assisting us very much in terms of technical LR issues. We need more of these organisations to support financially.

5.3.1.2 National level: Policy and coordination

The national government's role is highlighted in determining overall policies for LR and establishing an effective relationship through effective coordination among relevant government organisations for LR in informal settlements. These relevant organisations include urban planning authorities in local and national levels, such as the Ministry of Urban Development and Housing (MUDH), Capital Region Independent Development Authority (CRIDA), and Afghanistan Independent Land Authority (known as ARAZI). In addition, there are other public organisations that should be involved in LR such as the Ministry of Finance for LR budgeting issues, Ministry of Energy and Water and Da Afghanistan Breshna Sherkat (DABS) for provision of electricity and power. One of the government officials highlighted the government's important role in his statement:

G11: The government is responsible to improve the quality of life of its citizens by providing the basic social and public infrastructure in poor neighbourhoods. In the meantime, a good coordination must be made among all these relevant public organisation so that LR becomes feasible.

5.3.1.3 Local level: LR management

Local government

As one of the main stakeholders in LR, Kabul Municipality is currently responsible for its planning and implementation in the city's metropolitan area. In LR management, Kabul Municipality is required to play an effective role in motivating and convincing informal residents about such changes in their communities. One of the participants recommended that this process is better to start with the highest rank member of this organisation to open the way for other relevant staff to proceed with their works:

G08: Of course, it would be the best if the high-rank officials such as Mr mayor appear in the meetings first because it will positively affect the environment of the meeting and the residents would take those meetings more seriously. After that, the LR staff or other relevant staff can proceed with further clarification and technical issues. The first social step is very important.

Formulating a pilot project for LR in informal settlements is another significant task at local level, which can also be implemented by the local government or other non-government actors such as the private sector:

E01: Government role in the initial phase is important to demonstrate the virtues of the land readjustment concept by successfully implementing pilot projects. Further the non-government actors should take up more such developments.

City planning department

As a major department within Kabul Municipality, the city planning department is responsible for managing the day-to-day activities of LR division and to provide necessary technical or coordination support.

The land readjustment division

Within the organisational structure of the city planning department, the LR team is the lowest implementing body and is responsible for a variety of technical and social issues, such as preparation of concept plans, socio-economic surveys for LR in informal settlements and so on.

G09: Informal residents need to help the LR team to complete their surveys and transfer what they learn about LR to their fellow informal residents.

Private sector

The private sector can assist LR in several ways, including implementation, technical planning and consultation, and financial investment. Although the private sector does not only apply to local companies, any other international, multinational, or joint-venture private organisations are required to have deep knowledge, understanding and solid experience in the local context in terms of culture, beliefs, lifestyles, risks, and so on, to be able to undertake LR effectively and efficiently. This statement was made by one of the participants about the unique role of the private sector in LR implementation:

E02: The government must not have any relation with budget or money issues of this project as it is very corrupted ... The private sector is better because they work for profit and, if they fail, they lose their money. This will cause them to work harder to save their investment and the project.

Landowners' association

As the lowest decision-making body in LR, the landowners' association needs to be established to take up implementation of the project. According to the following

participant, once the LR mechanism is established well in the context, then this local body can start and get involved in implementation capacity:

E03: In a country like Afghanistan where land readjustment is being implemented for the first time and the mechanism is not well established, the government should be the LR performer. However, when the mechanism is well established and the method is well disseminated among the public/residents, implementation by landowners' association and private sector should be considered.

Individual level: Informal landowners

Finally, the informal landowners and community residents are the individual stakeholders in LR with extremely significant role:

G09: I emphasise the role of the informal residents in LR and without their constant support and follow-up, LR would be hard to implement.

5.3.2 Socio-cultural Risks

5.3.2.1 Community awareness and participation

The findings illustrated that the community awareness and participation in LR could be one of the most challenging tasks for the local government. Participants raised a few key factors that could stop informal communities participating in LR. These factors include lack of proper understanding about LR:

G02: If the project is properly understood by them, then they would have no hesitation to contribute their lands.

G06: The awareness of the informal residents must be raised about LR in several information sharing meetings and seminars. If they don't understand the project well, they will resist against LR and would not allow the project implementation and will not contribute their land for the project purposes. From this aspect, the role of the community residents is critical. If they understand this project is for them, they will happily provide portion of their land for (provision of infrastructure such as) road, hospital, green space, etc.

Fear of losing land or not receiving a fair compensation is another important factor:

L01: The first challenge would be resistance of the informal landowners and dwellers because they would think that they will lose their properties or may not receive a fair compensation against their contributed land and properties. We have many examples of such scenarios. The last scenario was about our current main road which the informal residents resisted to the end and finally

the municipality had to use its legal force to implement the project. That is not always easy.

Also, in the case of small landowners, they may not choose to accept and cooperate with LR because they might think they would be the first ones forced to leave:

E07: Some landowners whose land area is small may have to leave the area.

Informal residents do not trust their local and/or national government about LR:

G08: The first step for the government is trust-building. As the government has failed in many of their promises and projects to Kabul residents, there is a gap of trust between the residents and the government. This must be addressed first.

This was further emphasised by the following expert:

E08: The people (informal residents) do not trust KM (Kabul Municipality) or any other governmental organisation.

It is also expressed by the following informal landowner:

L05: A major challenge is lack of trust in the government.

This lack of trust can also relate to the stability of the national government:

G05: Informal residents have serious doubt about the future of LR and whether the government is stable enough to finish this project as planned and not to leave the residents homeless.

The lack of trust extends to the bad record of the local government in terms of compensations for acquired lands:

L02: The government has a bad history in its previous projects in paying compensation or substitute lands.

Doubt about issuing official land title deeds by the government could be another social risk:

L06: I am not sure if the government will really issue the title deeds for us.

5.3.2.2 Land contribution

The following expert believed that “land contribution” is the only factor that can hold the informal residents back from cooperating effectively with LR in their community:

E02: A major challenge is convincing the informal residents for LR and the lack of sense of cooperation (land owners are not willing to contribute their lands to the LR process) ... people would not contribute their lands easily to the project ... Even when we show them how their land would be changed after LR, they may still resist against LR

This was also confirmed by one of the interviewed informal landowners when he said:

L03: Some landowners may resist to contribute their lands to LR project.

Another example is the following extreme case:

G10: I give you a real story about this. A few years ago, Kabul Municipality decided to demolish the informal settlement without talking to the community residents and went there with bulldozers. When they got there, they faced people lying down on the street to prevent the municipality to destroy their houses. Even with the police support, they didn't succeed to destroy even one informal house. Therefore, it is impossible to do any action in such areas without discussion, approval and satisfaction of the community residents.

Land contribution rates could also be controversial as it may affect different landowners differently. This can create a real challenge for LR in informal settlements.

One of the experts illustrated this problem further:

E06: The negative point of LR could involve dissatisfaction or uncertainty in some residents who may feel they may not get enough from the project or they may bear more loss than gain out of LR, for example, the total area of one's land plot at the end of the project could be half of the original size at the beginning.

Due to all these factors as mentioned above, the landowners may resist and not cooperate and contribute their lands to the project. This was restated several times by the respondents as below:

G11: A negative thing could be resistance of the residents against LR, particularly when they are required to contribute some parts of their lands to the project.

Another social challenge is uneducated and illiterate residents. One of the participants explained that the majority of informal landowners in Kabul cannot read and write, which makes it difficult for the local government to communicate with them effectively to attract their participation in LR:

E06: Difficulties in public awareness about LR as most informal dwellers are illiterate and it might take so many gatherings and seminars and advertising on the media.

Therefore, consensus building was mentioned as a fundamental issue in LR:

E08: I think one of the requirements for implementing a successful land readjustment project in informal areas is getting the agreement and approval of residents. Therefore, consensus building is essential in land readjustment projects.

5.3.3 Legal Risks

Respondents believed that there are three major legal issues that could directly influence LR in informal settlements. These issues are lack of a legal framework/law for LR, unclear land titles, and the unavailability of some principal landowners during LR.

5.3.3.1 Lack of a legal framework

As LR is a new concept in Afghanistan, there are no established laws to legally bind LR, especially in the case of informal settlements. This was one of the major concerns of the LR experts and government officials who participated in this research who said:

E03: Legal framework is not well established (in the Kabul context).

It was further mentioned by another expert that:

E06: Lack of laws or legal framework for LR in Afghanistan to convince the residents and other stakeholders is one of the major challenges.

5.3.3.2 Unclear land title/ownership

In addition to the challenge with legal framework, respondents pointed out that LR can face problems in informal settlements with unclear land titles and ownership:

E07: Clearance of land ownership issues is a major challenge in LR in informal settlements in Kabul.

5.3.3.3 Unavailability of some principal landowners during land readjustment

Respondents also informed that the unavailability of some landowners can create problems for LR, especially in terms of land ownership clearance and issuing new land title deeds after the process is complete. A government officer said:

G09: The principal landowners are not available in some cases (living abroad etc.).

5.3.4 Financial Risks

The majority of respondents demonstrated their concerns about financial risks of LR in informal settlements. These risks include difficulties in obtaining enough reserve land, reliability of financial mechanism, supplementary budget, huge compensation and infrastructure costs, land valuation system, and no immediate revenues for the government.

5.3.4.1 Difficulties in obtaining enough financial land

Although LR is a self-financed tool, it might not be able to secure enough financial land to cover all expenditure of the project. One of the participants explained why this might happen:

E02: Upon understanding about LR process, the informal dwellers divide their lands into smaller parcels of lands and sometimes sell some of their lands so that, in the LR process, their current land is smaller than the standard and therefore [they] do not contribute any land to the LR process. In such a case, the government or the implementer cannot get enough financial land or reserve land from the project to be able to fund the whole project smoothly.

However, some participants believed that this could be a temporary problem for the first couple of LR projects:

G02: For the first LR project or two, the government may not be able to get all the associated costs from the financial lands.

Therefore, the respondents suggest that the government must look for some complementary funds to ensure that the first LR project is completed successfully and smoothly:

G09: For the first project it is very vital to have the funds and the government must work to find it somehow.

G11: I think the government must secure enough funds for the first LR implementation because it is normally very hard to fully fund the project from the financial land the first time.

5.3.4.2 Financial mechanism/model

Having the above problem, experts informed that a proper financial model or mechanism does not exist to ensure LR's success in informal settlements:

E03: Financial mechanism is not well established.

Another senior international LR expert also confirmed this:

E05: Financial mechanism is a challenge as the area is mostly built-up (which makes it hard to obtain enough financial land).

Some government officers considered this financial mechanism in the form of a government budget to assist with LR division activities:

G04: The first requirement is the budget. It has been always the main and first requirement with many other projects at Kabul Municipality and, due to this reason, our works at land readjustment division progress very slowly.

This was also mentioned by another local government officer:

G11: Budget is the first step. It must be secured before LR.

The budget issue of LR as a financial supporting mechanism is not only the concern of LR experts and the government officials, but also the interviewed informal landowners. The below informal landowner raised his concern about the budget:

L03: budget restriction from the government side.

5.3.4.3 High compensation

All participants agreed that the cost of LR in informal settlements could be extremely high due to compensation to affected landowners. One of the experts said:

E03: The compensation for demolishing cost may be high in [a] highly dense built-up area, which directly affects project development cost.

It was further supported by one of the government officers:

G02: Also, the compensation costs would be a big problem if we face a lot of demolition in the area resulting from LR.

It was also mentioned by informal residents:

L01: Another big challenge would be the compensation of the contributed land and properties. As you know, there are too many people living in the informal areas with an extreme density; therefore the government [having] to compensate all of these, could be a very big issue.

5.3.4.4 Cost of temporary resettlements

The temporary resettlement cost was another concern of the respondents:

E05: The cost of temporary resettlement/relocations during LR implementation could be a bit challenging.

5.3.4.5 Infrastructure costs

One of the main components of LR finance is infrastructure expenses. Some informal landowners believed that provision of all required infrastructure could be very costly for the project:

L01: The other problem could be the huge cost of infrastructure. In informal areas, even the basic sewerage and drainage systems do not exist and bringing all of this infrastructure with roads etc. could be very costly.

5.3.4.6 Land valuation system

Due to the informal land market in informal settlements, some respondents expressed their concerns about a proper system for land valuation:

G03: Land valuation system could be problematic in informal settlements ...

5.3.4.7 No immediate revenue for the government

Another financial risk of LR is that the government may not benefit financially immediately after completing the project, possibly due to the problems mentioned above. One government official stated that:

G02: There is no immediate revenue for the government from LR in informal settlements ...

5.3.5 External Risks

Participants advised that the power of land grabbers can also influence LR in informal settlements.

Land grabbers

There are many areas in informal settlements that have been grabbed illegally, with most of them already being partitioned, developed and sold to various informal residents. With understanding about LR, the participants from the local government believed that these land grabbers might occupy and grab more informal lands to be legalised through LR. Government officials expressed their opinions about land grabbers in the following statements:

G02: The power of land grabbers and those who construct houses and apartments illegally in such informal areas should not be underestimated ...

This was further confirmed by another informant:

G011: Land grabbers influence LR in informal settlements.

5.3.6 Technical Risks

Participants also informed that there are four technical concerns for LR in informal settlements, including concerns about the duration of the project, resettlement mechanism and issues, scarcity of land for infrastructure, and lack of technical capacity.

5.3.6.1 Duration of LR

One of the technical concerns raised by some informal landowner participants was the duration of LR in informal settlements. These informants were worried how long it might take for LR to complete in their communities:

L05: The duration of the (LR) project is one of our main concerns ...

Another informal landowner also emphasised this issue:

L06: I am not sure how long it might take for such project to finish ...

5.3.6.2 Resettlement mechanism and issues

Experts mentioned that temporary resettlement of informal residents is a real challenge and developing a proper temporary resettlement model should be considered as a main requirement:

E03: Temporary resettlement mechanism could be considered as major requirements for successful implementation of LR in informal settlements of Kabul city.

Another expert also added that these temporary resettlements should be undertaken in a phase-wise approach to smooth the development of the area:

E05: The resettlement mechanism is an issue as the area is totally built-up, some residents have to be temporarily resettled in order to progress with the development in phase-wise manner.

5.3.6.3 Scarcity of land for infrastructure

Another technical risk that emerged from the interview data was concern about the scarcity of land for developing the required public and social infrastructure. One of the experts expressed this issue, as follows:

E05: Scarcity of land — as the area is mostly built-up, land would be scarce to provide infrastructure ...

Thus, not all necessary infrastructure may improve with LR in informal settlements. It was addressed by another expert that:

E07: All required social and public facilities may not be possible to be included within the project due to scarcity of land ...

This means that LR may not be possible to complete with its full benefits and features in all informal settlements, as stated as a criterion in LR customisation:

E01: To me, LR as we know in India (TPS) can definitely be applied in informal areas also, but it is mostly used in relatively open areas or peri-urban areas with ease. Therefore, I guess it is difficult to implement LR with its full benefit in informal settlements in Kabul.

5.3.6.4 Technical capacity and resources

Low technical capacity of the local government was stated several times during the interviews as one of the major challenges of LR in informal settlements. For instance, one of the experts said that:

E07: Lack of institutional and human resource capacity is one of the most important challenges in front of LR in informally developed areas ...

Moreover, this was also emphasised by some interviewed informal landowners, as below:

L04: Another concern is the lack of technical people to implement the (LR) project ...

5.4 Strategies and Actions — Create a Change (CC)

The findings of this research suggest that certain strategies and actions are required to make the phenomenon happen successfully in informal settlements. Figure 5.4 illustrates these strategies:

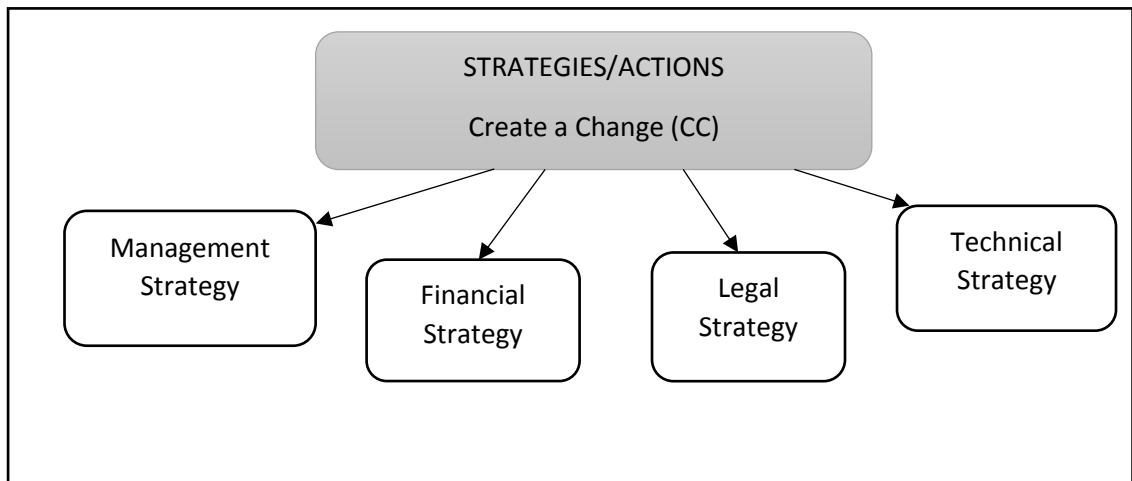


Figure 5.4: Strategies and Actions — Create a Change (CC)

5.4.1 Management Strategy

In order to explain the management strategies and actions in detail, this section is divided into four areas, namely: planning, organising, leading, and controlling.

5.4.1.1 Planning

The findings suggest several important strategies and actions at planning level for LR to achieve the emerged phenomenon, CLR. These planning strategies include developing a comprehensive policy framework for LR, involving informal landowners in LR planning in their community, aiming to strengthen community councils to take up development and maintenance of their communities, and utilising international best practice experience in planning LR in informal settlements.

A comprehensive policy framework

Participants recommended that a comprehensive policy framework should be developed by the local government to guide LR in legal, financial, technical issues:

E03: At the policy level, the government should establish a comprehensive policy which includes various tools and options for development/improvement of informal settlements ... Development of a comprehensive framework for legal, financial support, such as governmental subsidies, and temporary resettlement mechanism could be considered as major requirements for successful implementation of LR in informal settlements of Kabul city.

In addition, one of the experts also advised that it is essential to consider the interests of all stakeholders in any such policy in both planning and practice:

E04: A clear policy and procedure that guarantee the benefits of all parties involved could result in good output. In addition, this policy should be applied to all the informal landowners in the same way without any prejudice.

Involve informal landowners in planning

Experts in LR advised that informal residents should be involved in its planning and the local government should adapt a bottom-up planning approach:

E03: At a practical level, the government should adapt a bottom-up approach of planning, which gets the residents involved from the planning stage that will encourage realisation of plans.

Another expert expanded this involvement and recommended that the informal residents should be involved in all stages from planning and designing, to the implementation phase and fully pay attention to their requirements:

E08: Involving the residents in planning, designing and implementation of the project and get their full agreements.

Lessons from successful international experience

The findings of this research illustrate that the lessons from successful international practice in similar contexts of LR should be considered in the planning and implementation in informal settlements in Kabul. The below international LR experts introduce LR concept in India:

E01: In India, there are many versions of similar concept collectively known as 'Land Assembly'. There are two major types of tools for achieving land assembly. Although, there is a subtle distinction between the two tools/instruments, they are sometimes used synonymously and in place of each other. One is called Land pooling/readjustment while the other is known as Plot reconstitution/town planning scheme (TPS). TPS mostly implemented in one of the western states of India-Gujarat under the state law of 'Gujarat Town Planning and Urban Development Act 1976' is the most widely used LR method...In short, the TPS is conceptualised as a joint venture between the local authority and the owners of land who voluntarily agree to pool their land, redistribute the reconstituted plots of land among themselves and share the development cost. Generally, an area of 100 hectares is taken for such schemes primarily in sub-urban areas where development pressure is high but physical development is yet to start.

As the below expert recommends, using successful the LR experience of other countries can assist the Afghan local government with better planning:

E04: Using best practice experiences from other countries can assist LR to draw the most effective and efficient plans to succeed in informal settlements.

5.4.1.2 Organising

Act transparently

The next step after planning is organising LR works. The findings from the participants indicate that all these works should be carried out in a transparent manner in close coordination with the informal landowners. The following participant supported this in his statement:

G07: It is widely known that transparency is a very important issue in LR. Therefore, as I mentioned above, the people should know about the plan; if they do not have sufficient information about every step of the project, it might face failure.

Intergovernmental coordination

This concept emerged when several participants including LR experts, government officials, and informal landowners spoke about the necessity for effective coordination among the relevant government agencies. One government official said:

G11: Then coordination with other ministries and public sectors should be strengthened as LR needs their support as well. For instance, schools in LR plans must be constructed and managed by the ministry of education, clinics and hospital through the ministry of public health, green space and some parks by the ministry of urban development, etc.

It was further emphasised by another government official:

G10: The government must make necessary coordination with other public organisations.

An LR expert added:

E07: Enhance collaboration among relevant institution.

In addition, one of the interviewed informal landowners also advised about the importance of coordination between informal communities and the government:

L03: There should be close coordination between the representative of our area and the government to convince us and let us know all the details and effects.

5.4.1.3 Leading

A strong political will

As one of the major strategies and actions in managing and motivating all involved LR stakeholders in informal settlements, some participants advised that there must be a solid determination and will at the top level of both local and national governments. One of the government officials stated that:

G10: A strong political will must exist in Kabul Municipality high-rank officials and also in the presidential palace to enable us to implement LR. Without such clear and strong determination, we cannot proceed with LR.

Furthermore, one of the government officials expanded this and said:

G11: The last word is that if a strong political will exists inside Kabul Municipality about LR and we (the LR team) are given enough financial and technical support, I am confident that we can create a change in the informal settlement with the LR tool.

Such political will and determination can be translated into attending and supporting the first meetings with the informal landowners about LR. One of the officials highlighted this as:

G08: The effectiveness of the first meetings is very crucial and how the matter is brought up for discussion. LR staff must be careful about it. As I said earlier, the presence of the high-rank officials of the government, such as Kabul mayor, is very important at the beginning to foster trust on the LR process. If it is managed well, we can convince the residents.

Promote public awareness about LR

As part of strategies for managing and leading LR in informal settlements, all stakeholders should be provided with enough accurate and on-time information about the process. One of the experts stressed the importance of providing sufficient and accurate information to informal landowners:

E06: We must ensure that they have enough and accurate information about the project and understand it very well. Meanwhile, they must be assured that they will still continue to live in their community after LR.

The local government can use the support of non-government organisations and community leaders in raising public awareness about LR in informal communities:

E07: The informal organisations and community leaders can play an important role in increasing the public awareness about LR projects in their communities and increase the chances of getting the agreement of community residents.

E02: The non-government organisations, donor agencies, and NGOs can also help in improving the conditions of informal settlements by establishing a sustainable and trustworthy relationship between the informal dwellers and the local authorities. Some of these organisations, such as UN-Habitat, are currently working on some slum upgrading projects which is not sustainable; however, this could be improved if there are stronger ties and relationships between these organisations and the local governments.

Informal residents should be aware of the personal and community benefits of LR:

E01: Through understanding the benefits of the project in terms of financial gains and quality of services they would enjoy after development (the physical environmental improvement).

Make LR a community-driven project

In the leading stage, it was recommended by the participants to motivate the informal residents in such a way to make LR a community-based project through understanding its benefits. It was pointed out that the government needs to empower the residents to take the lead for LR in the future, even without financial support from the government:

E08: I think the local government should help informal residents to organise a community council and prioritise their settlements problems and issues and try to solve them by their community money, even if the government cannot help them financially.

5.4.1.4 Controlling

Active support against disrupters

In order for LR to succeed, the findings indicate that the local and central governments should constantly support this process. One of the participants emphasised that:

G05: The Afghan government must strongly and actively support the implementer and implementation of LR, especially against people who want to disrupt this process.

This was further supported by another expert, who said:

E04: It is impossible to improve the condition of the informal settlement without the constant support and attention of the central government.

Therefore, the local and national governments should actively continue its support until LR is successfully implemented in informal settlements.

Measures to stop further development of informal settlements

Participants suggested that the government must take effective measures to prevent further illegal construction in informal settlements:

G05: First of all, the government must have strong determination and action to prevent further development of the informal settlements.

They also mentioned why such measures should be taken as soon as possible:

G06: If we do not tackle the problem of informal settlement now, soon we will see that the informal landowners will continue to expand their properties and change it from a shanty house to a concrete made structure where the major problem of public infrastructure remain the same and even worse. In such a case, LR implementation could be even more difficult due to the compensation costs for the project developer to demolish those concrete structure rather than a cheap house.

5.4.2 Financial Strategy

5.4.2.1 Government loan as a complementary financial mechanism/model

As recommended by one of the international experts, a government loan is a sustainable alternative financial solution for funding LR in informal settlements as well as financial land income.

E05: The government should support LR projects with initial seed money in the form of a loan. As the financial and economic condition of Afghanistan is not very good and these densely built-up informal settlements require money up-front, and also as it is not possible to sell the financial lands at first to make initial budget for the project or even in some cases no financial land could be obtained, thus the project will face problem for procurement of initial budget required for construction. Of course, one way is to provide subsidies by the government; however, I don't think that is the only option. Another option could be loans for the project, which will be returned. In Japan both subsidies and loan systems exist (probably from post office saving) which UR (urban renaissance agency) take advantage of it and return after the development. If the public (government) only provides subsidies it would require more funds for further development; however, if it is in the form of loan, the same budget can be used in cycles for many projects.

5.4.2.2 Government subsidy for hazardous areas or transport-oriented locations

The above experts also suggested that the government may choose other methods such as subsidies in some special circumstances and locations, for instance in areas prone to natural disasters or where developing a road is essential:

E05: ... This is how the Japanese government thinks. Therefore, in Japan the government provides some subsidies for all LR projects, because development of the same infrastructure such as a road would be much costlier later on through other methods such as land acquisition. Japanese ideology is to prevent before it is built-up, because development in built-up area is very difficult ... however, using subsidy to conduct a project is effective in the already built-up areas where there is risk of disaster such as fire hazards, or where there is a plan to pass an urban planning road (master plan road) which is very important for the area.

5.4.2.3 Seek support from development aid agencies

As the initial supporting fund is extremely vital for LR in informal settlements, some experts suggest that the government should be seeking such financial assistance from development aid agencies:

E01: Government has to have adequate fund in the form of seed money at least to construct the basic infrastructure to initiate any such efforts. Such funds become even more essential when the concept in the country is new. It can generate this fund with the help of multi-lateral funding agencies, if possible.

5.4.2.4 A combination of government budget and community financial support

One of the experts who had experience with some slum development projects in Kabul introduced another financial alternative for LR. He discussed how the government can still proceed with LR in informal settlements even if the financial land income fails to fully support the project. His alternative method was a combination of government financial support and financial contribution of informal communities to complete LR:

E06: Fortunately, we have various sources of funds for provision of urban infrastructure including water, drainage, sanitation, etc. which can also be used for LR. Therefore, if our first attempt for financing the project through 'financial land' fails, then such support funds could be used jointly with the support from the informal community to develop the required public infrastructure such as roads, drainage system, water supply and electricity etc. Kabul Solidarity Program (KSP) which is a slum upgrading program proved that Afghan people are ready to contribute to the KSP projects by around 50% of the total costs.

5.4.2.5 Support certain vulnerable informal landowners affected by LR

As part of LR financial strategy in informal settlements, some participants suggest that certain vulnerable informal residents should be taken care of by the government:

G02: We faced a major problem in that area as the level of income in that neighbourhood is very low. I mean LR will have significant changes on the lifestyle of the residents and they may not be able to develop their remaining lands after LR. So, I think the government should have enough plans to support them.

5.4.3 Legal Strategy

5.4.3.1 Local level

At the local level, the findings suggest that the local government should consider two important issues. First, it must ensure that the new land title deeds will be granted to informal landowners under LR, and second, conduct land ownership clearance in small phases to determine the true landowners for LR.

Ensure new land title deeds

Experts advised that this is one of the major tasks of the government to make sure the informal landowners receive formal land title deeds for their readjusted lands after LR:

E02: The government must ensure the residents about the formal titling documentation after LR.

Land ownership clearance in small phases

The other important issue is clearing land ownership in small phases. In order to determine the real landowners for LR, experts recommend that land ownership surveys be conducted in certain small areas under the project first:

E02: In [the] case of Kabul, I think as a complete survey of land ownership would take many years (five years or more) and we may not want to keep the informal settlements condition as it is, the local authorities can start surveying a small area where the land readjustment is planned to be implemented before the project execution.

This legal land ownership survey will open the way for LR and provide enough information to start the project:

E06: Before LR, we need to have enough information about the site in terms of legal status of houses and the lands ... I believe we have to start LR through a pilot project and divide it into some small phases. For the first phase, we start with a very small site and use it as a showcase to attract the trust and attention of the residents. Then it will be easier to proceed further with this tool.

Once the land is cleared, public lands should be separated from private owners for further planning:

G04: The most important task of the local government is to clarify the ownerships of land. Then public lands must be separated from the private lands and plans must be drawn based on that.

5.4.3.2 National Level

Develop a legal tool for Land Readjustment

At the national level, the findings strongly suggest that legal back-up be developed in the form of a law to advocate LR implementation in informal settlements. This can clear most of the legal concerns in the context and ease the process of LR:

E07: One of the most important challenges in front of LR in informal settlement is the lack of an endorsed law or legislation to legalise it in informal settlements and in the country in general. Currently there is no such a legal tool in the country to help with LR implementation.

5.4.4 Technical Strategy

5.4.4.1 Technical capacity building at local level

Improving technical capacity and increasing the number of technical staff for LR are among the main issues for a LR strategy in informal settlements:

G09: The government must develop its technical capacities about LR ... the current training programs have been good, but further training is still necessary.

More technical staff is required for LR implementation:

G06: The government must train more staff in regard to implementing LR to be able to have a successful project. For the moment, there are only eight staff working in the land readjustment and redevelopment division of city planning department, Kabul Municipality.

Not only professional staff, but also high-rank officials of the local government are required to participate in LR training programs to be able to understand the LR concept for better policy and decision making:

G01: More technical training programs for the relevant staff and high-rank officials of Kabul Municipality.

In these training programs, topics such as mechanism of land rights in the country, land valuation system, land contribution methods, resettlement plans, and other relevant socio-economic issues should be covered:

G03: We have to understand the flow and required steps in all phases of LR projects. Like, when you want to deal with land issues, you have to know the mechanism of land rights, land valuation, contribution method, and resettlement of affected residents during the project implementation, social and economic consideration of the LR project.

5.4.4.2 Create a landownership database

In order to make the LR process work smoothly in informal settlements, a land ownership database should be created to assist with planning and implementation, and also issuance of land title deeds after the project:

E01: [The] creation of [a] database of the informal settlements, particularly land ownership, can significantly improve the progress of LR in terms of planning, implementation, and new title deeds.

5.4.4.3 Ease standards in planning and implementation

According to the findings, LR needs to ease its standards both in planning and implementation in informal settlements in Kabul to be able to make consensus building faster in these communities and, at the same time, respond to the local needs. The LR experts advised that:

E05: We don't need to apply LR with its full features and infrastructures in such areas. LR can still work for such areas with easement in standards of required infrastructures such as we don't have to make the road 8 metres wide, where 4.5 or 5 metres could be responsive for the site, or where a road could be bent or curved instead of pressuring on straight road which requires to demolish some buildings, will make it easier to get consensus and perform LR. I think making more flexible plans rather than rigid standards can have a big effect on [the] success of the project ... We shouldn't make impossible plans. Even if not 100%, we can still succeed 60% or so and the LR can be customised to meet the local needs, even if it results in easement of our planning standards.

Scarcity of space could be one of the principal reasons for this strategy:

E01: ... Adopting a lower than usual standard (for LR in informal settlements) due to scarcity of space.

5.4.4.4 Surveys

As part of the technical strategies and actions, a series of surveys is required to make LR happen successfully in informal settlements. The required information can be obtained through independent physical and socio-economic surveys:

E01: Government should generate adequate data on the informal areas by conducting physical and socio-economic surveys in order to make a decision on selection of suitable tool either LR or UR.

Another option is to use a combination of independent and other surveys:

E06: A complete survey is required to be done in terms of the availability of (enough) lands, the area residents' population and houses, their land legal status, etc. In this regard, surveys such as 'the state of Afghan cities' which has been done very recently could be very useful as it provides the recent digital mapping of the whole city and we can obtain some good data out of it in terms of number of households in Kabul (around 352,000) etc.

5.4.4.5 Use world's best practices

The findings also suggest that best practice experience similar to Kabul's context should be used in terms of technical issues:

E02: However, in some developing countries like India and some African countries where the land ownership is still not clear, they managed to find a similar method in accordance with their norms, culture and lifestyles for LR implementation ... I should mention that LR cases around the world are different in technical and legal contexts. India could be a good example for us in terms of technical issues, but the legal rights and systems are quite different with that of us, so we need to ensure that we develop our own model for all LR aspects.

5.5 Contextual Conditions — Land Readjustment in Kabul (LRK)

Six specific contextual conditions emerged from the interview data which can influence the Main Focus of this research. As shown in Figure 5.5, these conditions are the land management system, creation and growth of informal settlements, future of informal settlements, condition of existing infrastructures, attitudes of informal landowners, and ethnic divide.

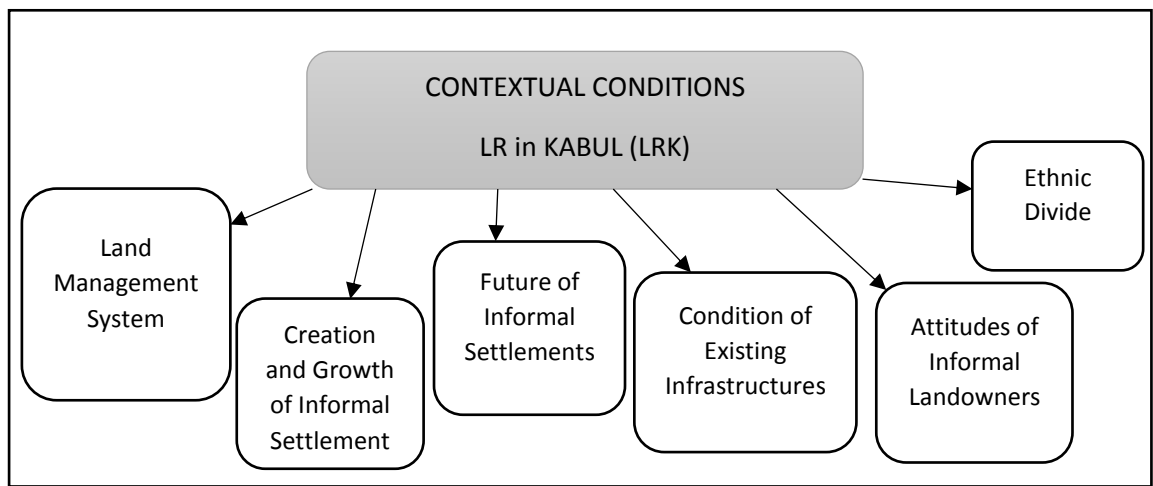


Figure 5.5: Contextual Conditions — Land Readjustment in Kabul (LRK)

5.5.1 Land Management System

This section consists of two main aspects: the land registration system in Afghanistan and the LR procedure.

5.5.1.1 Land registration system

One of the most important concepts that emerged from the interview data was the problem with the land registration system. One of the participants pointed out that:

E02: This can be a major problem as we currently do not have a clear land registration and cadastre plan system in Afghanistan and there are even a lot of misconducts on changing the data and ownership on cadastre plans, which is illegal. I had a research project in Qowaye Markaz area in Kabul in which one land plot had official land title deeds issued by the government to three different people. This shows that there have been illegal changes even in cadastre plans. Due to these reasons and lack of a proper land registration system, it is very hard to stop people from occupying lands illegally and also stop the process of making fake land documents.

5.5.1.2 Land readjustment procedure

Another relevant topic to the context was the LR procedure. The public servants informed that the local government was working to develop a procedure for LR in Kabul city. One of these officials said:

G03: Fortunately, the Kabul Municipality prepared the first procedure of land readjustment and urban redevelopment.

This was restated by another government official, with more details about various land ownership cases and LR in informal settlements:

G08: Yes. At the moment, we are developing a land readjustment procedure and considering all cases of land ownership. Those informal landowners who live in the informal settlements could benefit from LR and we are not depriving them from this project.

The first legal support for LR in Afghanistan is the Land Readjustment and Urban Redevelopment Procedure approved by the administrative board of Kabul Municipality on 22 November 2017. This will enable the Kabul Municipality to start LR systematically in Kabul city for the first time in its history. The procedure is developed based on Article 46 of Land Acquisition Law, Article 16 of Municipal Law, and Article 2 of Kabul Master Plan Implementation Regulation.

5.5.2 Creation and Growth of Informal Settlements

Participants informed that the deficit in policy, planning and government capacity, scarcity of urban land, internally displaced persons (IDPs), economic factors such as a notorious/instable economic system, regulatory policy, implementation and enforcement deficit, and increase in population were the main reasons for the creation of informal settlements in Kabul. One of the government officials described these factors, as below:

G05: The first reason is the high rate of internal migration from other places and provinces to Kabul due to insecurity in their places. Secondly, unavailability of enough standard (planned) urban areas which lead these people to go and build a shelter for themselves anywhere and, unfortunately, we didn't have any alternative plan for it. Thirdly, the population of Kabul is growing very fast, which could be considered as a reason in this regard. Lack of laws and policies on urban development in the last decades, weak government, mis-controlling and negligence of the relevant local authorities, lack of knowledge by urban dwellers about the disadvantages of living in

informal settlements (such as difficulties in accessing the area in emergency cases like health issues, lack of urban services, schools, hospitals, etc.) are the other reasons.

In addition, participants also stated that the land and housing deficit, land grabbers, land speculation, lack of law and legislations, market factors, weak financial status of informal residents, lower price of land in informal settlements, intervention of government influential persons, corruption, political factors and forces, lengthy process of construction permit, rigid planning system, regulatory policy, and socio-cultural factors are the main reasons for the informal settlements growth in Kabul. One of the participants highlighted that:

G02: I think the main reason that the informal settlements are still growing is because of the lengthy and very complicated process of [obtaining a] construction permit in Kabul Municipality. The other reason is that most informal area residents are poor and cannot afford purchasing a land in a formal planned area. As you know, the price of land in informal areas is 3–5 times less than the planning areas and that lead this low-income social class to continue living in such places. And finally, the Afghan government is corrupt and many high-rank officials misuse their power to prevent Kabul Municipality acting according to its laws and planning in informal areas. In most cases, we cannot stop them from building further illegal houses in informal areas.

5.5.3 Future of Informal Settlements without Land Readjustment

A question was asked of all interviewees about their opinions and viewpoints of the future of informal settlements without LR in Kabul. They stated their views in the following four approaches.

5.5.3.1 Natural disaster risks

According to one participant, there is a high risk to some residents living in informal settlements in the future, due to weak structures of their houses. He informed that:

G07: It is very dangerous for the residents, as most of informal houses are made of muds, which are not strong enough against the natural disasters, if some natural disaster happens the fatality percentage will be too high.

5.5.3.2 Further serious problems with basic infrastructure

Another participant informed that even if the informal residents improve the structure of their informal houses, the problem of infrastructure remains or even intensifies:

G06: If we do not tackle the problem of informal settlements now, soon we will see that the informal landowners will continue to expand their properties and change them from a shanty house to a concrete made structure where the major problem of [lack of] public infrastructure remains the same and even worse.

This was also emphasised by another participant:

G02: If the informal dwellers continue to live like as they are doing now, soon they will have further serious problems with no access to proper health care, schools, roads, green space etc.

These problems may directly affect the environment and health of informal residents:

E06: To me, it looks like a crisis. Even now, we are in crisis. Especially in terms of environmental consequences. You can see that when it is raining, most residents in such areas release their relatively small toilet reservoirs into the streets so that it goes away with the flow of rain. This creates a lot of health problems for the residents, especially for the kids and the elderly and other environmental problems. The other issue is about the lack of access to clean urban water. Expanding such conditions will direct Afghanistan towards a worse crisis in the near future.

5.5.3.3 Land acquisition and landowners' loss

Without LR, the only available solution for the government is the conventional method of land acquisition in which the landowners lose more compared to LR:

G10: If LR is not implemented, then we need to do land acquisition and in this case, which is very slow, the resident will be losers.

5.5.3.4 People finding own ways to survive and develop their communities

According to one of the interviewed government officials, although informal residents may find their own way to survive and develop their communities, it might take a very long time and they may not be able to improve it as much as LR can:

G04: Even without LR, people will find their own way to survive as they are currently doing; however, this might take a very long time so that they could

develop their neighbourhood well and also it might not be as good and comprehensive as LR. Therefore, our mission as the government agency is to help them do this improvement much quicker through LR.

This was also mentioned by another expert participant:

E05: It will take very long to upgrade them without LR. For example, in upgrading the road network will not change, [it was] only a little widened and would be hard to increase roads in the site in most cases, thus improvement of the road network through upgrading is very difficult.

5.5.4 Current Infrastructure Challenges

The informal landowner participants commented on their current infrastructure challenges they are facing in their communities. Table 5.2 summarises these findings.

Table 5.2: Status of Current Infrastructure in Informal Settlements

	Very good	Good	Available but not sufficient/good quality	Very bad	Not available at All
Urban water					All 6 interviewed informal landowners
Electricity			All 6 interviewed informal landowners		
Sewerage and drainage system				2 interviewed landowners	4 interviewed landowners
Main roads			3 interviewed informal landowners	3 interviewed informal landowners	
Tertiary roads/streets			2 interviewed informal landowners	4 interviewed informal landowners	
Sanitation			2 interviewed informal landowners	4 interviewed informal landowners	
Primary and secondary schools		1 interviewed informal landowner	3 interviewed informal landowners	2 interviewed informal landowners	
Hospitals and health centres			1 interviewed informal landowner	2 interviewed informal landowners	3 interviewed informal landowners
Parks and playgrounds			1 interviewed informal landowner		5 interviewed informal landowners
Green space					All interviewed informal landowners

	Very good	Good	Available but not sufficient/good quality	Very bad	Not available at All
Any other item: (please add)				1 interviewed informal landowner — about pit toilet	

Source: Interview data.

5.5.4.1 Urban water

The interviewed informal landowners stated that there is no access to clean urban water in most informal settlements. As the investigator observed, the majority of the houses in the visited informal settlements had a water well:

FN: In most houses, there is a water well that is used as drinking water and other house usage such as taking [a] bath and washing clothes and dishes (Field Note 2017).

5.5.4.2 Electricity

Although the interviewed informal landowners had this facility, there were complaining about many blackouts during winters. One of the landowners said that:

L04: The quality of electricity is fine, but during winters, we only have a few hours of power per day. This is while some other (formal) parts of the city have electricity full [the whole] day. I think it really matters where you live in terms of electricity provision and also other urban services.

5.5.4.3 Sewerage system

One of the major infrastructure challenges of informal settlements was the lack of a proper sewerage system in the community. The investigator noted that:

FN: There is no underground sewer system to collect and direct waste and surface water from the streets. As a result, it is very hard to move around these areas, especially on rainy days (Field Note 2017).

5.5.4.4 Main roads

Although there are some main roads in informal settlements, however, the residents informed that there are not enough for their communities. The investigator also noted one of his encounters with this issue:

FN: The main road that connects the informal settlements of Dashte-Barchi in the west of Kabul to Mirwais Square (one of the main entrances of Kabul city) is so congested with extremely high traffic during the day. It seems that only one main road does not respond to the population living in this area of the city (Field Note 2017).

5.5.4.5 Tertiary roads

The following informal landowner stated that the tertiary roads in his community do not correspond to the local needs, especially in emergency situations:

L06: It was just a couple of days ago that one of our neighbours needed an ambulance, but the roads were so tiny that the ambulance had to wait two streets back and we had to take the patient there. The patient suffered a lot to get to the ambulance.

This was also observed by the investigator when he visited the site:

FN: The condition of most side or tertiary roads are extremely notorious and completely inaccessible by sedan or larger vehicles such as ambulance or fire truck. Some of the interviews were conducted during hard winters in Kabul and it was not possible to access most areas in emergency cases such as fire or health issue. (Field Note 2017).

5.5.4.6 Sanitation

As can be seen in Table 5.1, the condition of sanitation is not appropriate in the informal settlements where the respondents are living. It was also noted by the investigator that:

FN: There were no bins for collection of solid wastes in the communities except a few close to the main roads. As a result, solid wastes including recyclables were spread out everywhere on sidewalks, streets, ditches, etc. (Field Note 2017).



Figure 5.6: Poor sanitation and solid waste collection in informal settlements — a young child seeking among garbage to find some recyclables (plastics and cans) for sale in an informal settlement in Kabul. Source: The Author.

5.5.4.7 Schools

In terms of availability of primary and secondary schools in the community, most participants said that there are not enough facilities or they are of bad quality. They claimed that most of the available schools are private, using residential or business buildings for the school. Furthermore, in most cases the necessary factors of a school, such as child safety, are not considered when choosing the building location or are not of good quality in terms of construction materials.

5.5.4.8 Hospitals and health centres

The standard of hospitals and health centres is also not good in participants' communities. Informal landowners stated that most of the current hospitals and health centres are private; however, many of them do not offer a good-quality service to the residents.

5.5.4.9 Parks, playgrounds, and green space

Most respondents also claimed that the quality and/or quantity of parks and playgrounds is not satisfactory and adequate to their community. One of the respondents said:

L02: In the last 13 years that I have been living here there have been no recreation facilities, green space or a playground so that our kids could play

outside. Due to this, most of our kids play on the street, which is not safe first, not healthy, and also creating a lot of noise.

This was also noted by the investigator's field note on the site:

FN: In all informal areas that the investigator visited during his two research fieldworks, there were no parks, green space, or playground for children (Field Note 2017).

5.5.4.10 Pit toilets

As one of the participants raised, the pit toilets were one of the most disturbing and disgusting issues in these settlements. This participant pointed out that as there is no underground sewer system to collect human faeces and toilet waste, most houses construct their toilets about one metre above ground level to make a space for collecting human faeces, usually from the street door. The investigator also observed many of these toilets and noted:

FN: It was very unpleasant to see pit latrines collected from a small door under the toilet facing to the street. This was noticed quite a few times during the visits in the informal settlements (Field Note 2017).

5.5.5 Attitudes of Informal Landowners towards Land Readjustment

During the interviews, the investigator noted a few special attitudes of informal landowner respondents which were evident from the way each of them was answering the questions. These feelings were: fear and passion, lack of trust, and personal impressions about LR.

5.5.5.1 Fear and passion

It was noticeable that each respondent had a feeling of fear when answering the questions about their insecure land tenure and documents or land contribution; perhaps their fear was of compulsory eviction by the government or losing their lands. This feeling was very common among most informal landowner respondents. On the other hand, when the questions were about the possibility of providing infrastructure, such as standard roads in their community, through LR or receiving formal land title deeds for their remaining land after readjustment (or apartment in the case of urban redevelopment), they were listening and speaking with passion and enthusiasm (Field Notes 2017).

5.5.5.2 Lack of trust

The other visible feeling of the informal landowner respondents was the lack of trust in the Afghan government, especially when the discussion was about temporary resettlements.

FN: Most of them asked me after their interviews what happens if the government delays the project upon temporary resettlement of area residents and does not return them to their principal place of living. This was also evident about issuing formal land title deeds after completion of LR (Field Notes 2017).

5.5.5.3 Impression about land readjustment

This research found that the informal residents truly welcome LR in their communities and eagerly cooperate to realise this project. One of the interviewed informal landowners stated that:

L06: I think after 13 years of living in the informal settlements, I have the right to ask my government to pay attention to my area of living. You can see that the living condition here is not very good. Of course, we didn't choose to live here, we were forced to live like this as we had no other option at that time. We just tried to survive and knew that the government has more serious challenges like national security and fighting with terrorists. Now that the country or at least Kabul city is a bit better from a security aspect, we really invite the government to look at our neighbourhood and improve our basic infrastructures. If the government shows a little bit of interest for such projects, we, the residents, will embrace it and will do whatever we could to make our neighbourhood a better place for our kids and families.

Furthermore, another landowner also emphasised that they value more the provision of required infrastructure in their community, rather than other incentives of LR, such as their land value increase:

L01: Anyway, I would like to add that I am not going to do business with my land and I don't really care about the price hike personally, as long as the above said facilities come in my neighbourhood. This would definitely increase our living condition and health. These are much more important to me.

5.5.6 Ethnic Divide

Entering into several informal settlements, the investigator noticed that most residents belong to a particular ethnic group in each neighbourhood. It was clear from their language, accent, culture, and lifestyles. For example, during visiting informal areas in Dashti-Barchi in the west of Kabul, most residents were from the Hazara ethnic group, while in Shah-Shahid informal settlements in the south-east of Kabul, the majority were Pashtuns. The investigator also noticed that when travelling to the north of Kabul, the majority of residents were from the Tajik ethnic group. One of the interviewees told the investigator that it is because of the civil wars in Kabul in the past few decades. At that time, the Mujahidin were divided based on their ethnic groups and were fighting against each other. Unfortunately, the layout of the city is still similar to those periods because Kabul residents are still worried about civil wars and feel safer living next to each other, even in informal areas (Field Notes 2017).

5.6 Intervening Conditions — Land Readjustment Politics (LRP)

There were three main categories discovered as intervening conditions for the research phenomenon such as the government policy towards LR, unstable land value and market, and political factors and insecurity (see Figure 5.7).

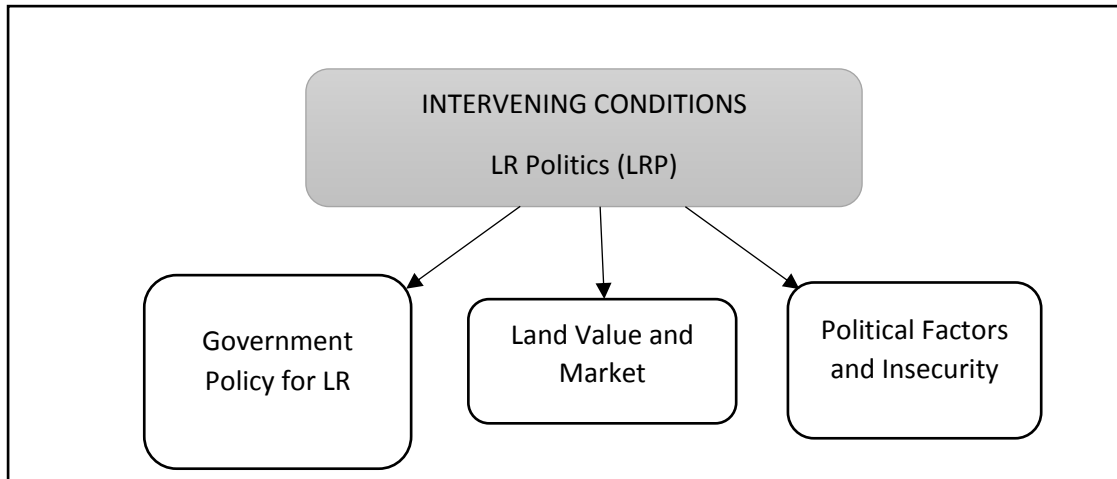


Figure 5.7: Intervening Conditions – Land Readjustment Politics (LRP)

5.6.1 Government Policy for Land Readjustment

As currently there is no national urban policy in the country (UN-Habitat 2015, 37) to guide urban development, the government may have different goals and policy for LR in informal settlements depending on issues such as type of informal settlements, government budget, transit-oriented development, and urban development policy. The findings of this research suggest that the government might aim to regularise informal settlements at any cost in some scenarios or choose to improve the quality of life and provide social housing in other informal settlements. It may also aim to earn revenues from taxes after formalisation of informal settlements through LR or just conduct LR to make profit from financial land through land value capture. All these proposed varying policies might affect the process of LR in certain informal settlements, positively or negatively. One of the interviewees said that:

L03: We don't know about the government's intention for LR in informal settlements. Of course, we definitely support them if the government really wants to improve the condition; however, if there is something else (such as eviction of informal residents from the site etc.), we never let it happen.

5.6.2 Land Value and Market

Another significant factor that might influence LR in informal settlement is changes in land value and market. This concept emerged when some participants raised land value and market:

L01: Well, I believe the current land price in this neighbourhood is kind of a bubble and not real; however, I think if the prices come back to their normal situation, I suppose the value of my land with formal land documents would increase by 50% to 200%. Again, nothing can be predicted with the land market these days.

In case the land value increases, then there is a high possibility that the financial land can cover the LR costs (fully or to a high extent). However, if the land price drops down in the market, it is less likely that the financial land could compensate the LR costs adequately and, therefore, the project might face failure financially. This demonstrates that land value and market is one of the important factors that can lead LR to success or failure (from a financial aspect). However, the formalising of land and provision of infrastructure is likely to increase land value unless there are extremely unusual circumstances, such as having your home removed through force.

5.6.3 Political Factors and Insecurity

5.6.3.1 Influence by government officials

There might be a conflict of interest with the government to implement LR in informal settlements. One of the interviewed participants claimed that a significant majority of informal landowners are somehow related to the government as a staff member and so on and, therefore, they can influence LR in their communities:

E02: I would say that around 90% of those informal landowners themselves are a part of government or somehow attached to the government (government employee, high rank official or influential) and insist to legalise their lands without paying any big money or losing parts of their lands to the government.

This participant also mentioned that these government people might continue occupying more government or private lands and try to legalise them through LR as there is no proper land registration system in the country to stop them doing so:

E02: The most important negative point is that it could encourage influential people to usurp land and legalise it by LR. This can be a major problem as we currently do not have a clear land registration and cadastre plan system in Afghanistan ...

5.6.3.2 Insecurity and terrorism

This concept emerged when the investigator visited the site twice in 2016 and 2017 for data collection. During these visits, there were several terrorist attacks in Kabul city, resulting in many casualties. This sent a signal that LR might be influenced by this factor through affecting land value, distracting the government focus from LR in informal settlements, delaying construction works. (Field Notes 2016, 2017).

5.7 Outcome Conditions — Customisation Success Criteria (CSC)

The findings propose five key criteria for LR customisation success in informal settlements. These criteria include provision of required infrastructure, land tenure security, improvement in quality of life, avoiding dispersing the community, and government benefits. Figure 5.8 illustrates these emerged conditions.

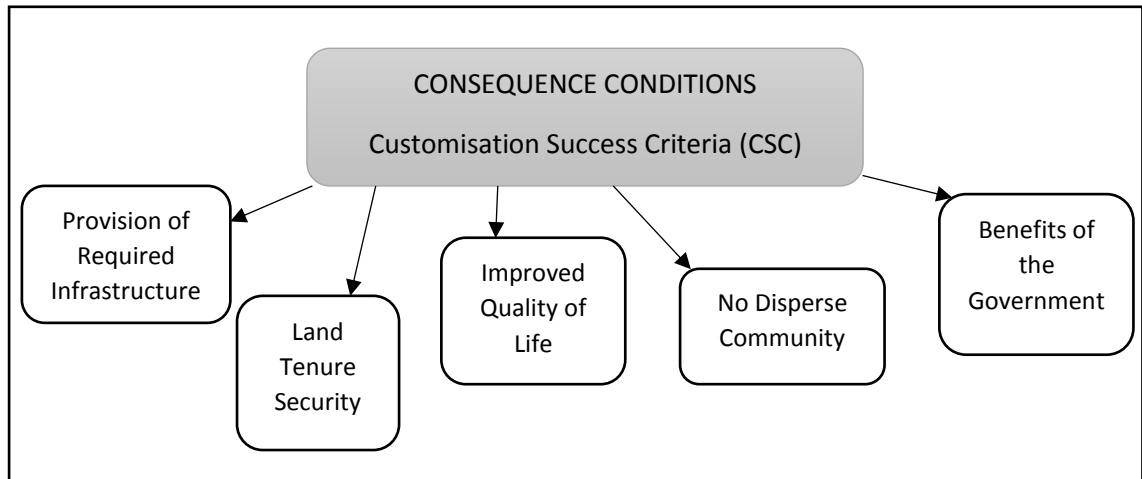


Figure 5.8: Outcome Conditions — Customisation Success Criteria (CSC)

5.7.1 Provision of Required Infrastructure

The LR process can definitely promote the quality and quantity of social and public infrastructures in informal communities. This was stated as one of the most important results of LR in informal settlements. One of the experts highlighted this, as below:

E06: Beside this, having proper road access, urban services, clean and green city and many more are included as the positives of land readjustment in informal settlements.

Another expert emphasised this matter as one of the objectives of LR beside land value increase:

E08: It is a participatory approach that is based on the understanding and agreements of the landowners to provide better living facilities for the people under the project and to raise the value of land.

This was also supported by the government officials:

G06: The first most important advantage is that it is a comprehensive tool that can change an informal area to a formal area with most infrastructures.

G07: Social and physical infrastructure will be brought [provided] for the residents.

G02: In my opinion, LR can change the view of a neighbourhood and that is a good thing. It can provide a lot of social facilities such as schools, clinics, parks, green area, widened road, better public transportation. These are all the positives of LR.

G10: Changing an unplanned area to a planning area, bringing public infra[structure] such as widen[ing] roads, schools, etc.

This was also supported by informal residents:

L01: Improvement in the quality of roads could help in getting to work on time.

5.7.2 Land Tenure Security

5.7.2.1 Feel more secure after formalisation

Another important consequence of LR could be land title security and peace of mind of the residents living in informal settlements. One of the participants stated that:

E07: The title deeds will be formalised which will bring a peace of mind and land ownership security for the informal residents.

5.7.2.2 Enable using land as capital

Through LR, informal landowners can also be assisted to use their land as a capital as well as transfer it easily without any legal issues. One of the informal landowners informed that:

L01: Of course, one can use the official land documents for any business or investment purposes as a capital; also there is no legal problems in this regard ... it can be sold or transferred very easily.

5.7.2.3 Recognition

Being recognised by the local government is another privilege of LR in informal settlements, which emerged from the interview data. Unfortunately, informal landowners are not currently recognised by the local government and that is one of the main reasons for the current condition of informal settlements. Although there have been some urban upgrading projects such as Kabul Solidarity Program (KSP) in

informal settlements, these are managed and funded by the residents and international donor agencies such as the Japan International Cooperation Agency (JICA) under the supervision of the local government to improve the condition of these settlements, not to recognise them. Using LR, this privilege can be given to informal residents to benefit from all the urban services provided by the local government. Two informal landowners shared their views in this regard, as follows:

L02: The customary documents are not registered with the government, but the official ones are registered and recognised by the government.

L06: The only difference I think is that when you have those “official” land document, you’re considered as a citizen with good public service. For people like us, no one cares about our well-being and neighbourhood.

5.7.3 Improvement in Quality of Life

Improved safety and security

Experts and government officials believed that an improvement in quality of life in informal settlements is one of the main consequences of LR. One of the LR expert participants argued that the community security and safety will be improved:

E02: Improving the current condition of the informal settlements by LR would increase the security and safety of the residents, especially at night when people are passing by from a lit street rather than a dark, squalid, and unpaved walkway.

This was also confirmed by some local government participants, as below:

G05: LR will improve the security and safety condition of the informal settlements ...

G07: It is also very good for security reasons.

In addition, in addition to acknowledging the LR’s positive impact on the quality of life in informal settlements, one of the public servants claimed that the local government will also benefit from it, as it can reduce the burden, pressure and dissatisfaction with the authority due to the current bad condition of life in these settlements:

G08: The pressure on the government will be reduced about the bad quality of life of the residents.

5.7.4 Avoid Dispersing the Community

One of the government officials raised another positive consequence of LR in informal settlements. She remarked that LR can provide the opportunity for local residents to stay in their current community after the project. Based on her previous experience with land acquisition, she emphasised that LR can better respond to this criterion as the area residents will not be evicted from their neighbourhoods by force:

G04: The best advantage of LR, in my opinion, is that people will continue to live in their current neighbourhood after LR implementation. I remember when I was working for the land acquisition department, due to the nature of the land acquisition process, the residents had to contribute part or their whole land to the land acquisition process against financial compensation or a substitute land plot somewhere else in the city where most of the residents didn't like it — because most of these residents had to relocate to areas where the living condition was not good and there was no development project going on there. That was why no one was willing to leave their land for the land acquisition process and therefore, this process was very slow and challenging.

5.7.5 Benefits of Government

Some government officials advised that the government can also benefit from LR. These advantages can be controlling the unplanning expansion of informal settlements, enhancing informal residents' satisfaction, and some financial benefits.

5.7.5.1 Controlling the unplanned expansion of informal settlements

Creation and expansion of informal settlements have been one of the major challenges in Kabul as discussed earlier under contextual conditions. Therefore, LR can provide a tool for the local government to control the expansion of these settlements. In this regard, one of the government officials said:

G05: Controlling the expansion of the informal settlements is one of the key consequences of LR

5.7.5.2 Residents' satisfaction

This social consequence of LR emerged when a participant said:

G08: The residents win because they will find access to facilities and social infrastructure such as widened roads, schools, health care, green space and parks, which they didn't have before. Also, the government benefits from LR because it can attract its citizens' satisfaction.

5.7.5.3 Financial benefits

Finally, the local government might also benefit from LR financially through property taxes and other services:

G05: More financial gain for the government through levying urban and service taxes after formalisation of the area through LR....

5.8 Chapter Summary

This chapter presented the research findings in the form of an inductive model, comprising six main components: main focus, causal conditions, strategies and actions, contexts, intervening conditions, and consequences. All findings from the 26 interviews and field notes were categorised into these six components of the theory to offer a better understanding of the research question.

The findings suggest that LR can be customised in terms of 14 criteria in five major areas, namely the physical set-up, population characteristics, legal and planning framework, economic considerations, and world best practices to fit in informal settlements in Kabul. This is the main finding of this research that emerged from the data, which is referred to as the 'Main Focus' across this thesis. The main factors that influence the Main Focus are: LR stakeholders, socio-cultural risks, legal risks, financial risks, external risks, and technical risks. Based on these factors, the findings generate certain strategies and actions to be taken in terms of management, financial, legal, and technical issues. In addition, it was found that the land management system, reasons for creation and growth of informal settlements, future of these settlements, status of existing infrastructure condition, attitudes of informal landowners, and ethnic issues, can influence the aforementioned strategies as contextual conditions.

Furthermore, intervening conditions such as government policy towards LR, land value and market, political factors and insecurity could also impact these strategies. Finally, the success of LR can be evaluated through achieving consequence conditions such as the provision of required infrastructure in informal settlements, land tenure security, improvement in quality of life, no dispersed community, and benefits for the government. In Chapter 6, all these findings are analysed against the literature to further elaborate their inter-relationships and implications for policy and practice.

Chapter 6: Discussion

6.1 Introduction

This chapter discusses the importance of the research findings with reference to the current LR literature and comprises three key sections. In the first section, each of the six paradigms of CLR model is summarised, followed by a brief review of the relevant key aspects of the literature. Then, the significance of each finding is discussed in comparison with the literature. After a detailed discussion of each paradigm, it was confirmed that this study made substantial theoretical and policy contributions to the current LR research. The most important theoretical contribution is the development of the CLR model in challenging contexts, which is not currently available in the LR literature. Furthermore, this chapter discusses how the findings of this thesis contribute to development of appropriate policies for LR towards achieving Goal 11 of the United Nations' Sustainable Development Goals (SDG 11). These are discussed in the third and the fourth sections in this chapter, followed by outlining the limitations of this research.

6.2 Discussion of the Findings

The findings of this research are categorised in six paradigms, as suggested by Creswell (2007), namely: Main Focus, antecedent conditions, strategies and actions, contextual conditions, intervening conditions, and outcome conditions. These are presented in turn by relating the local findings to the global literature.

6.2.1 Main Focus (The Main Finding)

The Main Focus is the central part of the research findings that best explains the main purpose of the model (Creswell 2007). An outcome of the data analysis process was the definition of this study's Main Focus as "customised land readjustment" (CLR). This category emphasises that CLR is the most effective method for using the LR tool in challenging contexts. It further explains that it can be carried out through customisation in five major areas: physical set-up, population characteristics, legal and planning frameworks, economic considerations, and world's best practices. Each of

these five major aspects of the Main Focus category has certain criteria that emerged from the interview data, as shown in Table 6.1.

Table 6.1: Five Key Aspects of the Main Focus Category with their Criteria

Main Focus aspects	LR customisation criteria
1. Physical set-up	1. Features 2. Layout and structure 3. Natural disaster risks
2. Population characteristics	4. Local community needs 5. Density 6. Land scarcity 7. Norms, culture, and lifestyle
3. Legal and planning framework	8. Land ownership 9. Building regulations and standards 10. Preservation of historical areas
4. Economic considerations	11. Land value increase 12. Government gains and losses
5. World's best practices	13. World's best practices 14. Standards

In addition, the literature also discusses eight aspects of LR as the core issues of the LR theory in urban areas. These are: compulsory application of LR (Archer 1978; Alterman 2007); customisation based on (minimum) context requirements (Nagamine 1986; Acharya 1988; Byahut and Mittal 2017); resource management (Larsson 1997; Çete 2010; Supriatna and van der Molen 2014); multi-purpose usage (Alterman 2007; Souza, Ochi and Hosono 2018; Zhang 2008; Larsson 1997; Archer 1992; Hong and Brain 2012; Byahut and Mittal 2017; Zabihi and Khiavy 2012; Mittal 2014); LR finance (Muñoz Gielen 2014; Mathur 2012; Archer 1978; Supriatna and van der Molen 2014); sustainable land use (Zhang 2008); equitable land contribution (Kucukmehmetoglu and Geymen 2016); and participatory approach (Soliman 2017; Yau 2012; Mittal 2014). Table 6.2 illustrates these key aspects with the relevant literature sources.

Table 6.2: Central Aspects of Land Readjustment in the Literature

Key aspects	Relevant studies
Compulsory implementation of LR	<ol style="list-style-type: none"> 1. LR should be a compulsory process which is planned, implemented, and led by a government agency (Archer 1978) 2. Compulsory LR can lead to wide application (Alterman 2007, 50)
Customisation based on (minimum) context requirements	<ol style="list-style-type: none"> 3. LR needs to be customised based on the minimum requirements rather than fancy development standards (Nagamine 1986) 4. LR should be used based on the context's requirements in terms of socio-economic and political conditions, otherwise it cannot yield the expected outcomes, even with the most comprehensive technical plans (Acharya 1988) 5. Strategies and actions need to be customised to make LR successful (Byahut and Mittal 2017)
Resource management	<ol style="list-style-type: none"> 6. LR is effective when none of stakeholders has enough resources to develop community alone (Larsson 1997) 7. Conflicts in LR can be reduced by allowing landowners to maintain most of their lands (Çete 2010) 8. LR can mobilise physical and social resources of community voluntarily or compulsorily (Supriatna and van der Molen 2014)
Multi-purpose usage	<ol style="list-style-type: none"> 9. LR can be used for a variety of purposes such as provision of public infrastructure and amenities (Alterman 2007; Souza, Ochi and Hosono 2018; Mittal 2014; Larsson 1997) 10. Addressing environmental issues (Souza, Ochi and Hosono 2018) 11. Urban reconstruction, renewal, and regeneration (Zhang 2008) 12. Housing (Zabihi and Khiavy 2012) 13. Natural disasters — LR seems to be an effective tool for recovering from natural disasters such as earthquakes (Hong and Brain 2012; Byahut and Mittal 2017) 14. Increase urban lands — LR should be used to increase urban lands (Archer 1992) 15. Reorganising old urban communities (Larsson 1997)
Sustainable land use	<ol style="list-style-type: none"> 16. LR should be used to make land use sustainable (Zhang 2008)
LR finance	<ol style="list-style-type: none"> 17. LR finance is among the key issues (Archer 1978; Nagamine 1986; Agrawal 1999; Turk 2005, 2008; Mathur 2012) 18. Government subsidy — government might need to subsidise LR, especially when there is not enough legal support for it (Muñoz-Gielen 2014) 19. Revolving fund mechanism — establishing a revolving fund system to allow revenues earned from the previous LR to be used for the new LR (Mathur 2012) 20. Land value capture — LR costs should be borne through land value capture (Archer 1978; Supriatna and van der Molen 2014)
Equitable land contribution	<ol style="list-style-type: none"> 21. A statistical model is needed for equitable deduction of land from each landowner's land for public use (Kucukmehmetoglu and Geymen 2016)
Participatory LR	<ol style="list-style-type: none"> 22. A mechanism for shortening the gap between state policy and community capacity is needed through participatory and inclusive LR (PILaR Mechanism) (Soliman 2017) 23. Landowners' participation in decision-making process, especially those relevant to property valuation, should be the core of LR (Yau 2012) 24. Participatory planning should be used to lead landowners to voluntarily contribute their lands to LR (Mittal 2014, 322)

As can be seen in Table 6.1, the customisation criteria No. 4 states that LR needs to be customised based on the local community needs. This is confirmed by the literature in Table 6.2, relevant research No. 4, whereby LR should be used based on the context's requirements in terms of socio-economic and political conditions, otherwise it cannot yield the expected outcomes, even with the most comprehensive technical plans (Acharya 1988).

Similarly, the literature also confirms customisation criteria No. 3 in terms of effectiveness of LR in rebuilding areas prone to or affected by natural disasters such as earthquakes (Hong and Brain 2012; Byahut and Mittal 2017). However, the findings suggest that this should be done through a supplementary fund (for example, a government subsidy) rather than revenues from the sale of financial land as taking enough financial land might be challenging in such areas.

On the other hand, criteria such as customisation based on land ownership (criteria No. 8 of the findings phenomenon) seem to be unique to the challenging contexts as they suggest that LR is most promising in those settlements where the landowners are informal (not recognised by the government as the real landowner) as well as their properties are developed irregularly (outside of the city master plan and without consideration of construction regulations). This is particularly significant as it is very likely that landowners of such areas would accept LR for the purpose of receiving official land titles for their remaining portions of lands after the LR is completed.

It is also interesting to see that the Main Focus aspect No. 5 emphasises learning and customising the world's best practices of LR for challenging contexts. This can provide LR in these contexts with an excellent opportunity to consider and customise the current global challenges, such as participatory LR and the Sustainable Development Goals (SDGs) in their unique context.

6.2.2 Antecedent Conditions

Six major categories emerged from the interview data, which can be considered as potential risks to LR and therefore can hinder the Main Focus paradigm as discussed above. These six categories are: LR stakeholders, socio-cultural risks, legal risks, financial risks, technical risks, and external risks.

The LR literature also specifies five conditions that can disrupt the LR success, namely management, socio-cultural, legal, financial, and technical conditions. Management challenges and risks can impact LR negatively at the initial stage. These challenges include: lack of enough government support (Acharya 1988; Mittal 2014); lack of intergovernmental coordination in terms of financial, administrative, and political issues of LR (Archer 1978; Karki 2004); lack of strong political will and leadership

(Acharya 1988; Turk 2005; Mittal 2014); transparency of the LR process (Agrawal 1999); miscommunication and negotiation with landowners (Karki 2004); lack of an overall strategy for LR (Karki 2004); lack of discussion forums and community meetings for sharing previous LR experience (Karki 2004; Hong and Brain 2012); concerns over trustworthiness, honesty, and fairness of governing public agencies (Needham 2007); rehousing and resettlement management issues (Yau 2012); inexperienced managers (Karki 2004); and lack of effective cooperation among key interest groups (Cain, Weber and Festo 2018).

Although most of these challenges were not discussed in the findings as antecedent challenges, the outcomes from the analysis emphasised the role of LR stakeholders as one of the most defining conditions in challenging contexts. This has been further confirmed by the literature as the crucial role of the government (Acharya 1988; Mittal 2014; Needham 2007), importance of communication with landowners (Karki 2004), and effective cooperation among key interest groups (Cain, Weber and Festo 2018).

In terms of socio-cultural conditions, it seems that lack of understanding, knowledge, persuasion, participation, and consensus of landowners (Acharya 1988; Sorensen 2007; Turk 2008; Hong and Brain 2012; Zabihi and Khiavy 2012; Archer 1992) as well as lack of a culture of collective-action are two major issues in the literature (Hong and Brain 2012). Although the findings confirm the first socio-cultural condition described in the literature, they further state that it is the “land contribution” by landowners that can realise LR in challenging contexts. While the literature mostly emphasises consensus building and forming a collective-action culture among landowners (Hong and Brain 2012), the findings focus on how to convince landowners to contribute (a fixed portion of) their lands to the LR process.

Furthermore, four legal conditions including lack of legislation, legal backup or regulatory framework (Archer 1992; Mittal 2014); complicated legal system (Turk 2005); land ownership structure (Turk 2005, 2008); and enhanced protection of property rights (Alterman 2007) are considered among the most challenging regulatory issues in the LR literature. The findings indicate that the lack of a legal framework and unclear land ownership are two key regulatory concerns for LR. Both conditions are further supported by the literature (Turk 2008; Mittal 2014); however, tightening property rights was not stated as a key antecedent issue for LR in challenging contexts.

In addition, the literature specifies that several financial conditions can also hinder LR success. These are concerns in terms of: self-financing LR through land value capture (Larsson 1997); redress or compensation system (Agrawal 1999; Yau 2012); alternative financial sources other than financial land (Needham 2007; van Der Krabben and Lenferink 2018); increase in land value (Needham 2007); high land exchange costs (Needham 2007); bad real estate market (Mittal 2014); improper land and valuation method (Condessa et al. 2015); and unavailability of low-interest loans for LR (Soliman 2017). The most important financial concerns in the findings were: difficulties in obtaining enough financial land, financial mechanism/model, high compensation costs, temporary resettlements costs, infrastructure costs, land valuation system, and no immediate revenue for the government after LR. It seems that both the literature and the findings have common concerns in terms of self-financing LR through land value capture (Larsson 1997), compensation (Agrawal 1999), other financial sources (or financial mechanism) (van Der Krabben and Lenferink 2018), and land valuation system (Condessa et al. 2015). However, the findings further discuss how concerns such as temporary resettlement expenses, infrastructure costs, and lack of immediate revenues for the government can disrupt CLR in challenging contexts. These can be considered significant antecedent conditions in such contexts.

Major technical conditions in the literature are concerns over: availability of an accredited development agency (Acharya 1988; Archer 1992); good preparation works (Archer 1992); LR scheme and planning (Archer 1992; Turk 2005; van Der Krabben and Lenferink 2018); shape, size, and location of land (Karki 2004); lack of value-based criterion for LR (Turk 2005); lengthy and time-consuming process (Alterman 2007); quality of cadastre records (Turk 2008; Durovic and Nikolic 2016); lack of a good showcase (Hong and Brain 2012); and unavailability of a better alternative (van Der Krabben and Lenferink 2018). In the findings, these technical issues are: duration of LR, resettlement mechanism and issues, scarcity of land for infrastructure, and technical capacity and resources. While the literature confirms three of these concerns — lengthy process (Alterman 2007), land scarcity (Turk 2005), and technical capacity and resources (Acharya 1988; Archer 1992; Turk 2008) — developing an efficient mechanism for resettlement purposes remains one of the most important technical concerns for LR in challenging contexts.

6.2.3 Strategies and Actions

In terms of required strategies and actions to achieve LR goals, this research identified four categories, namely: management strategy, financial strategy, legal strategy, and technical strategy.

6.2.3.1 Management strategy

According to the findings, the management strategy includes: planning a comprehensive policy framework, involving informal landowners in the LR planning process, and adopting international experience; organising transparent actions and intergovernmental coordination; leading through a strong political will, promotion of public awareness about LR, making LR a community-driven project; and controlling through active support against disrupters and taking measures to stop further development of informal settlements. These strategies were further confirmed by the LR literature, as shown in Table 6.3.

As shown in Table 6.3, developing a mechanism to effectively involve and allow the participation of landowners in LR planning, design, and implementation is essential in this process (Agrawal 1999; Home 2007; Turk 2008; Zabihi and Khiavy 2012). This fully addresses the second component of the planning strategy in the findings, which involves (community) residents in the planning, designing, and implementation of LR. However, the findings further add that LR planning in challenging contexts requires appropriate customisation of best international practice. This means that not every successful LR plan in the international domain might work in challenging contexts. Therefore, care is required in the planning stage when adopting best international experience.

Table 6.3: Land Readjustment Management Strategy in the Literature

Components of management strategy	Relevant supporting literature
Planning	<ol style="list-style-type: none"> 1. Use a trial and error approach between local government and landowners to achieve consensus rather than applying a ready-made model (Nagamine 1986) 2. Use a well-planned integrated strategy for LR (Turk 2005) 3. Develop early infrastructure such as (main) roads to make land developable and increase its supply (Acharya 1988; Sorensen 2007; Mathur 2012) 4. Provide landowners with an option to opt-out of LR to promote voluntary participation (Agrawal 1999) 5. Mind the vulnerable such as squatters (Agrawal 1999) 6. Do not aim for a full appropriation (Home 2007) 7. Use threat of expropriation instead of expropriation as direct expropriation may lead to social resistance and increased compensation (Turk and Altres 2011) 8. Use LR for provision of social housing (Supriatna and van der Molen 2014)
Organising	<ol style="list-style-type: none"> 9. Utilise coercive and authoritative power of local government for LR (Nagamine 1986; Muñoz-Gielen 2014) 10. Define the roles and responsibilities of all involved (private and public) institutions and stakeholders clearly (Agrawal 1999; Tian, Guo and Yin 2017) 11. Make a taskforce/section for LR education and information sessions (Karki 2004; Turk 2005) 12. Formulate a pilot project in new contexts (Supriatna and van der Molen 2014) 13. Participate both landholders and leaseholders in LR process (Supriatna and van der Molen 2014) 14. Use non-negotiable obligations and conditions to ease development of public infrastructure and social housing (Gozalvo Zamorano and Muñoz Gielen 2017) 15. Well-understand LR social network, process, and requirements of community residents (Soliman 2017)
Leading	<ol style="list-style-type: none"> 16. Guarantee provision of new land title deeds (Home 2007; Supriatna and van der Molen 2014) 17. Move towards voluntary and participatory LR through consensus building among landowners (Davy 2007) 18. Establish a trustworthy relationship with community residents to come to a win-win solution (Davy 2007; Mittal 2014) 19. Consider cooperation and collective action in problem solving instead of any top-down or bottom-up approaches (Hong and Brain 2012) 20. Facilitate a bottom-up approach for consensus building (Mittal 2014; Tian, Guo and Yin 2017) 21. Avoid lengthy negotiation with landowners (Muñoz Gielen 2014) 22. Let the government act more as a facilitator (Holtslag-Broekhof 2017; Almeida et al. 2018) 23. Communicate potential land value increase to landowners to reduce potential conflicts resulting from reducing the principal land size by LR (Byahut and Mittal 2017)
Controlling	<ol style="list-style-type: none"> 24. Take strong controlling measures over land use and against land speculation (Nagamine 1986; Home 2007; Yilmaz, Çağdaş and Demir 2015) 25. Ensure equitable distribution of costs and benefits (Agrawal 1999; Turk 2008; Supriatna and van der Molen 2014; Holtslag-Broekhof 2017) 26. Freeze any activity that adds value to the land before LR (Supriatna and van der Molen 2014) 27. Review plans in terms of local powers aspiring of control (Soliman 2017)

In terms of organising, the findings emphasise two main factors: LR transparency to landowners and intergovernmental coordination. These factors highlight the importance of effective communication and coordination in the LR process. These two elements were thoroughly researched in the LR literature and their significance was

considered in several studies worldwide (Karki 2004; Turk 2005; Agrawal 1999; Supriatna and van der Molen 2014; Tian, Guo and Yin 2017; Soliman 2017). Therefore, it can be argued that the LR literature has provided enough insights in regard to these two issues and their impacts on the LR success.

In relation to leading strategy, the literature argues that considering cooperation and collective action in problem solving and facilitating a bottom-up approach for consensus building are two important strategies that can guide LR towards success (Hong and Brain 2012; Mittal 2014; Tian, Guo and Yin 2017). In addition, it states that the government needs to act more as a facilitator in LR rather than an implementer (Holtslag-Broekhof 2017; Almeida et al. 2018). According to the findings, all these factors are confirmed in the Kabul context; however, the findings strongly indicate that LR needs to become a community-driven project to succeed. This is perhaps due to the unique circumstances of such contexts, where governments are not trusted and capable enough to conduct such projects (Davy 2007; Supriatna and van der Molen 2014). Moreover, the findings show that strong political leadership is considered as one of the major factors in the LR success in challenging contexts. This is still an important factor in LR literature (Acharya 1988), but less emphasised as a key factor for success. Therefore, it can be said that this research adds to the significance of this factor in such special conditions.

Finally, both the findings and the literature agree on the significance of strong controlling measures against disrupters (and speculators) as well as stopping further development activities before LR projects (Nagamine 1986; Home 2007; Yilmaz, Çağdaş and Demir 2015; Supriatna and van der Molen 2014; Soliman 2017). These controlling measures are important to smooth LR's implementation and avoid unnecessary compensation costs.

6.2.3.2 Financial strategy

The findings suggest five actions as financial strategies: use government loans as a complementary financial mechanism, consider government subsidy for hazardous areas or transit-oriented locations, seek support from development aid agencies, use a combination of government budget and community financial support, and support certain vulnerable informal landowners affected by LR. In terms of financial issues, the literature advises certain actions such as: attempt to recover all LR costs through

land value capture or sale of financial land (Archer 1978; Turk 2008); use government subsidy to do LR in urban peri-areas (Nagamine 1986); pay enough compensation to affected landowners (Agrawal 1999; Mathur 2012); landowners to contribute financially to LR besides their land contribution (Turk 2005); include infrastructure costs in LR (Turk 2008); establish a revolving fund system (Mathur 2012); prioritise redevelopment (flat-for-flat) compensation strategy over partnership and cash compensation methods (Yau 2012); and consider average property valuation based on floor-area value, not just floor area to promote equitable cost-benefit sharing (Condessa et al. 2015).

While the literature strongly advises the recovery of LR costs through land value capture (or sale of financial land) (Archer 1978; Turk 2008), the findings show that this may be more difficult in the Kabul context. The lack of security means that formalizing land ownership and providing infrastructure may lead to greater interventions by land grabbers or government. Such fears may not become realised though as the findings also showed there was a strong community presence to assist householders; hence value capture could be obtained through increased rates or other means to enable the LR process to be continued into other areas. However, it may be necessary to provide government guarantees or complementary financial support from the government, development aid agencies, community residents, or other sources to facilitate the successful application of LR in these special contexts. Although there are several studies in the literature that support these findings to a certain extent (Nagamine 1986; Agrawal 1999; Mathur 2012; Turk 2005), it seems LR in such special contexts may require more significant financial support in addition to the sale of financial land to succeed. This can be considered another significant aspect of LR in challenging contexts that is explored through this research.

6.2.3.3 Legal strategy

According to the findings, three legal considerations are significant in achieving LR goals in challenging contexts. These include: ensuring new land title deeds, land ownership clearance in small phases, and the development of a legal tool for LR. The findings indicate that the first two actions need to be undertaken at the local (municipality) level, but the third one requires a national level commitment.

In addition, the literature also proposes specific legal strategies for LR in urban areas. For instance, developing a flexible legal structure that enables multiple planning and implementation methods is among these key strategies (Turk 2005, 2008; Home 2007; Muñoz Gielen 2014; Tian, Guo and Yin 2017; Holtslag-Broekhof 2017). The findings recommend such a legal tool in the Kabul context.

Other important legal strategies stated in the literature include: enabling compulsory purchase of land for public services (Zabihi and Khiavy 2012), maintaining the pre-emptive right of purchasing land by the local government (Supriatna and van der Molen 2014), supporting landowners who do not have a secure tenure such as formal land title deeds (Soliman 2017), adjusting legal issues to make cadastral records match the physical set-up (Turk 2005), and defining expropriation terms as well as land valuation procedure and methods in LR law (Almeida et al. 2018). The findings, however, emphasise two major legal strategies: ensuring new land title deeds and conducting land ownership clearance in small phases. These two significant actions are required to be undertaken in the Kabul context in addition to developing a flexible legal structure to enable LR in this context. Thus, discovering these two unique legal strategies is a contribution of this thesis.

6.2.3.4 Technical strategy

In order to undertake the research of this phenomenon, the findings also advise consideration of five technical actions. These are: technical capacity building at the local level, the creation of a landownership database, easing of standards in planning and implementation, undertaking required surveys, and the use of the world's best practices.

Several technical actions and strategies have also been discussed throughout the LR literature. These include: avoiding the perception of LR as the only tool for every case (Archer 1992); maintaining doubt in LR's effectiveness at preventing urban sprawl in city and region levels (Sorensen 1999); integrating the LR plan with the city master plan to determine suitable LR size, land contribution rate, and redistribution of readjusted plots (Turk 2005); improving expert and effective planning skills (Turk 2008; Home 2007); and ensuring the availability of an appropriate number of technical staff (Turk 2008).

It is evident from the literature that technical planning skills and improving human capacity are among the important technical issues. Furthermore, granting more floor area ratio (FAR) for readjusted land plots to encourage landowners and increase density (Turk and Altres 2011); applying a fair land contribution rate which is enforced by law (Zabihi and Khiavy 2012); using legally binding LR plans (Supriatna and van der Molen 2014); utilising a GIS database to address inaccuracies in urban cadastral maps effectively (Durovic and Nikolic 2016); and reducing the size of an LR project to increase LR success (Soliman 2017) are among other significant technical matters in LR.

The findings also confirm the significance of using a GIS database in LR; however, more emphasis is placed on easing standards in planning and implementation of LR in the Kabul context. According to the findings, LR needs to ease its standards both in planning and implementation in the Kabul context to be able to make consensus building easier and at the same time respond to local needs. This finding is the most important technical aspect of LR in this context as it determines the major technical works required.

6.2.4 Contextual Conditions

Another condition that directly impacts strategies and actions is related to each context where LR is being implemented. The findings show that six contextual conditions can influence the aforementioned strategies and actions. These are: the land management system, the creation and growth of informal settlements, the future of informal settlements, the condition of existing infrastructure, the attitudes of informal landowners, and any ethnic issues.

The LR literature also confirms that a land registration system and database are among the key issues of LR that can seriously affect its success (Turk 2005; Byahut and Mittal 2017). This confirms that this important condition must not be overlooked. In addition, the literature specifies a few more conditions which are relevant to the LR context. These include: amount of publicly owned lands (Sorensen 2007); level of legal support for LR in the context (Mittal 2014; Erdem and Meshur 2009; van Der Krabben and Lenferink 2018); level of financial and technical support for LR in the context (Turk and Altres 2011); collective-action culture (Turk and Altres 2011; Cain, Weber and

Festo 2018; Almeida et al. 2018); urgency for a capital-intensive method in contexts with budget limitations (Mittal 2014); availability of non-negotiable obligations (Gozalvo Zamorano and Muñoz Gielen 2017); pressure from the community to improve living conditions (Byahut and Mittal 2017); and quality and reliability of context cadastre records (Byahut and Mittal 2017).

The impact and role of landowners' attitudes towards LR have been also confirmed by the literature through the extent of collective-action culture and pressure from the community on the government to improve the living environment (Turk and Altres 2011; Byahut and Mittal 2017). These social issues are extremely important and can directly influence LR strategies and actions in the community.

However, the findings add two unique conditions to the current LR literature: the importance of the existing contextual conditions as well as ethnic issues and sensitivity. As discussed in the findings, the current condition of informal settlements in Kabul can highly influence LR's direction in such contexts. This is because different communities in Kabul require different services and infrastructure. Therefore, LR might need to be customised, based on the contextual conditions to meet specific local needs. In addition, in contexts where several ethnic groups live, LR might need to consider certain strategies to avoid ethnic tensions and conflicts, especially in areas with a history of ethnic wars and conflicts. Thus, these two factors can be considered as unique contextual conditions of LR in challenging environments explored by this research.

6.2.5 Intervening Conditions

Three categories emerged from the data that can influence strategies and actions either positively or negatively. These are: government policy for LR, land value and market, and political factors and insecurity.

In the literature, Almeida et al. (2018) introduce five major management criteria that can affect LR success. These include: initiative and process leadership, stakeholders' relationship, competency and management skills of the LR managing body, operation rules and regulations, and applying international management practice experience. The

success of LR can be improved if these criteria are applied efficiently and effectively, otherwise they can impact on it negatively.

According to the LR literature, there are other similar conditions that can affect LR in different ways. These are: real estate market conditions and fluctuations (Turk and Altres 2011; Cain, Weber and Festo 2018); the availability of financial support, such as government subsidies and a revolving fund (Karki 2004); a proper evaluation mechanism (Karki 2004); the effects of other land management methods (Turk 2005); level of support and participation of landowners (Turk 2005); methods of sharing costs and benefits (Sorensen 2007); and the level of neighbourhood attachment of landowners (Yau 2012).

Although the market condition is further supported in the literature (Turk and Altres 2011; Cain, Weber and Festo 2018), there are two significant conditions found to be key in challenging contexts: government policy towards LR and political factors, including insecurity. As discussed in Chapter 5, the findings suggest that the government might consider distinctive policies for different types of settlements in a challenging context. Therefore, all these varying policies might affect the process of LR in certain communities, positively or negatively. Furthermore, political factors such as influence by government officials on LR and security concerns are other key conditions explored through this research as the literature has not considered these issues that are important in a typical LR project. Thus, these two factors are major contributions to LR theory in challenging contexts.

6.2.6 Outcome Conditions

The findings illustrate five key outcomes of the CLR model as: provision of required infrastructure, land tenure security, improved quality of life, avoiding dispersing the community, and government benefits. Outcome conditions have been also discussed in LR literature. Some of these consequences could be negative, such as unfair distribution of basic infrastructure after LR (Karki 2004); however, most of the outcomes are positive. These include: provision of new title deeds (Zhang 2008); reallocation of economic resources among stakeholders (Zhang 2008); reallocation of conflict between interest groups and others (Zhang 2008); reallocation of land sources among various public sectors (Zhang 2008); changing or mitigating the bad history of

post-conflict nations through change in layout and structure of community and provision of new infrastructure (Home 2007); clarifying the intricate and unclear land tenure rights (Supriatna and van der Molen 2014); and provision of social housing (Gozalvo Zamorano and Muñoz Gielen 2017).

All major outcomes are well-supported by the literature, such as the distribution of infrastructure benefits (Karki 2004) and resolving land tenure issues (Supriatna and van der Molen 2014); however, the findings discover an obvious aspect of LR theory in challenging contexts — government benefits. Although governments might need to sacrifice financial support and other sources to make LR successful in a challenging context, the findings demonstrate that the government can still earn valuable benefits including controlling the unplanned expansion of informal settlements, satisfaction of community residents, and increased financial benefits from property taxes and other services after LR. This can be considered a valuable achievement for the government and a significant contribution to LR outcomes in such contexts. However, it is also possible for governments to seek to obtain land value capture opportunities through LR as the challenging contexts may be manageable and greater opportunities for LR are available if less government contributions are required.

6.3 Contribution to Land Readjustment Theory

There are two major theoretical contributions in this research. First, it compiled the most important and relevant literature to assist understanding of the key concepts of LR research. This is important because the current LR research is very fragmented in terms of research topic and context. Therefore, this research endeavoured to gather the most significant theoretical aspects of each study under six categories to improve the understanding of LR theoretical development in the last five decades.

Second, the research developed a substantive theoretical model for LR in challenging contexts, which is not currently available in the LR literature. This model is developed through an exploratory case study and based on the coding techniques developed by Glaser (1978). It comprises six major paradigms: the core phenomenon, antecedent conditions, strategies and actions, contextual conditions, intervening conditions, and consequences conditions. The relationships among these paradigms are illustrated in

Figure 5.1, as discussed Chapter 5. However, the relationship between the findings and the current LR literature is explained in Table 6.4 in terms of the aforementioned six paradigms, highlighting the major theoretical contributions of this research.

As shown in Table 6.4, the findings are compared with the current LR literature to determine the major theoretical contribution of this thesis. There are three contributions in terms of antecedent conditions as importance of: effective communication and understanding among LR stakeholders, land contribution, and resettlement mechanism.

In terms of the research phenomenon, the contribution of this thesis is development of 14 criteria for LR customisation; this is portrayed in Table 6.4. These criteria can assist relevant urban policy makers and LR specialists to successfully customise LR to suit a challenging context.

In order to achieve customised land readjustment (CLR), certain strategies and actions are required in terms of management, technical, legal, and financial issues. After a detailed discussion of the findings with reference to the LR literature, it was discovered that LR in challenging contexts must be a community-driven project under strong political leadership by the government. Meanwhile, complementary financial support should be considered for LR along with ensuring new land title deeds and easing LR standards.

Table 6.4: Contribution to Land Readjustment Theory

Paradigm	Findings		LR literature	Theoretical contribution
	Title	Emerg ed categories from data		
Antecedent conditions	Customisation requirements (CR)	<ol style="list-style-type: none"> 1. LR stakeholders 2. Socio-cultural risks 3. Legal risks 4. Financial risks 5. Technical risks 6. External risks 	<ol style="list-style-type: none"> 1. Technical 2. Socio-cultural 3. Legal 4. Financial 5. Management 	Importance of: <ul style="list-style-type: none"> • Effective communication and understanding among LR stakeholders • Land contribution • Resettlement mechanism
Main Focus	Customised land readjustment (CLR)	<ol style="list-style-type: none"> 7. Physical set-up 8. Population characteristics 9. Legal and planning 10. Economic considerations 11. World's best practices and standards 	<ol style="list-style-type: none"> 6. Compulsory LR 7. Customisation based on minimum contextual requirements 8. Resource management 9. Multi-purpose usage 10. Sustainable land use 11. LR finance 12. Equitable land contribution 13. Participatory LR 	Customisation needs to be based on: <ul style="list-style-type: none"> • Features • Layout and structure • Natural disaster risks • Local community needs • Density • Land scarcity • Norms, culture, and lifestyle • Land ownership • Building regulations and standards • Preservation of historical areas

Paradigm	Findings		LR literature	Theoretical contribution
	Title	Emerg ed categories from data		
				<ul style="list-style-type: none"> • Land value increase • Government gains and losses • World's best practices and standards
Strategies and actions	Create a change (CC)	12. Management strategy 13. Financial strategy 14. Legal strategy 15. Technical strategy	14. Management 15. Legal 16. Technical 17. Financial	LR to be a community-driven project Strong political leadership Complementary financial support Ensuring new land title deeds Conducting landownership clearance in small phases Ease LR standards
Contextual conditions	Kabul in context (KIC)	16. Land management system 17. Creation and growth of informal settlements 18. Future of informal settlements 19. Condition of existing infrastructure 20. Attitudes of informal landowners 21. Ethnic divide	18. Land registration system and database 19. Limited public-owned lands 20. Collective-action culture 21. Non-negotiable obligations 22. Pressure from community 23. Reliable technical data	Importance of existing context condition in terms of infrastructure requirements Ethnic issues and sensitivity
Intervening conditions	Land readjustment politics (LRP)	22. Government policy for LR 23. Land value market 24. Political factors and insecurity	24. Five major management criteria 25. Real estate market 26. Changes in property rights 27. Quality of cadastre records 28. Neighbourhood attachment level	Government policy towards LR Political factors and insecurity
Outcome conditions	Customisation success criteria (CSC)	25. Provision of required infrastructure 26. Land tenure security 27. Quality of life improvement 28. Avoid dispersing community 29. Government benefits	29. Provision of basic infrastructure 30. New title deeds 31. Reallocation of economic resources 32. Reallocation of conflict between interest groups and others 33. Reallocation of land sources among various sectors 34. Clearing bad image of war in post-conflict contexts 35. Provision of social housing	Importance of government benefits in terms of: Controlling expansion of informal settlements Satisfaction of community residents Increased financial benefits from property taxes and other services after LR

In the context paradigm, the unique contribution of this thesis is regarded as exploring the importance of the existing contextual conditions in terms of infrastructure as well as ethnic issues and sensitivity.

Government policy towards LR and political factors including security concerns are two key aspects of LR in challenging contexts which were revealed by this thesis. As

the government policy for LR might differ in each community, certain strategies and actions might be required to face all possible outcomes of such varying policies. For example, the government might choose to do LR for the provision of social housing in one community, while it may aim to prevent and mitigate natural disaster risks through LR in another community. These may even influence government financial policies on financing LR through a government subsidy, loan, or any other financial mechanism. In addition, the influence of political figures in LR and serious security concerns can further impact LR in such challenging contexts.

Finally, the benefits for the government is the less emphasised aspect of the LR literature which was further explored in this study. These benefits include controlling expansion of informal settlements through LR, satisfaction of community residents after LR, and increased financial benefits from property taxes and the provision of various urban services, such as urban water. This innovative approach enabled LR to be theorised in a simple and easy-to-understand process for urban policy makers and community residents and therefore can foster and promote LR understanding and application in challenging contexts.

6.4 Contributions to Policy and Practice

Besides theoretical advancement, this study also provides significant contributions to LR policy and practice in challenging contexts towards achieving Goal 11 of the United Nations' SDGs — “make cities inclusive, safe, resilient, and sustainable” (SDG 2018). It examined how the CLR model developed in this research can contribute towards achieving the SDGs. The CLR model confirmed that it can positively lead towards development of policies to achieve Goal 11 of SDGs. In particular, it can assist urban policy makers in achieving most targets of this goal as below:

Goal 11 — Target 1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

Although, as Haziq (2017) argues that most informal settlements in Kabul are not considered slums, the findings of this research suggest that the government might aim to regularise informal settlements at any cost in some scenarios or choose to improve the quality of life and provide social housing in other informal settlements. This shift

in LR policy can assist in providing affordable housing for the low-income families and thus help with this target.

Goal 11 — Target 2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

The CLR model developed in this study is designed to improve living conditions in challenging contexts, especially in communities with a large number of vulnerable people. More sustainable, accessible and safer roads is one of the major outcomes of the CLR model as discussed in Chapter 5 that can significantly improve transport systems for all community members, including children and aged persons. Therefore, it can be argued that the CLR model can effectively assist in achieving this target in challenging contexts.

Goal 11 — Target 3: By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

The CLR model indicates that LR in challenging contexts must be a community-driven project in order to succeed; therefore, it is essential to involve community members in LR planning, design, and implementation to achieve the CLR outcomes. It has been clearly stated in the second management strategy of the CLR model to effectively include informal landowners' participation in the LR process so it can yield the expected results. This can both assist with better planning to address local needs as well as smooth management, which results from less social resistance from community members. Thus, the CLR model will be fully compatible with this target.

Goal 11 — Target 4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

As per criteria No. 10 of the CLR phenomenon, LR should be customised to preserve any ancient and historical areas of the city and still provide the community with further infrastructure. This is a significant aspect of the CLR model to maintain historical and

natural heritage and landscape to preserve cultural identity of the community. Therefore, it can be argued that the CLR model is actively supporting this target.

Goal 11 — Target 5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

Component No. 5 of the CLR financial strategy states that in informal settlements, certain vulnerable informal residents should be looked after by the government. This involves any community member who is affected by or exposed to any natural disaster risk such as a flood or earthquake. This can effectively decrease the number of casualties from any such disasters.

Goal 11 — Target 6: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.

The CLR model gains importance as it aims to provide green and public space facilities in such challenging communities. This is one of the significant priorities of this theory which helps improve the quality and quantity of safe and sustainable public amenities for any member of the community, including children and elderly people. This shows that the CLR model is completely in line with this target.

Goal 11 — Target 7: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.

Based on criteria No. 3 of the CLR phenomenon, it is advised that customisation of LR should be undertaken in accordance with natural disaster risks. Another variation of LR with specific sources of supplementary funding is designed to focus on locations where a risk of natural disasters such as earthquake, fire, or flood is anticipated. In

addition, component No. 3 of the contextual conditions (as shown in Figure 5.1 in Chapter 5) also confirms that most of the informal settlements in Kabul are prone to natural disaster risks (earthquakes) and LR should be considered to improve these areas. This component of the CLR model highlights that there is a high risk to some residents living in informal settlements in the future due to the weak structures of their houses.

6.5 Limitations of this Research

There are two main limitations of this research. First, it was not possible to visit all informal settlements in the research site for observation and conduct further interviews with informal landowners. This has been due to the dangerous security conditions in Kabul and also strict security measures by the Curtin Risk Assessment Team to protect the investigator from any potential hazard and minimise any risk. These included minimal movement in the research site and meeting interviewees in public and safe places such as cafés and restaurants. Nevertheless, the investigator had the opportunity to visit and photograph some extreme and average informal settlements in the research site.

Second, as the primary data of this research was collected through one case study, it might not be directly generalisable to every challenging context. This was due to the financial and time limitations of the investigator in conducting this single case study. However, it still provides invaluable information and a strong starting point for any such research in different challenging contexts.

6.6 Chapter Summary

This chapter discussed how the research findings contribute to the current LR body of knowledge. It started by highlighting the key aspects of findings in each paradigm (from the research Main Focus to outcome conditions), comparing and contrasting them with the available LR literature to identify the importance and relevance of each finding. After a detailed discussion of each paradigm, it was confirmed that this study made substantial theoretical and policy contributions to the current LR research. The most important theoretical contribution is the development of the CLR model in challenging contexts, which is not currently available in the LR literature. Furthermore, it was discussed how the findings of this thesis can contribute to development of appropriate policies for LR towards achieving Goal 11 of the United Nations' SDGs. The next chapter answers the questions of this thesis and concludes to what extent this research has achieved its aims and objectives, as explained in Chapter 1. It also specifies further research gaps and opportunities to fully explore various theoretical and policy aspects of LR research in challenging contexts.

Chapter 7: Conclusion

7.1 Introduction

This chapter consists of two parts. First, it provides answers to the two questions of this research and examines to what extent the study has achieved its aims and objectives. Second, it presents a series of recommendations in terms of further research work to be carried out to expand the understanding of this important area, along with some useful advice about researching in a challenging environment. This research has developed a systematic theoretical model for LR in challenging contexts as well providing practical in-depth insights and policy recommendations to achieve Goal 11 of the United Nations' Sustainable Development Goals (SDGs) — making cities inclusive, safe, resilient, and sustainable. The findings suggest sustainable development can be supported through Customised Land Readjustment (CLR) based on 14 criteria, which is called the “Main Focus” in this research. This is the main contribution of this research along with other theoretical and policy contributions discussed in Chapter 6.

7.2 Aims and Objectives

This research aimed at providing answers to the following research questions:

Main Question: How can **land readjustment (LR)** be used in **challenging contexts** in developing countries?

Sub-Question: How can the output of this thesis contribute towards achieving the **Sustainable Development Goal 11 (SDG 11)** — make cities and human settlements inclusive, safe, resilient and sustainable, in challenging contexts?

These research questions aimed at clarifying how the LR theory can be applied in practice and what needs to be done to further the understanding of urban development in challenging environments, which are characterised with complicated land ownership, non-existent legal support, weak technical and financial government capacity, and unstable security conditions. In order to answer the main research question, CLR model was developed through this research. According to this theory,

LR can be applied in such a context provided that 14 criteria are met. These criteria include customising LR based on: benefits and features in the challenging context; layout and structure of each community (for example, if the community is well-laid out with durable building structures, then LR is not required; but if there is a serious shortage of basic infrastructure, LR can be helpful); natural disaster risks (for example, conduct LR in risky areas with subsidies from the government or other supportive funds); local community needs; density; land scarcity; norms, culture, and lifestyle in the context; land ownership; building regulations and standards; preservation of historical areas; land value increase; government gains and losses; and world's best practices.

This CLR model was developed based on the exploratory case study in the Kabul city context where all characteristics of a challenging context as mentioned earlier are existent. These characteristics include: (1) unclear and murky legal framework; complexity in urban land ownership, including various types of informal land documents which are not recognised by the government; (2) the vast majority of urban dwellers being informal landowners; (3) weak local and national public institutions in terms of technical capacity, urban policy and management; (4) financial issues, such as extreme budget constraints and unstable land markets; (5) socio-cultural factors, such as resistance to change and lack of trust in public agencies; and (6) security concerns and terrorism.

As LR is new in Kabul, this research aimed to analyse its applicability, objectives and purposes, potential, and barriers in this context to examine how these conditions can affect LR theory. In this regard, a series of focussed interview questions were developed in both phases of this study's fieldwork in Kabul and invaluable information was gathered from the 26 interviewees. Through a process of detailed analysis, as explained in Chapter 4, this information was transformed into a series of significant contextual conditions which formed an essential part of the CLR model.

The research was able to show that LR can work in challenging contexts however there are particular considerations that need consideration due to the potential impacts of security concerns. The improvement of informal settlements through formal titles and infrastructure would only lead to value increases that can be captured to help pay for such LR if the new housing remains in local ownership rather than being seized

through some violent intervention. The role of community development in the LR process that can assist communities to withstand such activity would help. The uncertainty of value improvement would be eased if some kind of guarantee or complementary financial mechanism could be developed to assist LR. Despite many potential government benefits from LR it would assist its mainstreaming if government funding was not the main source of support and land value capture was maintained as a major feature of LR in challenging contexts.

It was also important to understand how this theory can contribute to the existing LR literature. As discussed in Chapter 6, the available LR research is very diverse and fragmented in terms of researched areas — from using LR as a tool for reconstruction of urban areas affected by natural disasters such as earthquake (Hong and Brain 2012; Byahut and Mittal 2017) to LR statistical models for equitable land contribution for developing public facilities (Kucukmehmetoglu and Geymen 2016). This PhD research contributes to the LR literature through providing a clear and easy-to-understand approach for urban policy makers and other stakeholders operating in challenging contexts, which is not currently available.

In addition to theoretical advancement, this study also provides significant contributions to LR policy and practice in challenging contexts towards achieving Goal 11 of the United Nations' SDGs — “make cities inclusive, safe, resilient, and sustainable” (SDG 2018). It examined how the CLR model can contribute towards achievement of the SDGs. It is evident that the CLR model developed through this research can assist in sustainable development of informal settlements through the creation of change and improvement to basic infrastructure, land tenure security, natural disaster risks, green space, urban water, and health and sanitation. These can bring significant policy recommendations towards achieving Goal 11 of the United Nations' SDGs. As stated in Chapter 6, LR can make cities more inclusive and resilient, safer, and more sustainable through the provision of social housing, sustainable improvement of informal settlements, involving community members in the LR planning process, preserving ancient and historical areas, attending to the needs of the vulnerable and poor, and provision of basic infrastructure, green and public space. These contributions can significantly help relevant urban policy makers to apply

LR successfully and take effective steps in achieving the SDGs in challenging contexts.

7.3 Recommendations and Further Work

7.3.1 Recommendations

In terms of application of the CLR model developed in this thesis, it should be noted that public participation is one of the main requirements. Unlike some contemporary urban planning theories such as blueprint planning (Hall 2014) or the synoptic planning system (Lane 2005) which suggest a top-down approach in planning and thus put less emphasis on public participation in the urban planning process, the CLR model strongly emphasises the importance of participatory planning (Fainstein 2000) in all LR processes from planning to implementation and maintenance. In this approach, all views and opinions are considered, conflicts are managed and vulnerable groups have the opportunity to take part in the planning process (Forester 1999). Although not entirely, but it seems that the participatory planning theory has strongly influenced LR in countries such as Japan where public participation is key to the LR process (Sorensen 2007). As discussed above the community-strengthening in this approach would also be necessary to ensure the benefits of the LR are not taken away through some kind of violent intervention. Thus it would be essential to trial LR in Kabul, and other challenging contexts, by having a strong community-based approach.

This research also provides some useful advice for future researchers who are interested in conducting research in challenging contexts:

1. The safety and security of the investigator and other involved persons is the most important issue that needs to be taken very seriously. As explained in Chapter 4, strict security measures were taken to safeguard the investigator during two research fieldwork trips in Kabul.
2. Developing a case study protocol prior to data collection can greatly assist in gathering the required data more effectively and efficiently.

3. Although the nature of this thesis is purely qualitative, using the mixed research method is highly recommended in further research on strategies and intervening conditions, for example, market conditions and financial strategy.
4. It is very important to maintain effective communication with all the research participants until completion of the research as sometimes further complementary data might need to be supplied or coordinated by these participants, such as a second interview or a site visit.

Privacy and confidentiality are extremely important during data collection and analysis through interviews in such contexts as it can negatively impact the reputation or career of the research participants. In addition, conducting research in a challenging context is a double-edged sword in terms of potential contributions and risks. While it can significantly contribute to the body of knowledge as these contexts are usually less researched due to various challenges such as safety and security, it can also carry considerable risks to the investigator's security as well as to the research participants. Therefore, it is recommended that maximum care be taken during any required visit to these sites and researchers should be well prepared not to miss any important data through developing an effective case study protocol before data collection.

7.3.2 Further Work

The main question of this research was to uncover how LR can be applied in challenging contexts. However, as this area of research is still new, there are many aspects and issues of LR in these particular contexts that require further research. For instance, more case studies are required in other challenging contexts to explore various requirements and challenges of urban LR in a wider context. This can greatly strengthen the generalisability of CLR model in practice. In addition, further research is recommended to explore how national and local ethnic politics can affect LR in contexts with sensitive ethnic issues. This is one of the key aspects of the CLR contextual conditions, which can significantly influence LR success in such contexts.

Therefore, the Case Study methodology seems to be one of the most appropriate research methodologies as it can explore the unknown aspects of each case and highly assist in developing formal theories for LR in these contexts.

7.4 Concluding Remarks

This thesis analysed the role of LR in challenging contexts, using the example of the informal settlements in Kabul, Afghanistan. It demonstrated the complexity of the issues that need to be tackled, as well as the potential this approach offers for achieving better, more sustainable and resilient settlements and communities (SDG 11). The research developed a new substantive theory about CLR that allows for specific management, financial, legal, and technical strategies to emerge, which facilitate the provision of the required infrastructure and land tenure security that would improve people's quality of life while maintaining the spatial integrity of the affected community. Hence, this thesis was able to bridge theory development with the opportunity for much-needed practical outcomes in war-affected areas with confounded risks and challenges. This can lead to managing LR with the appropriate legal, social, economic, and cultural means and assist in normalising urban planning in these exceptional circumstances.

Although the case study used for theory development in this thesis was based on what can be considered extreme situations, the application of the CLR model can be appropriately adjusted for almost any other urban environment. It outlines the basic criteria to be considered in handling the complexity and priorities of informal settlements to improve urban sustainability. Further research can enrich this important planning and land use area. This PhD thesis provided some stepping stones for expanding the understanding of the power of LR.

Appendix 1: Profile of Participants

Profile of Participants

No.	Name	Description (including level of education, work experience and other required information)
P01	E01	<i>LR expert, PhD in urban management, work experience: 15–20 years, local work experience in Kabul context related to LR: 1–5 years as consultant.</i>
P02	E02	<i>LR expert and university lecturer, PhD candidate in urban planning, work experience: 5–10 years, work experience in Kabul context relevant to LR: 5–10 years as a land readjustment and urban redevelopment consultant.</i>
P03	E03	<i>LR expert, PhD in urban planning, work experience: 5–10 years, local work experience in Kabul context related to LR: 5–10 years as land readjustment/urban redevelopment expert.</i>
P04	E04	<i>LR expert, Master's degree in urban planning, work experience: 10–15 years, work experience in Kabul context relevant to LR: 3–5 years as a consultant.</i>
P05	E05	<i>Certified LR professional in Japan, work experience: 40+ years, work experience in Kabul context relevant to LR: 5–10 years as senior consultant and trainer.</i>
P06	E06	<i>LR expert, civil engineer, PhD in management, work experience: 5–10 years in senior project management capacity, local work experience in Kabul context relevant to LR: 5–10 years in advisory capacity.</i>
P07	E07	<i>LR expert, Master's degree and PhD in urban planning, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–5 years in LR technical and management capacity.</i>
P08	E08	<i>LR expert, Master's degree and PhD in urban planning, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–5 years in LR advisory capacity.</i>
P09	G01	<i>Local government manager, work experience: 30+ years, work experience in Kabul context relevant to LR: 3–5 years in senior management capacity.</i>
P10	G02	<i>Local government manager, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 5–10 years in LR management and supervision capacity.</i>
P11	G03	<i>Senior local government manager and university lecturer, Master's degree in urban planning, work experience: 5–10 years, work experience in Kabul context relevant to LR: 3–5 years as urban planning advisor.</i>
P12	G04	<i>Local government officer, work experience: 5–10 years, work experience in Kabul context relevant to LR: 3–5 years as LR officer.</i>
P13	G05	<i>Local government officer, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 5–10 years in social and technical capacity.</i>
P14	G06	<i>Local government officer, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–6 years in land redevelopment capacity.</i>
P15	G07	<i>Local government officer, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–6 years with specialisation in transportation planning.</i>
P16	G08	<i>Local government officer, work experience: 5–10 years, work experience in Kabul context relevant to LR: 3–6 years in LR surveying capacity.</i>
P17	G09	<i>Local government officer, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–6 years in LR social and economic surveying.</i>
P18	G10	<i>Local government officer, work experience: 10–15 years, work experience in Kabul context relevant to LR: 3–5 years as a LR team member.</i>
P19	G11	<i>Local government officer, work experience: 5–10 years, local work experience in Kabul context relevant to LR: 3–6 years as LR team member.</i>
P20	L01	<i>Informal landowner, age: 30–40, gender: male, informal settlement resident and landowner for 3 years.</i>
P21	L02	<i>Informal landowner, age: 40–50, gender: male, informal settlement resident and landowner for 13 years.</i>

No.	Name	Description (including level of education, work experience and other required information)
P22	L03	<i>Informal landowner, age: 40–50, gender: male, informal settlement resident and landowner for 8 years.</i>
P23	L04	<i>Informal landowner, age: 40–50, gender: male, informal settlement resident and landowner for 15 years.</i>
P24	L05	<i>Informal landowner, age: 30–40, gender: male, informal settlement resident and landowner for 9 years.</i>
P25	L06	<i>Informal landowner, age: 40–50, gender: male, informal settlement resident and landowner for 13 years.</i>
P26	C01	<i>Consultant Company in LR, years of experience: 5+, area of specialisation: technical planning.</i>

Appendix 2: Interview Data Confirmation

How interview data is transcribed and confirmed

Research participant	Mode of communication	Language used	Transcribed and/or translated to English by	Mode of confirmation of final transcript in English	Confirmation date
(G01)	Face interview	Dari	Researcher	Face to face	03 Apr 2016
(G02)	Face interview	English	Researcher	Face to face	17 Mar 2016
(G03)	Email	English	Participant	Email	16 Oct 2017
(G04)	Face interview	Dari	Researcher	Face to face	12 Apr 2016
(G05)	Face interview	Dari	Researcher	Face to face	02 Apr 2016
(G06)	Face interview	Dari	Researcher	Face to face	14 Apr 2016
(G07)	Email	English	Participant	Email	28 Apr 2016
(G08)	Face interview	Dari	Researcher	Face to face	09 Apr 2016
(G09)	Face interview	Dari	Researcher	Face to face	06 Apr 2016
(G10)	Face interview	Dari	Researcher	Face to face	04 Apr 2016
(G11)	Face interview	Dari	Researcher	Face to face	18 Apr 2016
(E01)	Email	English	Participant	Email	16 Oct 2017
(E02)	Face interview	Dari	Researcher	Face to face	27 Apr 2016
(E03)	Email	English	Participant	Email	14 Aug 2017
(E04)	Email	Dari	Researcher	Phone	20 Apr 2016
(E05)	Skype interview	Japanese	Researcher	Email	11 Aug 2017
(E06)	Face interview	English	Researcher	Face to face	23 Mar 2016
(E07)	Email	English	Participant	Email	09 Aug 2017
(E08)	Email	English	Participant	Email	21 Oct 2017
(L01)	Face interview	Dari	Researcher	Face to face	22 Jan 2017
(L02)	Face interview	Dari	Researcher	Face to face	27 Jan 2017
(L03)	Face interview	Dari	Researcher	Face to face	21 Feb 2017
(L04)	Face interview	Dari	Researcher	Face to face	16 Feb 2017
(L05)	Face interview	Dari	Researcher	Face to face	11 Jan 2017

Research participant	Mode of communication	Language used	Transcribed and/or translated to English by	Mode of confirmation of final transcript in English	Confirmation date
(L06)	Face interview	Dari	Researcher	Face to face	03 Feb 2017
(C1)	Face interview	Japanese	Certified translator	Email	14 Aug 2017
Total: 26					

Appendix 3: Case Study Protocol

Case Study Protocol

2015–2018

PhD thesis title: Land readjustment and the informal settlements in developing countries; a management framework based on a case study in Kabul, Afghanistan. (Please note that the title has changed slightly in the final submission.)

1. Overview of the Case Study

As stated earlier, the case study protocol is one of the best ways to increase the reliability of the case study. Yin (2014, 84–94) introduces four major sections for a case study protocol as: (1) overview of the case study, (2) data collection procedures, (3) data collection questions, and (4) guide for the case study report. All these sections are followed in this thesis, as explained below. First, the protocol starts with highlighting the objectives of the thesis followed by the research questions, introducing key readings, and also determining the role of the protocol in directing the case study investigator during data collection. Then the protocol continues with identifying the data collection procedures, which is coordination with the field contacts, making a data collection plan (what type of evidence is required, who to be interviewed, what events to be observed, and what other documents to be studied while on site) and other necessary preparation before the fieldwork. Once the procedures are clear, the data collection questions should be included in the protocol. Finally, the protocol is completed with presenting a guide for the findings and the case study report. This guide starts with an outline and format of the data, followed by explanation on how other documents in the research have been used along with referencing information. These four principal elements of the case study protocol are discussed below in details.

This protocol shed light on the steps this case study has been carried out from the start to the end in accordance with the best case-study practices. The main objective of this case study is to investigate how effective land readjustment, which is a well-known land management tool, can be with the informal settlements across the world's emerging cities in developing countries.

2. Objectives of the Case Study

- Develop a framework for LR management in challenging contexts.
- Evaluate this framework in Kabul as an extremely challenging context.
- Assess whether the new framework can make LR more effective.
- Uncover how Sustainable Development Goal 11 can be achieved through LR in such contexts.
- Analyse LR, including its objectives, applicability, potentials and barriers in such contexts.
- Complete the case study within three years.

3. Case Study Questions

Main Question: How can **land readjustment (LR)** be used in **challenging contexts** in developing countries?

Sub-Question: How can the output of this thesis contribute towards achieving the **Sustainable Development Goal 11** in such contexts?

4. Information sheet for the research participants

This sheet is to be shared with all research participants prior to the interviews. The information sheet is developed in both English and Dari (the local language in Kabul) for the research participants, providing them with some basic information about the research topic, the researcher, privacy and ethical issues relevant to the study. It also provides contact information for later feedback on the research or any relevant complaint directly to the ethics officer at the university.

4.1 Information sheet in English:



Date: 10 November 2015

Curtin University Sustainability
Policy (CUSP) Institute

GPO Box U1987
Perth Western Australia 6845

Office location
Building 209 Level 1
Kent Street
Bentley WA 6102

Telephone +61 8 9266 9030
Facsimile +61 8 9266 9031
Email culp@curtin.edu.au
Web sustainability.curtin.edu.au

INFORMATION SHEET

Information sheet for the participants in the project: land readjustment management framework in Kabul, Afghanistan.

My name is Hossein Mohammadi, I am currently undertaking research towards a PhD degree at Curtin University of Technology. The title of my research project is "Land readjustment and the informal settlements: a management framework based on a case study in Kabul, Afghanistan". My research focuses on the following question: "how can land readjustment respond to the goals and requirements of the informal land ownership context in terms of management framework?"

I would like to find out about your opinion, views and perceptions on urban management issues and land management problems in specific, based on your work experience and/or research publications on this subject. The interview process will take approximately 45 minutes. All questions will be read to you and your answers will be recorded. Prior to commencing the interview, I would like to have your consent by signing this form. In the analysis of data, interviewee will remain anonymous, your name or position will not be used and all effort will be made for participants not to be identifiable in the final thesis.

Consent: Your involvement in this research is entirely voluntary.

You will be given the opportunity to see the questions beforehand and decide whether you would like to participate in the interview. When you have ticked the AGREE box

on the first page of the questionnaire, I will assume that you have agreed to participate and allow me to use the information provided for this research. However, you have the right to withdraw at any stage during the interview process without having to give me a reason and without it affecting your rights or my responsibilities as a researcher.

Confidentiality: The interview is anonymous; no personal information will be obtained other than general demographic description. The results from the survey will be presented only as a general discussion in the conclusions and will be used only for the purposes of this research. In adherence to the university policy, the completed questionnaires will be scanned and kept in a secured server for seven years after which time they will be destroyed.

Further information: This research has been reviewed and given approval by Curtin University of Technology Human Research Ethics Committee (Approval number: RDHU-256-15). If you would like further information about the study, please feel free to contact me on +61404 574 801 in Western Australia or +93 788 777 738 in Kabul, Afghanistan, or by email at hossein.mohammadi@postgrad.curtin.edu.au. In addition, Prof. Mohammad Amir Noori at the Faculty of Economics at Ibnesina University in Kabul can transfer your questions and concerns to me. You may visit him at Ibnesina University at Karte 4, Dist. 3, Kabul, Afghanistan. Alternatively, you can contact my principal supervisor Prof. Dora Marinova on +61 8 9266 9033 or via email at d.marinova@curtin.edu.au. Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Thank you very much for your support and contribution by sharing your expertise in this research, and your participation is greatly appreciated!

Hossein Mohammadi
PhD Candidate

4.2 Information sheet in Dari (local language):



Date: 10 November 2015

Curtin University Sustainability
Policy (CUSP) Institute

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معلومات راجع به تحقیق

معلومات برای اشتراک کنندگان در پروژه تحقیقی بالای چوکات مدیریتی تنظیم مجدد زمین در شهر کابل، افغانستان. من حسین محمدی، دانشجوی دوره دوکتورای دانشگاه کرتین هستم که بالای موضوع "تنظیم مجدد زمین و ساحات غیر پلانی" شهر کابل تحقیق می کنم. این تحقیق به دنبال ارایه یک چوکات مدیریتی در قالب یک تحقیق موردی در شهر کابل می باشد و تمرکز عمده این تحقیق بالای موضوع ذیل است:

چطور تنظیم مجدد زمین خواهد توانست به اهداف و نیازمندیهای ساحات غیر پلانی در قالب یک چوکات مدیریتی مناسب پاسخ دهد؟

من می خواهم با توجه به تجربیات و تحقیقات شما، نظرات، نگرش ها و برداشت های تان را از موضوعات مدیریت شهری و مشکلات مربوط به مدیریت زمین در افغانستان و علی الخصوص در شهر کابل بدانم. این مصاحبه حدود 45 دقیقه به طول خواهد انجامید. تمام سوالات برایتان خوانده خواهد شد و جواب شما ضبط خواهد شد، اما قبل از آن من باید رضایت کتبی شما را در این مورد دریافت کنم. در پردازش اطلاعات این تحقیق، نام، عنوان شغلی شما پرسیده نخواهد شد و هویت شما پنهان خواهد ماند.

رضایت: اشتراک شما در این تحقیق کاملاً داوطلبانه است.

به شما این فرصت داده خواهد شد تا قبل از اینکه در مصاحبه اشتراک کنید سوالات را ببینید و بعد تصمیم بگیرید که آیا در مصاحبه اشتراک خواهید نمود یا خیر. زمانی که شما قسمت "رضایتمندی" را در این فرم نشانه کنید من استنباط می کنم که شما رضایت خود را در رابطه با اشتراک در این تحقیق نشان داده اید. البته شما خواهید توانست در هر مرحله از مصاحبه انصراف دهید بدون اینکه مجبور باشید دلیل آنرا به من توضیح دهید و در ضمن تمام مسئولیت های من نسبت به حفظ هویت شما پایدار خواهد ماند.

حفظ اسرار: این مصاحبه با نام مستعار و ناشناس باقی خواهد ماند. هیچ نوع اطلاعات شخصی به جز معلومات عمومی گرفته نخواهد شد. نتایج این سروی فقط و فقط به شکل یک مباحثه عمومی ارایه و صرفاً در این تحقیق استفاده خواهد شد. با در نظر داشت پالیسی دانشگاه، سوالنامه های پر شده اسکن شده و به مدت هفت سال در یک سرور امن نگهداری خواهد شد. سپس از بین برده می شوند.

معلومات بیشتر: این تحقیق توسط کمیته اصول اخلاقی تحقیق انسانی در دانشگاه کرتین (تحت نمبر RDHU-256-15) تایید گردیده است. اگر شما مایل هستید که معلومات بیشتر در مورد این تحقیق پیدا کنید لطفاً با من به شماره +61404 574 801 در کشور استرالیا و یا +93 788 777 738 در افغانستان تماس بگیرید. شما همینطور می توانید با ایمیل آدرس من که در زیر آمده تماس بگیرید: hossein.mohammadi@postgrad.curtin.edu.au اگر به هر دلیلی موفق به تماس با من نشدید می توانید با جناب استاد محمد امیر نوری، استاد دانشکده اقتصاد دانشگاه ابن سینا در کابل تماس بگیرید. ایشان می توانند سوالات و نظرات شما را به من منتقل کنند. آدرس دانشگاه ابن سینا: کارته 4، ناحیه سه، کابل، افغانستان.

استاد راهنمای این تحقیق محترمه دورا مارینوا (Dora Marinova) می باشد که می توانید با شماره +61 8 9266 9033 و یا ایمیل آدرس d.marinova@curtin.edu.au به همراهمان به تماس شوید. اگر شما نمی خواهید به طور مستقیم با اشخاص شامل این تحقیق به تماس شوید، شما می توانید برای شکایت محرمانه و یا ذکر هر نوع موضوعات غیر اخلاقی که در پروسه تحقیق مشاهده می کنید با آفیسر موضوعات اخلاقی به شماره (08) 9266 9223 و یا امر صحت تحقیق (08) 9266 7093 ارتباط بگیرید و یا برایشان به ایمیل آدرس hrec@curtin.edu.au ایمیل کنید.

از اشتراک شما در این تحقیق و سهیم نمودن تجربیات تان صمیمانه اظهار سپاس و امتنان می نمایم.

حسین محمدی

کاندید دوره دوکتورا

5. Rationale for Selecting the Case

The rationale for selecting the case study as the research method for this research is defined herewith. The first reason was that the informal settlements in Kabul is an extreme example of informal settlements among the world's capital cities, where around 70% of the city is informally developed (Kabul Municipality 2018). This can serve as the main reason for selecting this case study. The second reason was the researcher's access to these informal settlements, which was not accessible to empirical research since creation of these settlements, due to security concerns for the international researchers and inability or lack of capacity of the local researchers. Through this revelatory research, invaluable descriptive information was found which revealed the specific characteristics of the informal settlements in Kabul.

6. Essential Readings

Below are some of the important readings about this case study:

- Archer, R. W. 1980. *A Municipal Land Pooling Project in Perth*. Canberra.
- Archer, R. W. 1978. "Land Pooling for Planned Urban Development in Perth, Western Australia." *Regional Studies* 12 (4): 397–408. doi: 10.1080/09595237800185351.
- Archer, R. W. 1992. "Introducing the Urban Land Pooling/Readjustment Technique into Thailand to Improve Urban Development and Land Supply." *Public Administration and Development* 12 (2): 155–174. doi: 10.1002/pad.4230120204.
- Davy, Benjamin. 2007. "Mandatory Happiness." *Analyzing Land Readjustment. Economics, Law and Collective Action*: 37–56.
- Doebele, A. William. 1976. *Land Policy in Seoul and Gwangju, Korea, with Special Reference to Land Readjustment (Third Draft)*. Washington D. C.
- Doebele, William A. 1982. "Land Readjustment: A Different Approach to Financing Urbanization."
- Larsson, Gerhard. 1993. *Land Readjustment: A Modern Approach to Urbanization*: Avebury Aldershot, Hants.
- Larsson, Gerhard. 1997. "Land Readjustment: A Tool for Urban Development." *Habitat International* 21 (2): 141–152.
- Souza, Felipe Francisco De, Takeo Ochi, and Akio Hosono. 2018. "Land Readjustment: Solving Urban Problems through Innovative Approach " edited by Japan International Cooperation Agency (JICA). Tokyo: JICA Research Institute.
- Yilmaz, Ahmet, Volkan Çağdaş, and Hülya Demir. 2015. "An Evaluation Framework for Land Readjustment Practices." *Land Use Policy* 44: 153–168.
- Yin, Robert K. 2014. *Case Study Research: Design and Methods/Robert K. Yin*. 5th ed. ed: Thousand Oaks, California: Sage.

7. Data Collection Procedures

The following major steps were followed in this thesis as data collection procedures.

Initial agreements of the interviewees: Once the research ethics approval was obtained from Curtin University, a series of contacts was made through phone calls and emails with the interviewees for taking their initial agreements to participate in the interview.

Fieldwork facilities and accommodation: a personal laptop computer provided by Curtin University for the research fieldwork was used during the interviews along with a voice recorder, and other necessary writing instruments. The investigator had the privilege to use the facilities and accommodations at his home university in Kabul for the first phase of the data collection in 2016 (please see the invitation letter by Avicenna University to the investigator of this thesis in terms of fieldwork cooperation and assistance).

For the second phase of the data collection in 2017, the investigator had to follow a tougher procedure for data collection set by Curtin University Critical Incidents Team, due to security concerns in Kabul, and conducted most of the interviews at his personal residential house in Kabul with a few short visits to Kabul Municipality and some informal settlements in the city.

Procedures for assistance and guidance: Beside local assistance and cooperation by the investigator's home university, all three supervisors of the thesis from Curtin University closely followed up the fieldwork progress in each phase of the fieldworks and provide constructive feedback through skype and email.

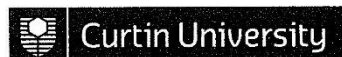
Schedule for data collection activities: Prior to each phase of the fieldwork, two fieldwork schedules were prepared by the investigator and confirmed by the thesis supervisors so that all the required data be collected from the site.

Provisions for unforeseen circumstances: Doing a case study fieldwork in a country with high security risks, a provision was necessary for unpredicted situations to be able to complete the fieldwork in the given time frame. In practice, this was the main factor that increased the duration of both fieldworks because of several terrorist attacks and security threats. However, as such circumstances were predicted in advance, the duration of the fieldworks were determined in accordance to these challenges.

Protecting human subjects: A clear procedure has been developed by Curtin University to protect humans in research. According to the rules of the university, all research that involved humans as a data source must obtain the ethics clearance from the university prior to starting data collection. This procedure is aimed at protecting the research participants from any potential misuse and damage. To follow is the Ethics Approval for this case study from Curtin University:

7.1 Research Ethics Approval

MEMORANDUM



To:	Prof. Dora Marinova Curtin University Sustainability Policy Institute (CUS)
CC:	Mr. Hossein Mohammadi
From:	Dr Catherine Gangell, Manager Research Integrity
Subject:	Ethics approval Approval number: RDHU-256-15
Date:	15-Dec-15

Office of Research and
Development
Human Research Ethics Office
TELEPHONE 9266 2784
FACSIMILE 9266 3793
EMAIL hrec@curtin.edu.au

Thank you for your application submitted to the Human Research Ethics Office for the project: 5507
Land Readjustment and the Informal Settlements in Developing Countries:
A Management Framework based on a Case Study in Kabul, Afghanistan

Your application has been approved through the low risk ethics approvals process at Curtin University.

Please note the following conditions of approval:

1. Approval is granted for a period of four years from **15-Dec-15** to **15-Dec-19**
2. Research must be conducted as stated in the approved protocol.
3. Any amendments to the approved protocol must be approved by the Ethics Office.
4. An annual progress report must be submitted to the Ethics Office annually, on the anniversary of approval.
5. All adverse events must be reported to the Ethics Office.
6. A completion report must be submitted to the Ethics Office on completion of the project.
7. Data must be stored in accordance with WAUSDA and Curtin University policy.
8. The Ethics Office may conduct a randomly identified audit of a proportion of research projects approved by the HREC.

Should you have any queries about the consideration of your project please contact the Ethics Support Officer for your faculty, or the Ethics Office at hrec@curtin.edu.au or on 9266 2784. All human research ethics forms and guidelines are available on the ethics website.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Catherine Gangell".

Dr Catherine Gangell
Manager, Research Integrity

7.2 Research Ethics Approval — Second Phase of Field Work



Office of Research and Development

GPO Box U1987
Perth Western Australia 6845

Telephone +61 8 9266 7863
Facsimile +61 8 9266 3793
Web research.curtin.edu.au

18-Nov-2016

Name: Dora Marinova
Department/School: Curtin University Sustainability Policy Institute
Email: D.Marinova@curtin.edu.au

Dear Dora Marinova

RE: Annual report acknowledgment
Approval number: RDIU-256-15

Thank you for submitting an annual report to the Human Research Ethics Office for the project **Land Readjustment and the Informal Settlements in Developing Countries: A Management Framework based on a Case Study in Kabul, Afghanistan**.

The Human Research Ethics Office acknowledges the project is ongoing and approval will remain current until 14-Dec-2017.

Any special conditions noted in the original approval letter still apply.

Standard conditions of approval

1. Research must be conducted according to the approved proposal
2. Report in a timely manner anything that might warrant review of ethical approval of the project including:
 - proposed changes to the approved proposal or conduct of the study
 - unanticipated problems that might affect continued ethical acceptability of the project
 - major deviations from the HREC approved protocol procedures and/or regulatory guidelines
 - serious adverse events
3. Amendments to the proposal must be approved by the Human Research Ethics Office before they are implemented (except where an amendment is undertaken to eliminate an immediate risk to participants)
4. An annual progress report must be submitted to the Human Research Ethics Office on or before the anniversary of approval and a completion report submitted on completion of the project
5. Personnel working on this project must be adequately qualified by education, training and experience for their role, or supervised
6. Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, that bears on this project
7. Changes to personnel working on this project must be reported to the Human Research Ethics Office
8. Data and primary materials must be retained and stored in accordance with the [Western Australian University Sector Disposal Authority \(WAUSDA\)](#) and the [Curtin University Research Data and Primary Materials policy](#)
9. Where practicable, results of the research should be made available to the research participants in a timely and clear manner
10. Unless prohibited by contractual obligations, results of the research should be disseminated in a manner that will allow public scrutiny; the Human Research Ethics Office must be informed of any constraints on publication
11. Ethics approval is dependent upon ongoing compliance of the research with the [Australian Code for the Responsible Conduct of Research](#), the [National Statement on Ethical Conduct in Human Research](#), applicable legal requirements, and with Curtin University policies, procedures

and governance requirements
12. The Human Research Ethics Office may conduct audits on a portion of approved projects.

Should you have any queries regarding consideration of your project, please contact the Ethics Support Officer for your faculty or the Ethics Office at hrec@curtin.edu.au or on 9266 2784.

Yours sincerely



Dr Catherine Gangell
Manager, Research Integrity

7.3 Consent Form

As most of the primary data of this research was to be obtained through interviews, an interview consent form was prepared to take the agreement of the interviewees prior to the interview.

CONSENT FORM

HREC Project Number:	RDHU-256-15
Project Title:	<i>A Management Framework for Land Readjustment in Informal Settlements</i>
Principal Investigator:	<i>Prof. Dora Marinova, Professor and Director of CUSP</i>
Student researcher:	<i>Hossein Mohammadi</i>
Version Number:	2.4
Version Date:	11 March 2016

- I have read, (or had read to me in my first language — *Dari*), the information statement version listed above and I understand its contents.
- I believe I understand the purpose, extent and possible risks of my involvement in this project.
- I voluntarily consent to take part in this research project.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007) — updated March 2014.
- I understand I will receive a copy of this Information Statement and Consent Form.

Participant Name	
Participant Signature	
Date	

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project.

Researcher Name	
Researcher Signature	
Date	

Note: All parties signing the Consent Form must date their own signature.

8. Data Collection Questions

8.1 Informal Residents

8.1.1 Questions in English language:

Questionnaire (Informal Residents/Landowners)

Topic: Land Readjustment and the Informal Settlements in Developing Countries:
A management and policy framework based on a case study in Kabul, Afghanistan

I agree to participate in this interview and answer all questions to the best of my knowledge and understanding and also allow the researcher to use my answers and information for his research purposes. AGREE

1. How long have you been living in this area?
2. Do you have any land document/land title deeds? If yes, is that customary or official?
3. If customary, have you tried to change it to official? Why?
4. What is the difference between customary land documents and the official ones?
5. Could you describe the below services and facilities in your area out of five mentioned status: Please tick.

	Very good	Good	Available but not sufficient/good quality	Very bad	Not available at all
Urban water					
Electricity					
Sewerage and drainage system					
Main roads					
Tertiary roads/streets					
Sanitation					
Primary and secondary schools					
Hospitals and health centres					
Parks and playgrounds					
Green space					
Safety and Security of the area					
Any other item: (please add)					

6. Has there been any development project in your area whether by the Afghan government, international NGOs, or private sector about any of the above items? If yes, please explain about it briefly.
7. Do you think it is feasible to bring the above facilities and services in your area? Why?
8. Which one of the above services or facilities would you want to be improved as soon as possible? Why?
9. What sorts of actions or help are you ready to do in order to have that facility/service in your area?
10. As most of the above infrastructure requires some land to be created on, are you ready to contribute your land for them? Why?
11. If yes, how much land are you ready to contribute for such purposes?
12. What if more land contribution is required, for example up to 50% of your land and, instead, the government issues an official land title deed for your remaining land?
13. How much do you think the value of your land would increase after you have received your official land document with the above facilities and services?
14. In your opinion, what would be the three most important problems or challenges that the government would face if it decides to legalise your area to bring the above services and facilities in your community?

Problem/challenge 1:

Problem/challenge 2:

Problem/challenge 3:

15. What should the government or other involved parties do to avoid these problems or challenges?
16. In case the government decides to do this project in your area, do you think the government itself should implement it or would it be better to leave the implementation to the private sector, who might have more experience and better equipment? Please choose one and explain why.
 - a. Only a government organisation should implement it and monitor the progress.
 - b. The government and private sector should implement it together, but the government has a more supervisory role.
 - c. Only the private sector should implement it, but under the supervision of the government.
 - d. It doesn't matter who implements it, just the outcome is important.
 - e. I don't agree with implementation of such project.

f. Other:

Please explain why you have chosen the above item.

17. If you need to leave your home for a temporary period for some demolition or reconstruction of your house for the above project purposes, what do you expect from the implementer of the project:

- a. Provide me with a suitable temporary house/apartment close to my current home.*
- b. Provide me with a suitable temporary house/apartment anywhere in the city.*
- c. Just pay me enough money so that I can rent a temporary suitable place by myself.*
- d. I want to continue living in my current home anyway despite the inconvenience and will let the implementer do their work.*
- e. I don't agree with the implementation of such project.*
- f. Other:*

18. In conclusion, do you have anything else to add about such a project in your area? Any special concern, advice, etc.?

END of Questions. Thank you for your participation in this research.

8.1.2 Questions in Dari (local language):

سوالنامه

(مربوط به باشندگان و زمینداران ساحات غیرپلانی)

عنوان: اصلاح مجدد زمین و ساحات غیرپلانی در کشورهای در حال انکشاف: یک چوکات پالیسی بر اساس یک

مطالعه موردی در شهر کابل

من موافقه دارم که در این مصاحبه اشتراک کنم و تمام سوالات را در حد توان و فهم خود پاسخ دهم و همچنین به تحقیق کننده اجازه دهم تا پاسخ ها و معلومات من را برای تحقیق خود استفاده نماید.

1. چند سال است که در این منطقه زندگی می کنید؟
2. آیا شما کدام اسناد یا قباله برای زمین خود دارید؟ اگر بله، آیا این اسناد شرعی است یا عرفی؟
3. اگر اسناد زمین تان عرفی است آیا تابحال سعی کرده اید تا آن را به اسناد شرعی تبدیل کنید؟ چرا؟
4. فرق بین اسناد شرعی و عرفی چیست؟
5. آیا می توانید در مورد خدمات و تسهیلات ذیل در محله تان برای ما معلومات بدهید؟ لطفاً وضعیت هر یک از خدمات و امکانات ذیل را با یک علامت در مقابل هر گزینه مشخص سازید.

اصلاً موجود نیست	خیلی بد / موجود است اما کافی نیست و همچنین دارای کیفیت بسیار بد است	موجود است اما کافی نیست / از لحاظ کیفیت خوب است	خوب	خیلی خوب	
					آب شهری
					برق شهری
					سیستم های فاضلاب و دفع آب های باران و برف
					سرک های اصلی
					سرک های فرعی و کوچه ها
					وضعیت بهداشتی
					مکاتب ابتدائیه و متوسطه/لیسه
					مراکز صحتی و شفاخانه
					پارک ها و زمین بازی اطفال
					ساحات و فضای سبز
					ایمنی و امنیت

					سایر موارد: (لطفاً اگر کدام مورد باقی مانده، ذکر کنید)
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6. آیا تا اکنون کدام پروژه انکشافی در ارتباط با موارد ذکر شده سوال قبلی توسط دولت، انجیوها یا سازمانهای غیر دولتی خارجی، یا بخش خصوصی در منطقه تان انجام شده است؟ اگر بله، لطفاً کمی راجع به آن برای ما بگویید.
7. آیا شما گمان می کنید که آوردن خدمات و امکاناتی که در سوال پنجم آمده در محله تان ممکن باشد؟ چرا؟
8. به نظر شما آوردن کدام یک از این خدمات و تسهیلات در محله تان بسیار ضروری است؟ چرا؟
9. برای آوردن این خدمات و تسهیلات در محله تان، شما چه اقدامات و کمک هایی را انجام داده می توانید؟
10. نظر به اینکه آوردن بیشتر این خدمات و تسهیلات در محله تان نیاز به زمین دارد، آیا شما حاضر هستید تا مقداری از زمین تان را به این منظور اختصاص دهید؟ چرا؟
11. اگر پاسخ تان مثبت است، چه مقدار از زمین تان را حاضر هستید که برای آوردن این خدمات و تسهیلات در محله تان کمک کنید؟
12. اگر نیاز به زمین بیشتر باشد چطور؟ مثلاً تا 50% فیصد زمین تان، و در مقابل دولت (شاروالی کابل) برای زمین باقی مانده تان قباله شرعی و به نام خودتان صادر کند؟
13. به نظر شما قیمت زمین تان پس از دریافت قباله شرعی و آوردن این تسهیلات و خدمات در محله تان به چه مقدار افزایش خواهد کرد؟
14. سه چالش یا مشکل اصلی که دولت برای پلانی و قانونی ساختن محله تان و آوردن این خدمات و تسهیلات با آن مواجه خواهد شد کدام اند؟
- مشکل یا چالش 1:
- مشکل یا چالش 2:
- مشکل یا چالش 3:
15. دولت یا دیگر ادارات و سازمانهای ذیدخل چه کارهایی باید انجام دهند تا از بروز این مشکلات و چالش ها جلوگیری کنند؟
16. در صورتی که دولت تصمیم بگیرد این خدمات و تسهیلات را برایتان فراهم سازد آیا شما فکر می کنید که دولت باید عهده دار اجرای آن باشد یا بهتر است اجرای آن را به بخش خصوصی که ممکن است تجربه و تجهیزات بهتر داشته باشد واگذار کند؟ لطفاً یکی از گزینه های ذیل را انتخاب کنید و دلیل انتخاب تان را مختصراً شرح دهید.
- a. فقط و فقط باید یک سازمان دولتی عهده دار اجرا و نظارت چنین پروژه ای باشد
- b. بهتر است دولت و بخش خصوصی با همکاری یکدیگر آن را اجرا کنند، اما دولت بیشتر نقش نظارتی داشته باشد
- c. بخش خصوصی باید چنین پروژه ای را به تنهایی اجرا کند، اما تحت نظارت دولت
- d. مهم نیست که چه کسی یا سازمانی آن را اجرا می کند، فقط نتیجه کار مهم است
- e. من با اجرای چنین پروژه ای در محله ام اصلاً موافق نیستم
- f. من یک نظر دیگر دارم و آن این است که ...
- لطفاً دلیل انتخاب فوق تان را به اختصار تشریح کنید.
17. اگر شما مجبور باشید که برای یک مدت موقت، خانه خود را به منظور کارهای ساختمانی و اجرای چنین پروژه ای تخلیه کنید، شما از اجرا کننده این پروژه چه انتظاری دارید:

- a. تا ختم پروژه برای من یک خانه یا آپارتمان موقت در نزدیکی خانه فعلی ام داده شود
- b. تا ختم پروژه برای من یک خانه یا آپارتمان موقت در هر جایی از شهر که میسر است داده شود
- c. اگر تنها کرایه خانه کافی برایم داده شود من خود می توانم یک مکان موقت برای خود و خانواده ام مهیا کنم
- d. من تمایل دارم تا در خانه فعلی ام بمانم و با تحمل سختی ها و مشکلات اجرای پروژه با اجراکننده پروژه همکاری کنم و بیجا نشوم
- e. من اصلاً با اجرای این پروژه موافق نیستم
- f. من یک نظر دیگر دارم و آن این است که ... (لطفاً اگر نظر دیگری دارید بیان کنید)
18. در پایان اگر کدام صحبت یا نگرانی در مورد اجرای این پروژه در محله تان دارید، می توانید آن را بیان کنید
-
- سوالات به پایان رسید. از اینکه در این تحقیق اشتراک کردید از شما تشکر می کنیم.

8.2 Interview Questions for Government Officials (from Kabul Municipality) and Subject Matter Experts

8.2.1 Questions in English language:

Questionnaire

Topic: Land Readjustment and the Informal Settlements in Developing Countries:
A management and policy framework based on a case study in Kabul, Afghanistan

I agree to participate in this interview and answer all questions to the best of my knowledge and understanding and also allow the researcher to use my answers and information for his research purposes. AGREE

- 1) Could you please tell me about yourself (job, education, work experience, etc.)?
- 2) Please describe the place where you are currently living in terms of access to urban water, electricity, green space, schools and hospitals, wide-enough roads, and other infrastructure?
- 3) Why do you think the informal settlements exist in Kabul and why are they growing?
- 4) Are you aware and do you have any information about land readjustment (LR)? If yes, could you please explain briefly what land readjustment is? If you are not aware what land readjustment is, I can briefly explain it to you.
- 5) Do you think LR is a suitable tool for improving the current condition of informal settlements in Kabul? Why?
- 6) If yes, could you please elaborate on what are the main requirements for implementing a successful land readjustment project in informal areas? If not, are you aware of any other tools that can help improve the informal areas in Kabul?
- 7) What should the Afghan government do in order to make LR or any other land planning happen successfully in informal areas with informal owners?
- 8) If the government cannot finance LR through land value capture in informal areas, do you think the government should still do it through other funds? Why?
- 9) What would be the most important reason for the Afghan government to implement LR in informal areas with informal owners? Please prioritise by numbering items if you want to choose more than one item.

- a. regularising the informal settlements at any cost
- b. improving the quality of life in informal areas
- c. providing social housing
- d. making profit from land value capture
- e. earning revenues from relevant taxes after formalisation
- f. list another reason:.....
- g. the Afghan government should not implement LR

10) What would be the three biggest challenges for LR in informal areas with informal landowners in Kabul? PLEASE LIST:

- a.
- b.
- c.

11) Comment on the role of community residents and informal organisations in land readjustment projects and how important do you think their role is in implementing LR in their community?

12) What should the informal settlements' residents do in order to improve the conditions in the informal settlements?

13) How do you see the role of government in improving the conditions in the informal settlements?

14) Were land readjustment to become an attractive option for improving the conditions in the informal settlements, is the Afghan government in your opinion the best suited to implement it? Why?

15) To the best of your knowledge, what are the positives and negatives of land readjustment in informal areas?

16) In your experience, has land readjustment worked in informal areas? Why?

17) What is the future of informal settlements without LR?

18) To the best of your knowledge, do you think land readjustment can be used in informal settlements where the title and tenure of land is not clear? Why?

19) Is there anything else you would like to add about the LR process in informal settlements and about informal settlement in general?

END of Questions. Thank you for your participation in this research.

8.2.2 Questions in Dari (local language):

پرسشنامه

موضوع: تنظیم مجدد زمین و ساحات غیرپلانی در کشورهای در حال انکشاف

یک چوکات پالیسی و مدیریتی بر اساس یک مطالعه موردی در شهر کابل، افغانستان

1. لطفاً به اختصار در مورد شغل تان، تحصیل تان، و تجربه کاری تان صحبت کنید.
2. لطفاً محلی که در آن زندگی می کنید را از لحاظ دسترسی به آب شهری، برق، فضای سبز، مکتب و شفاخانه، سرک های مناسب، و دیگر زیربناها توصیف کنید. آیا ساحه زندگی تان پلانی است یا غیر پلانی؟
3. به نظر شما، چرا در کابل ساحات غیر پلانی وجود دارد و چرا این ساحات همچنان در حال رشد است؟
4. آیا شما در مورد تنظیم مجدد زمین آگاهی و معلومات دارید؟ اگر اینچنین است می توانید مختصراً این پروسه را تشریح کنید؟
5. آیا شما گمان می کنید که پروسه تنظیم مجدد زمین یک ابزار مناسب برای بهبود اوضاع فعلی ساحات غیرپلانی در کابل باشد؟ چرا؟
6. اگر پاسخ شما به سوال بالا مثبت است نیازمندیهای اصلی برای اجرای موفق آمیز این پروسه در ساحات غیرپلانی چیست؟ اگر پاسخ تان منفی است شما ابزار دیگری را می شناسید تا به بهبود ساحات غیرپلانی کمک کند؟
7. دولت افغانستان به منظور اجرای موفق آمیز پروسه تنظیم مجدد زمین یا هر پروسه مشابه در ساحات غیرپلانی با مالکین زمین عرفی چه اقداماتی را باید انجام دهد؟
8. اگر دولت نتواند تمام بودجه مورد نیاز برای تطبیق پروسه تنظیم مجدد زمین را از طریق ارزش گیری از زمین یا "زمین ذخیره" تامین کند، آیا دولت باید هنوز این پروسه را از طریق دیگر منابع تطبیق نماید؟ چرا؟
9. به نظر شما مهمترین دلیلی که دولت افغانستان باید پروسه تنظیم مجدد زمین را در ساحات غیرپلانی که مالکین شان عرفی هستند تطبیق کند کدام یک از موارد زیر است؟ لطفاً اگر این دلایل بیش از یک مورد است آنها را به ترتیب اولویت شماره گذاری کنید:

(a) پلانی ساختن ساحات غیرپلانی به هر قیمتی

(b) بهبود کیفیت زندگی در ساحات غیر پلانی

(c) فراهم نمودن مسکن اجتماعی (خانه برای اقشار کم درآمد)

- (d) کسب مفاد از طریق ارزش‌گیری از زمین (بالا رفتن قیمت زمین بعد از تطبیق تنظیم مجدد زمین)
- (e) کسب درآمد از طریق مالیات‌های مرتبط بعد از پلانی شدن ساحه
- (f) دلیل دیگر را در اینجا ذکر کنید:
- (g) دولت افغانستان نباید تنظیم مجدد زمین را اجرا کند.

10. سه چلنج یا چالش عمده برای تطبیق تنظیم مجدد زمین در ساحات غیرپلانی با مالکین زمین عرفی در شهر کابل را ذکر کنید:

..... (1)

..... (2)

..... (3)

11. در مورد نقش و اهمیت باشندگان ساحه و سازمانهای غیردولتی در پروژه‌های تنظیم مجدد زمین نظر خود را بیان نمائید.

12. باشندگان ساحات غیر پلانی برای بهبود شرایط ساحات غیرپلانی چه اقداماتی را باید انجام دهند؟

13. نقش دولت در بهبود شرایط ساحات غیرپلانی را چطور می بینید؟

14. اگر تنظیم مجدد زمین بهترین راه بهبود شرایط ساحات غیرپلانی باشد، به نظر شما آیا دولت بهترین اجرا کننده این پروسه است؟ چرا؟

15. بر اساس تازه‌ترین آموخته‌های شما، مزایا و معایب تنظیم مجدد زمین در ساحات غیرپلانی کدام اند؟

16. بر اساس تجارب شما، آیا تنظیم مجدد زمین در ساحات غیرپلانی (داخل و یا خارج کشور) نتیجه داده است؟ چرا؟

17. آینده ساحات غیرپلانی را بدون تنظیم مجدد زمین چطور می بینید؟

18. برای جمع بندی مصاحبه مان، ایا شما گمان می کنید که تنظیم مجدد زمین بتواند در ساحات غیر پلانی که ملکیت و قباله آن هنوز تصفیه نشده است استفاده شود؟ چرا؟

19. در پایان اگر در مورد پروسه تنظیم مجدد زمین در ساحات غیر پلانی و به طور عمومی ساحات غیرپلانی نظر بیشتری دارید لطفاً بیان کنید.

از اشتراک تان در این مصاحبه سپاسگزارم.

8.3 Private Companies (with experience in land readjustment)

8.3.1 Questions in English language:

Questionnaire Private Sector

Topic: Land Readjustment and the Informal Settlements in Developing Countries:
A management and policy framework based on a case study in Kabul, Afghanistan

I agree to participate in this interview and answer all questions to the best of my knowledge and understanding and also allow the researcher to use my answers and information for his research purposes. AGREE

1. Could you please introduce your company and explain your main projects briefly.
2. Do you have any experience about land readjustment (LR) in any form, whether implementation, policy or technical consultation, etc.?
3. In case the Afghan government runs a LR project in informal settlements of Kabul, are you interested to bid as an implementer? Why?
4. If you are interested, what are your main conditions?
5. What are three most important reasons that could encourage you to bid for a LR project in Kabul, Afghanistan?
 - a.
 - b.
 - c.
6. As an implementer, what could be the three biggest challenges for a LR project in Kabul?
 - a.
 - b.
 - c.
7. How could these challenges be prevented or managed?
8. Would your company agree to implement a LR project jointly with the Afghan government? Why?
9. How about with an/another Afghan company? Why?
10. In case you implement a LR project in Kabul, do you use the local skilled or unskilled labourers? Why?

11. In your opinion, how success of LR in Kabul's informal settlements could be guaranteed?
12. If you are the LR implementer in Kabul, what do you expect the Afghan government to do?
13. What are your expectations from the informal dwellers where LR is being implemented?
14. If you have anything else to add about LR in Kabul, please mention them.

END of Questions. Thank you for your participation in this research.

9. A Guide for the Case Study Report

9.1 Outline of the Case Study

This research examines the relationship between land readjustment (LR) and informal settlements in developing countries with a case study in Kabul, Afghanistan. LR is a self-financed land management tool for reorganising urban and rural areas. The unorganised land plots of settlements are readjusted based on the new LR plan to enable the basic social and public amenities such as roads, sewerage, parks and green space, schools, health care, power and water supply in the community. The main objective of this research is to see how effective LR can be with informal settlements where the landowners are informal, which remains as a major problem across emerging cities in developing countries. It will do this by creating a framework for LR in the informal land ownership context based on best practice experience. In addition, this framework will be evaluated through a case study in Kabul where there are informal landowners. The gap available in the current LR literature exists in challenging contexts.

Therefore, this study intends to fill this gap with a substantial contribution to the LR process in informal areas which does not exist in the available literature. This case study benefits from the latest LR evaluation framework developed by Yilmaz et al. (2015) and relies on multiple sources of evidence including interviews, documents, direct observation, and archival records to maintain high validity of the research construct. Furthermore, following this case study protocol along with a case study database will increase the reliability of this research (Yin 2014).

Keywords: Land readjustment, challenging contexts, customary landowners, sustainable development, Kabul, Afghanistan.

9.2 Reporting Format

The reporting of this case study will be in single-case study format, along with the relevant charts, diagrams, pictures, and maps. As this is a rich case study, it is predicted that three academic journal articles can be published out of this thesis, namely the literature review, the methodology, and the findings.

9.3 Audience

The audience of this case study will be the following people:

Urban policy makers all around the world, especially in developing countries including Afghanistan;

University professors, academics, and eminent researchers all around the world who are interested in research on public policy, urban policy and management, land readjustment, urban development, informal settlements, or any other relevant topics;

All people living in informal settlements;

Other junior researchers and students to learn how a case study is formulated, implemented, evaluated, and reported in accordance with the professional standards.

10. Further Information

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Appendix 4: A Sample of the Interview Transcripts

Interview Transcripts

Topic: Land Readjustment and the Informal Settlements in Developing Countries:
A management and policy framework based on a case study in Kabul, Afghanistan

I agree to participate in this interview and answer all questions to the best of my knowledge and understanding and also allow the researcher to use my answers and information for his research purposes. AGREE

1. Could you please tell me about yourself (job, education, work experience, etc.)?

I have been a university lecturer for 6 years, teaching subjects in civil engineering and urban development. In addition, I have some work experience in implementing urban plans.

2. Please describe the place where you are currently living in terms of access to urban water, electricity, green space, schools and hospitals, wide-enough roads, and other infrastructure?

I live in district 9 of Kabul city, namely in Macroyan area, which is a planning area. Most buildings and apartment blocks are built more than 40 years ago. The quality of urban water is good, but there isn't enough park and green space compared to the number of residents. Due to this reason, most children tend to play on the streets. Number of schools and hospitals are suitable for the area, even there are more hospitals than required. The roads also are of good quality. Overall, the infrastructure condition is good, or even we can say that this area has one of the best infrastructure conditions in Kabul city.

3. Why do you think the informal settlements exist in Kabul and why are they growing?

There are a number of reasons including overall insecurity in all over the country and our notorious economic system. Insecurity causes people to come to a safer place to survive. Also, many people come to the cities to get closer to the job market with their families while they have no land or house in the city. Unfortunately, they start to reside in suburb areas illegally and make a shelter for themselves as they cannot afford to live in serviced urban areas.

The main reason of growing this particular phenomenon is partly due to the incapability of the relevant government organisations to manage the situation, but most importantly, most of high rank government officials occupy lands, develop and partition them illegally, or sell them to

other people which exacerbate the situation and lead such areas to grow rapidly. Misusing such power is a huge corruption.

4. Are you aware and do you have any information about land readjustment (LR)? If yes, could you please explain briefly what land readjustment is? If you are not aware what land readjustment is, I can briefly explain it to you.

Well, I was introduced to this concept in my undergraduate course, but later on I found out that the real meaning of it in practice is by far different. If we define this term literally, it means the lands are to be reorganised comprehensively both from technical as well as ownership views. Therefore, the shape of lands will be readjusted whilst the new land title deeds are to be prepared for them. However, land readjustment has not been used to formalise an urban area in the world, rather than to make them planning area. Thus, in case we decide to use this tool in the Afghan context, we need to consider both as in Kabul, there are areas which are not formal nor planning. But still there are some areas which are not formal but planning. For example, a person has usurped a piece of land, but developed and partitioned it according to building codes and standards. Even sometimes this area could be out of Kabul Master Plan or it could be in a different urban zone such as industrial or green space.

On the other hand, there are also some areas that are recognised by the municipality and are formal, but developed informally without considering the urban planning codes and standards. Implementing LR in such areas seems to be easier and more feasible. Although it should be mentioned that most areas in Kabul are informal and are not recognised by the municipality and also around 90% of those areas are not even based on the urban planning and construction codes and standards.

5. Do you think LR is a suitable tool for improving the current condition of informal settlements in Kabul? Why?

I think this highly depends on the type of the informal settlements. In areas where the land is illegal and informal (for example government land usurped by influential people) and it is also developed without proper planning, the government would loss by implementing LR as it will lose one of its most important valuable resource which is land. These areas unfortunately consist most informal settlements in Kabul.

Interviewer:

So, what is the substitute method if LR is not a good option for the government?

Interviewee:

Well, there should be a proper study to find a way or a model that both the government and the informal residents could benefit from it. In my opinion, there are different ways, but one of them could be building cheap house in the informal settlements ...

Interviewer:

... you mean social housing?

Interviewee:

Yes, social housing. In case government do not decide to sacrifice its land for this purpose, it can choose to provide cheap housing or social housing for the residents of those areas and make the informal dwellers to relocate into these houses and pay a long-term instalment mortgage. Our main objective from this model is that the government does not lose its lands.

There is a negative point about this method because the current investment of the residents on the area will be somehow wasted.

Interviewer:

So, based on what you say, do you think the government is still interested to apply land readjustment in Kabul considering such loss of lands?

Interviewee:

I would say that around 90% of those informal landowners themselves are a part of government or somehow attached to the government (government employee, high-rank official or influential) and insist to legalise their lands without paying any big money or losing parts of their lands to the government. So, if we apply LR to legalise such informal settlements, then these landowners would benefit a lot, not the government. On the other hand, if the government choose not to go ahead with LR, then the condition of the informal settlements remains the same. Therefore, the Afghan government needs to choose between sacrificing its lands to improve the situation or leave these areas as they are which could be exacerbated in future years.

6. If yes, could you please elaborate on what are the main requirements for implementing a successful land readjustment project in informal areas? If not, are you aware of any other tools that can help improve the informal areas in Kabul?

Discussed above.

7. What should the Afghan government do in order to make LR or any other land planning happen successfully in informal areas with informal owners?

Discussed above.

8. If the government cannot finance LR through land value capture in informal areas, do you think the government should still do it through other funds? Why?

The answer is discussed in the below conversation.

9. What would be the most important reason for the Afghan government to implement LR in informal areas with informal owners? Please prioritise by numbering items if you want to choose more than one item.

- a. regularising the informal settlements at any cost
- b. improving the quality of life in informal areas ✓
- c. providing social housing
- d. making profit from land value capture
- e. earning revenues from relevant taxes after formalisation
- f. list another reason:.....
- g. the Afghan government should not implement LR

Interviewee:

I would not say that the government should not implement LR, but what I am saying is that we need to find a way so that the government does not loses its land and also these informal residents do not freely gain a kind of easily gained wealth (the land). LR should be implemented in a way that benefits everyone. And why the government

should do that, it is because of the human beings (its citizens) and should be seeking how to improve the social, health care, cultural, and educational conditions of its people.

Interviewer:

So, you believe that that Afghan government is confused to choose between its own benefits or what is supposed to do which is the importance of its citizens?

Interviewee:

I guess these two factors are kind of related to each other in a way that the government can improve the livelihood of its residents only when it is strong enough. By strong I mean the financial capacity and power. If the government decides to implement LR with this condition, the government would financially be very weak at the end. It loses more than 50% of its land in Kabul city only.

Interviewer:

Ok, if we suppose that the government would lose more than 50% of its land, but instead increases the quality of life of its citizens by LR which is a self-financed tool (through financial land), do you think it will still reduce the burden on the government when the informal settlements problems are mitigated to a high extent?

Interviewee:

Yes, it certainly does, and that is why the government wants to proceed with this tool. However, as you know there is not enough public awareness about such tool in our communities and people would not contribute their lands easily to the project. Even when we show them how their land would be changed after LR, they still resist against LR ...

Interviewer:

So, this could be one of the most challenging issues in front of LR?

Interviewee:

Yes, it is. And the main reason is the communities' culture and lack of proper urban culture in the city...

10. What would be the three biggest challenges for LR in informal areas with informal landowners in Kabul? PLEASE LIST:

Ahmad Jawad

- a. Convincing the informal residents for LR and the lack of sense of cooperation (land owners are not willing to contribute their lands to the LR process)
- b. Upon understanding about LR process, the informal dwellers divide their lands into smaller parcels of lands and sometimes sell some of their lands so that in the LR process, their current land is smaller than standard and therefore do not contribute any land to the LR process. In such a case, government or the implementer cannot get enough financial land or reserve land from the project to be able to fund the whole project smoothly.

11. Comment on the role of community residents and informal organisations in land readjustment projects and how important do you think their role is in implementing LR in their community?

Interviewee:

I believe that the community people play a significant role in the LR process and if they really want the project regardless of the government satisfaction, the project can be undertaken successfully. I give you an example. Several years ago, I had to develop a detailed residential plan for an area as part of my bachelor's thesis and I chose a small area in Sorkh Rood district in Nangarhar province. I got all the required topographic maps from the local government, but the municipality was not happy with my project and wanted to keep that area for agricultural purposes. Well, I just completed my design and passed my thesis, but a few years later, I found out that with the insistence of the residents, municipality had finally approved my plan for them.

12. What should the informal settlements' residents do in order to improve the conditions in the informal settlements?

Interviewee:

The best way would be proposing their plans to the local authorities giving them some details on how they are going to implement the project. I don't think municipalities reject their plans.

13. How do you see the role of Government in improving the conditions in the informal settlements?

Interviewee:

If the residents are satisfied with the project, then it is very easy for the government to act as the major issues relate to the residents. Just the government must ensure the residents that the titling documentation and providing the basic infrastructure such as roads etc. would be done as fast as possible. If the government fails to ensure these things, then I think the residents wouldn't be much interested to implement LR which is a bit complicated than other development projects.

The non-government organisations, donor agencies, and NGOs can also help in improving the conditions of informal settlements by establishing a sustainable and trustworthy relationship between the informal dwellers and the local authorities. Some of these organisations such as UN-Habitat is currently working on some slum upgrading projects which is not sustainable; however, this could be improved if there is stronger ties and relationships between these organisations and the local governments.

14. Were land readjustment to become an attractive option for improving the conditions in the informal settlements, is the Afghan government in your opinion the best suited to implement it? Why?

Interviewee:

No, because the Afghan government does not have that capacity in terms of technical personnel and finance. For example, for Kabul city with over 4 million populations, there are only around 20 surveyors for various survey tasks. This is while in New Delhi, there is more than 100 surveyors available for a very small area of the city which is equivalent to one tenth of Kabul city. Therefore, I strongly believe that the private sector is the best implementer of LR and the local government has a supervision role on it.

15. To the best of your knowledge, what are the positives and negatives of land readjustment in informal areas?

Interviewee:

The greatest point of LR in the informal areas would be increasing the quality of life sustainably. The most important negative point is that it could encourage influential people to usurp lands and legalise it by LR. This can be a major problem as we currently do not have a clear land registration and cadastre plan system in Afghanistan and even there are a lot of misconducts on changing the data and ownership on cadastre plans which is illegal. I had a research project in Qowaye Markaz area in Kabul which one land plot had official land title deeds issued to three different people by the government. This shows that there have been illegal changes even in cadastre plans. Due to these reasons and lack of proper land registration system, it is very hard to stop people from occupying lands illegally and also stop the process of making fake land documents.

There are some ways to tackle this problem. First of all, we had to update our cadastre plans which belongs to 30 or 40 years ago. Most of these plans are drawn by hand and still some of the maps are lost and not available which confuses the government to determine the real ownership of land. After an updated and complete survey, a new integrated land registration system needs to be developed to be able to identify the genuine ownerships of lands. Although I believe the government is still not capable enough of conducting such survey and I think before any improvement or upgrading action, the municipality should know the area first.

16. In your experience, has land readjustment worked in informal areas? Why?

Interviewee:

Yes, it has. Especially in developed countries where the land title and tenure are clear and there is a genuine land registration system. However, in some developing countries like India and some African countries where the land ownership is still not clear, they managed to find a similar method in accordance with their norms, culture and lifestyles for LR implementation. In case of Kabul, I think as a complete survey of land ownership would take many years (5 years or more) and we may not want to keep the informal settlements condition as it is, the local authorities can start surveying a small area where the land readjustment is planned to be implemented before the project execution.

Therefore, as LR has been successful in other contexts around the world, I am sure it could be manageable for Kabul case if properly and accurately studied and surveyed. However, I should mention that LR cases around the world are different in technical

and legal contexts. India could be a good example for us in terms of technical issues, but the legal rights and systems are quite different with that of us, so we need to ensure that we develop our own model for all LR aspects.

17. What is the future of informal settlements without LR?

Interviewee:

If it grows like this and no effective preventive action is undertaken, I think Kabul would be an abandoned city in the next 100 years (laughing) ... and we need to leave this city and go and build another new city somewhere else.

18. To the best of your knowledge, do you think land readjustment can be used in informal settlements where the title and tenure of land is not clear? Why?

Interviewee:

Well I would say yes, especially in those informal settlements where the site is informal (illegal) and unplanned. As the residents of such slums do not have official title deeds for their lands and also their properties are not developed according to the urban development codes and standards, implementing LR would be the most promising as high possibly more than 80% of the residents would say yes to LR to gain official land titles. In contrast, it is less likely that LR could succeed in those informal settlements where the land title is clear, but the property is developed illegally as the price of land is rather higher in these areas and also the residents do not want to lose any of their properties due to financial loss and the complicated process of land documents later on.

19. Is there anything else you would like to add about the LR process in informal settlements and about informal settlement in general?

Interviewee:

I think we must endeavour to find the best way (not at any cost) for stopping growth of the informal settlements in Kabul, not only because it worsens the look of the city, but also [it] damages the health, economy, lifestyles, safety condition etc. in the city. Improving the current condition of the informal settlements by LR would increase the security and safety of the residents, especially at nights when people are passing by from an enlightened street rather than a dark, squalid, and uneven way.

LR can be tailored in three different models for areas where:

1. Informal landowner and unplanned residence construction (not following urban construction codes and standards)
2. Informal landowner but planned residence construction (based on the urban construction codes and standards)
3. Formal landowner but the residence is constructed unplanned (not following urban construction codes and standards)

Proper models should be developed and investigated constantly to improve it as it goes.

END of Questions. Thank you for your participation in this research.

Appendix 5: Land Readjustment and Urban Redevelopment Procedure



Islamic Republic of Afghanistan



Kabul Municipality

City Planning and Implementation Department

Land Readjustment and Urban Redevelopment Procedure

Land Readjustment Division

November 22, 2017

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Chapter 1 Goals & Terminologies

Article 1. Purpose of this procedure

This procedure is prepared following to the Land Acquisition Law Art.46, the Municipalities Law Art.16 and the Master Plan Implementation Regulation Art.2

Article 2. Objectives of LR/UR Procedure

The objectives of this procedure are to:

1. Better arrangement of affairs related to informal/ unplanned areas in Kabul city
2. Use and implement the contemporary methods for arrangement and implementation of city plans.
3. Legal back up for upgrading of planned and unplanned areas in Kabul city.
4. Conversion of unplanned areas to planned areas in the city.
5. Establishment and Development of infrastructures and public services for residents of project area.
6. Solve the problem of housing for homeless residents in the project area when they lost their houses during the project implementation.
7. Upgrading the environment of Kabul city.
8. Establishing the mechanism for public participation in urban projects.

Article 3. Terminologies

In this procedure, the definition of terminologies is listed as following:

1. Land Readjustment:

Land Readjustment (LR) is a technique for managing the planned development of urban-fringe lands, whereby a government agency consolidates a selected group of land parcels and then designs, services and subdivides them into a layout of streets, open spaces and serviced building plots, with the sale of some of the plots for cost recovery and the distribution of the remaining plots back to the landowners to develop or to sell for development.

LR is a horizontal conversion of land ownership only that contains the provision and sale of financial land for project's cost recovery.

2. Urban Redevelopment:

Urban Redevelopment (UR) is another successful method for the contexts of compact land developments. UR is unique concept that is directly connected with consolidation of small land

plots into a large plot, with high/mid-rise-building and open spaces within the plot. Usually, it is used in larger urban projects and it consolidate the land plot area to flats according to the value and location of each land plot. It is more a vertical conversion of land plots to flats that contains not only the transfer of ownership but also covers the cost of building construction with provision and sale of financial flats.

3. Flat for Land “FFL”:

FFL is one type of Urban Redevelopment method that consist the vertical conversion of land plots to flats according to a determined percentage of conversion only. The conversion percentage is constant for all land plots in the project site area.

4. Planned Areas:

They are consisting of the area where already approved detail plan is implemented.

5. Unplanned Areas:

They are consisting of the areas where no detail plan is implemented.

6. Project area

“Project area,” means the considered area where a (land readjustment or urban redevelopment) project is going to be implemented.

7. Original plot area

“Original plot area” means the area of land plot/parcel where land readjustment and urban redevelopment project has not been implemented.

8. Public Facilities:

They are the required facilities (educational, health, and public services) for local residents of a project, which directly have impact to health, viability and organization of a society.

9. Social Facilities:

They are consisting the facilities that are used for social and public gatherings, such as mosques, cinemas, theatres, funeral halls, gymnasiums, parks.

10. Infrastructure:

They are consisting the city wide services that contain facilities and systems and basic infrastructures for a city. Such as roads, drinking water supply, sewerage and waste water management, electricity, public parks, public swimming pools, public hospitals and libraries.

11. Contribution rate

It is the constant land contribution ratio to all project landowners, which is deducted for development of a site and provides public facilities and city services in the range of (0 to 40) percent.

12. Final plot area

“*Final plot area*” is the area of land plot/land parcel remaining for landowners after the contribution in order to implement land readjustment project.

13. Re-plotting

“*Re-plotting*” is the process to re-plot the land after contribution and in land readjustment plan, implement in site and register in related offices.

14. Resettlement:

It is a process to resettle the residents of project area to the closest possible location in another area inside the project area or its outside. Resettlement could be temporary or permanent according to the requirements of project.

15. Zoning:

It contains the urban indexes that are already identified and determined in the master plan and they are the basis for planning and re-plotting plans of LR and UR projects.

16. Project’s initial cost

“*Initial cost*” is the budget allocated from responsible entities for the initial cost of the project.

17. Land for public and social facilities:

It is a parcel of land that will be used for public and social facilities (roads, parks, school, mosque...etc.) inside the project.

18. Financial land

“*Financial land*” is a particular part of the contribution ratio which will be taken by project implementation body (KM) along with the contribution process from landowners. Principally the financial land is used to recover the project costs and it could be as land contribution or as monetary contribution.

19. Land Bank:

Land banking is the practice of aggregating parcels of land for future sale or development by project implementation body (KM). It could be used during the re-plotting process of LR projects and KM can sell these lands to support project fund or can use it for further development in the municipal projects.

20. Land valuation

Land valuation is determined based on the land acquisition law considering the location and accessibility of each land plot to the public facilities and services (road, market, school, etc.).

21. Implementing body

In first step Kabul Municipality must be the implementing body. In cases where private sector is the project implementer, than, Kabul municipality acts as the controlling and monitoring entity.

22. Floor Area Ratio (FAR)

FAR consists of the ratio between total floor area in the building and area of the land plot. Usually this ratio is presented in % (Figure 1).

23. Building Coverage Ratio (BCR):

It is the area where building construction will be performed or already performed (Figure 1).

24. KRUKI of the area:

It is a sketched map or a printed drawing of the project area that shows the location of the project area in accordance with clear and known locations and places closer and around the project.

25. Plan of property boundaries:

It is a map of existing properties that shows the boundaries and extent of each land plot inside the project area.

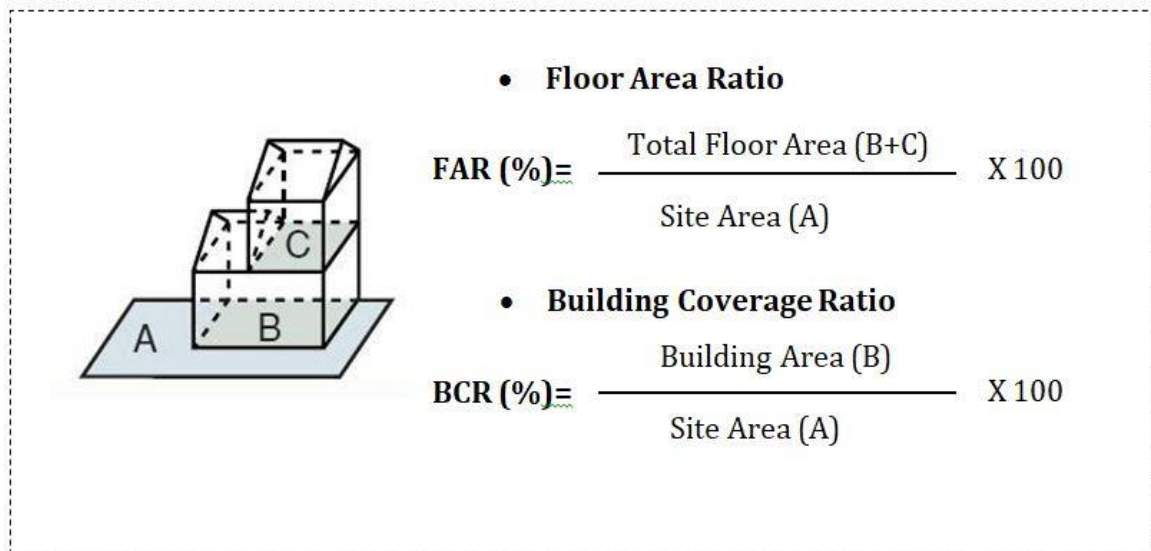


Figure 1: Illustration of FAR & BCR Ratios

Chapter 2

Part One: Land Readjustment

Article 4. Conditions to Select the LR Project Area

KM can develop the project area using the LR method as a detail plan in the light of master plan, considering the agreement of landowners and current laws.

Article 5. Flow of LR Project

For planning and implementation of LR project, the following steps shall be considered as shown in the Figure-2.

1- Public Awareness:

In this stage, the Implementation Body (KM) will share basic information about introduction LR projects to affected landowners through brochures, social media, mosques and Wakil Gozar. If required, KM could repeat this step until assurance of proper public awareness about the LR projects.

2- Recourse of Landowners:

At this stage, after public awareness, the landowners will come to KM to apply LR method to their lands through filling the formal form-1 (see Appendix-A for Form-1).

3- Area's Clear Marks & Gathering Planning Information:

At this stage, according to basic site information, the survey team in City Planning & Implementation Department (CPI) will go to the site and prepare area's clear marks and coordinates. Then, the planning members of CPI will gather and prepare the planning information of the area in accordance with Kabul Master Plan, Land uses and directions for development.

4- Project Pre-Feasibility Study:

In the light of prepared information by CPI planning team, a pre-feasibility study will be conducted by LR members.

5- Conducting Properties Survey:

KM will conduct the properties survey and prepare the current plan of the properties boundary and building locations in accordance with handed documents of landowners. This survey will be conducted from the actual site in presence of land owner, Wakil Gozar, representative of related district. And the information of building size and volume, its construction material and

boundaries of the land itself with full name of its owner will be gathered and recorded by surveyors.

6- Landownerships Identification:

At this stage, in accordance with formal legal documents of landownership, KM will conduct the landownership identification process.

7- Socio-Economical Survey & Analysis:

Based on the results of landownership identification and survey of properties, KM will conduct socio-economic survey that contains area's population, land purchase and sell market survey, presence of historical heritages, access distance to city wide services and facilities. Then, the LR members will do the socio-economic analysis in accordance with surveyed data. This analysis will clearly define the requirements and feasibility of the project for preparation re-plotting plan.

8- Roles & Responsibilities of Parties:

After explanation, negotiation and agreement of roles and responsibilities for each party in the LR Shura, all project parties (KM, Private Sector & Landowners) will sign their roles and responsibilities in a formal protocol sheet.

9- Complaints Mechanism:

This mechanism will be established inside the KM organization, and claims and complaints of residents will be processed through the leadership of KM.

10- Formation the LR Shura:

For better coordination and participation of all project parties, according to this procedure a joint LR Shura consisting the KM members, representatives of private sector (if involved to the project) and representatives of landowners will be established in accordance with this procedure.

11- Court Register for Authorizing the KM for Change in Land Use:



At this stage, for better coordination and smoother implementation of the LR project related to landownerships, KM in conjunction with members of LR Shura will prepare the required documents and submit them formally to the court. The main reason for this stage is that it is necessary for KM to be authorized by court in the light of submitted documents to make any changes in land uses of project area. This process will make the basis for issuing the fulfillment of new deeds and resettlement of residents in stage 16.

12- Preparation of Re-plotting Plans:

In accordance to the results of steps (1-11), the re-plotting plans will be prepared.

13- Agreement of Parties & Approval of Re-plotting Plan:

The prepared re-plotting plans in the step-12 will be shared with the project parties (KM, Private sector & Landowners), and their comments and feedback will be collected. After negotiation and comprehensive approval of project parties, if required the re-plotting plan will be revised. The final approval of re-plotting plan will be through Board for Visa of City Plans and Mayor's office. The final approved re-plotting plan will be saved in the archive of KM.

14- Project Business Planning:

At this stage, KM will allocate the required budget and resources for implementation of LR project.

15- Project Implementation:

Following the steps 8-14, the project action plan will be prepared by KM. Then it will be shared to the landowners through LR Shura, and after their approval, this plan will be saved in the project file in KM. Following, in the light of current laws and regulations, the project implementation will be done.

For transparency of project evaluation, a council of project residents or a third party that none of project parties have membership will be established.

16- Fulfilment of New Deeds and Resettlement:

Fulfilment of new deeds will be done for the land plots inside the plan following the step 11 according to current laws and regulations in related courts.

17- Project Results:

After project implementation, the results and outcomes of project will be analyzed through affected residents in the area.

Article 6. Formation of Land Readjustment Shura (Council):

For better communication with landowners, private sector and KM, there is a need to establish LR Shura.

1. The LR council members shall be as follow:

- Head of related district (Leader of Council)
 - Wakil Guzar (Deputy of Council)
 - Representative of private sector (Member) (if involved with planning/ implementation of project)
 - Representative from LR Department (Member)
 - Representative of City Planning & Implementation Directorate/ Construction Control Directorate (Member)
 - Representatives of Landowners (two members)
2. The above formation is applicable when the number of landowners is from 6 to 10, if they are more than 10 landowners, then the numbers of representatives will be decided according to the needs of project. (for each 5-10 lands one representative from landowners' side)
 3. The major conditions for LR Shura formation are as follow:
 - Landowners shall be members of LR Shura, not the current residents and tenants.
 - The presence of landowners or their formal representative is a must.
 - If there is less than 6 landowners in the LR project, than, there is no need to establish the LR Shura, as all landowners can coordinate and cooperate with project's implementation body.
 - If there is no LR Shura, then LR department can arrange and proceed its activities according to their programs in close coordination with area's residents.

Article 7. Conducting Property Survey

The survey of properties and gathering the information related existing buildings site, their volumes and construction materials will be done by City Planning & Implementation directorate in close coordination of landowners and their representatives.

Article 8. Identification of Landownership

The process of landownership identification will be done by directorate of Land Acquisition in KM after giving them the clear marking points (Area's KRUKI) of the project area and prepared plan of properties.

Article 9. Determining the Contribution Rate

The contribution rate is determined according to the following:

- 1- The acceptance of more than 50% of landowners is essential for conducting the LR project. And if negotiation with remained landowners was failed, in that case the process of land acquisition law will be applied to them. But, governmental and affected areas by natural disasters are exceptional from this condition.
- 2- The contribution land contains required lands for provision of infrastructures, public facilities, social facilities, affordable housing and financial land.
- 3- The Contribution rate at maximum shall not exceed from the 40% of total project area.
- 4- Financial land area is calculated in accordance with development expenses of project implementation and addition of land bank (the maximum rate for land bank is 10% of the project area) inside the project.
- 5- Landowners shall provide required land for provision of basic infrastructure and public and social facilities through land contribution. If landowners want, only the required land that contains the financial land and land bank could be paid as cash.

Article 10. Preparation of Re-plotting Plans

Re-plotting plans will be prepared in the light of following points:

- 1- Re-plotting plans will be designed and prepared by LR department, private sector in the light of master plan and provision of landownership identification and survey of properties, socio-economic analysis.
- 2- LR department or private sector shall prepare several concepts for the re-plotting plans considering the social and economic aspects, and study their feasibilities and do its effort to allocate previous landowners to their nearest possible locations, and finally find out the best possible concept for re-plotting.
- 3- The information related full name of landowners, previous land areas and re-plotted land area of lands inside the project area shall be included in the re-plotting plan. And it shall be saved part of a detailed table in the archive of CPI.
- 4- For the re-plotting, if the land area is enough to make a proper architectural planning in accordance with current laws and regulations of planning and building control in KM, and at the same time the land area and architectural planning is acceptable for its landowner, than it can be processed to the re-plotting and for further construction permit inside the KM.
- 5- Urban plans and construction drawings will be checked and approved through dedicated commission of visa inside the CPI.

Article 11. Resettlement of Landowners

In the following situations, the resettlement of landowners (temporary/ permanent) will be performed in the LR project:

- 1- For prevention of resettlement, LR department or private sector in coordination with residents of project area shall try its best to not relocate them in the re-plotting plans,
- 2- If LR department or private sector was constrained to do resettlement, then based on the current land acquisition laws options of temporary or permanent resettlement will be applied in close coordination with affected landowners.
- 3- In case of temporary resettlement, KM can offer residents the two options as follow:
 - a. Resettlement of residents into residential buildings that are related to KM's ownership or ownership of government those are available in KM's coordination.
 - b. KM can obtain budget from the ministry of Finance and taking some residential blocks or buildings as rental that are equivalent in quality and value to the lands before project.
- 4- On the request of landowners, in accordance to the land acquisition law the land acquisition process can be applied to their lands by KM.

Article 12. Development of Infrastructures

Development of basic infrastructures like parks, schools, mosques...etc. will be determined in the re-plotting plan after public contribution, and will be implemented by KM, other related governmental organizations or private sector.

Article 13. Public Facilities Provision

Land for public facilities such as school, clinic, park, mosque...etc. will be provided through public contribution.

Article 14. Development Costs of Public Facilities

Development costs for public facilities will be done based on current related laws and regulations.

Article 15. Compensation Cost

During the implementation of re-plotting plans, if a building is fully or partially demolished, then, based on the land acquisition law the compensation cost will paid to its landowner according construction material of his/her building.

Article 16. Administrative Costs of LR Department

For daily expenses in LR department like meeting with landowners and site visits, the required amount shall be included into yearly ad hoc money (Pul-e Sar Desti).

Article 17. Sale of Financial Land

Sale of Financial land that is provided through public contribution will be processed through volunteering in the light of current laws and regulations. Or the financial land will be constructed by KM and sold in the market.

Article 18. Approval of Re-plotting Plan

1. After approval of re-plotting plans by all parties (KM, Private Sector & Landowners or their representatives) it will be included in a separate protocol and saved in the coordination and policy directorate.
2. In the protocol of agreement, landowner or his/her representative shall sign.
3. If private sector was involved in the process of project planning, its authorized representative shall sign the protocol.
4. The final approval of re-plotting plan will be through Board for Visa of City Plans and Mayor's office. The final approved re-plotting plan will be saved in the archive of KM.

Article 19. Responsibilities & Eligibilities of Kabul Municipality

1. KM (as the city managing authority and implementing body for the LR project) is responsible to manage and lead all aspects of LR project in all stages.
2. The final decision on planning and implementation of LR and UR projects.
3. Controlling and Monitoring the Private sector in all project stages, if any private company is responsible for surveys, planning, implementation and construction of the project.
4. Building the parks, greeneries and roads, that will be done along the project implementation period. In case of UR project, the calculation and estimation of costs and sales of financial flats will be done along with project planning and implementation.
5. Introducing LR and Ur projects and their goals to all residents.
6. Explanation the program goals to social and technical coordinators.
7. Introduction of participants and coordinators for public awareness.
8. Explanation about location of lands and re-plotting concepts to LR council and residents.

9. Summarizing the problems of residents and finding an appropriate solution through LR/ UR Shura.
10. Socio-economic analysis and feasibility study of concept re-plotting plans.

Article 20. Responsibilities of Land Readjustment Department

1. Public awareness to project's residents about LR/UR project and its importance.
2. Processing meetings with representatives of landowners for better coordination of project stages and activities.
3. Establishment of coordination to find solution for the complainant residents and making them satisfied in the project.
4. In consideration the results of landownership identification and survey of properties, conducting the Socio-economic survey. If required, private sector can conduct the surveys but only under the control of LR department and in close coordination of landowners.
5. Contents of socio-economic survey are: area's population, historical areas, land value and price before and after project, number of elders and infants, existing guilds, access distance and degree to city services.
6. Considering the basis of ownerships, new land plots and ownership will be determined and after estimation of expenses and benefits the shares will be determined.

Article 21. Responsibilities of Landowners

1. Selecting and introducing the representatives for the LR/ UR Shura.
2. Active participation in sharing their ideas, comments and feedback to their representatives and through them to the implementation body (KM).
3. Presence of landowner or his/her representative during landownership identification, agreement of parties, during the resettlement application if required, during the implementation period, and fulfilment of new deeds. In the absence of a landowner or his/her representative KM will take action according to the land acquisition law.
4. Monitoring and evaluation during the project implementation and project handover.

Article 22. Rights and Responsibilities of Private Sector

1. Active participation on biddings related to LR and UR projects in KM according to the laws and regulations.
2. Follow up and coordination to the mechanisms and requirements determined in this procedure for LR and UR projects.
3. Active participation in LR/UR Shura.

4. If private sector is involved with the project implementation and construction, then, the ceiling limit of project revenue will be determined by KM based on related laws and the significance and location of each project.

Article 23. Project Action Plan

During the preparation of project action plan, the following points shall be considered:

1. Project organization and responsibilities of included departments.
2. Predicted costs for project implementation that were already estimated in project feasibility studies.
3. Sequence and hierarchies of activities in the light of total project period.

Article 24. Project Results

1. Based on the economic and financial content of the project and selling the financial land in LR and selling the financial flats in UR, the project is completed and handed over.
2. Based on the authorized city plans and construction drawings, project is actually built and according to stage 11 the lands and flats are distributed.
3. Social facilities that are built by related governmental organizations will start their activity.
4. Parks and roads are built by implementing body (KM), and actually start their activity.

Part Two: Urban Redevelopment

Article 25. Urban Redevelopment Project Promotion Area

In the following conditions, land areas could be selected as urban redevelopment project promotion area:

1. In the master plan the selected area is determined as medium or high density area.
2. If the land areas are in the route of roads and public affairs building, and their residents want to live in apartment buildings. In this case, in appropriate places new apartment building will be built and according to land acquisition law and housing regulation, these apartments will be distributed to displaced landowners.
3. If the land areas are in the route of main roads in the city, and development of selected area is necessary from government side.
4. If the land areas in dense area, or the land plots are too small for living and there is no prevention in the master plan.

Article 26. Conditions to Select the Urban Redevelopment Project Area

1. If the selected area match with criteria mentioned in Art.25, then after agreement of landowners or their representatives, urban redevelopment will be applied to the area.
2. KM can develop the area in the light of master plan through of Urban Redevelopment and Flat for Land (FFL) method as a detail plan.
3. If the area is in the rout of main roads and will be affected by land acquisition process, and landowner is absent to do the land acquisition, then, KM will take action according to the land acquisition law.

Article 27. Consideration of Urban Redevelopment Project Flow

The flow of Urban Redevelopment projects is as illustrated in Figure-3 below:

- 1- **Public Awareness:**
 In this stage, the Implementation Body (KM) will share basic information about introduction UR projects to affected landowners through brochures, social media, mosques and Wakil Gozar. If required, KM could repeat this stage until assurance of proper public awareness about the UR projects.
- 2- **Recourse of Landowners:**
 At this stage, after public awareness, the landowners will come to KM to apply UR method to their lands through filling the formal form-1 (see Appendix-A for Form-1).
- 3- **Area's Clear Marks & Gathering Planning Information:**
 At this stage, according to basic site information, the survey team in City Planning & Implementation Department (CPI) will go to the site and prepare area's clear marks and coordinates. Then, the planning members of CPI will gather and prepare the planning information of the area in accordance with Kabul Master Plan, Land uses and directions for development.
- 4- **Project Pre-Feasibility Study:**
 In the light of prepared information by CPI planning team, a pre-feasibility study will be conducted by LR members.

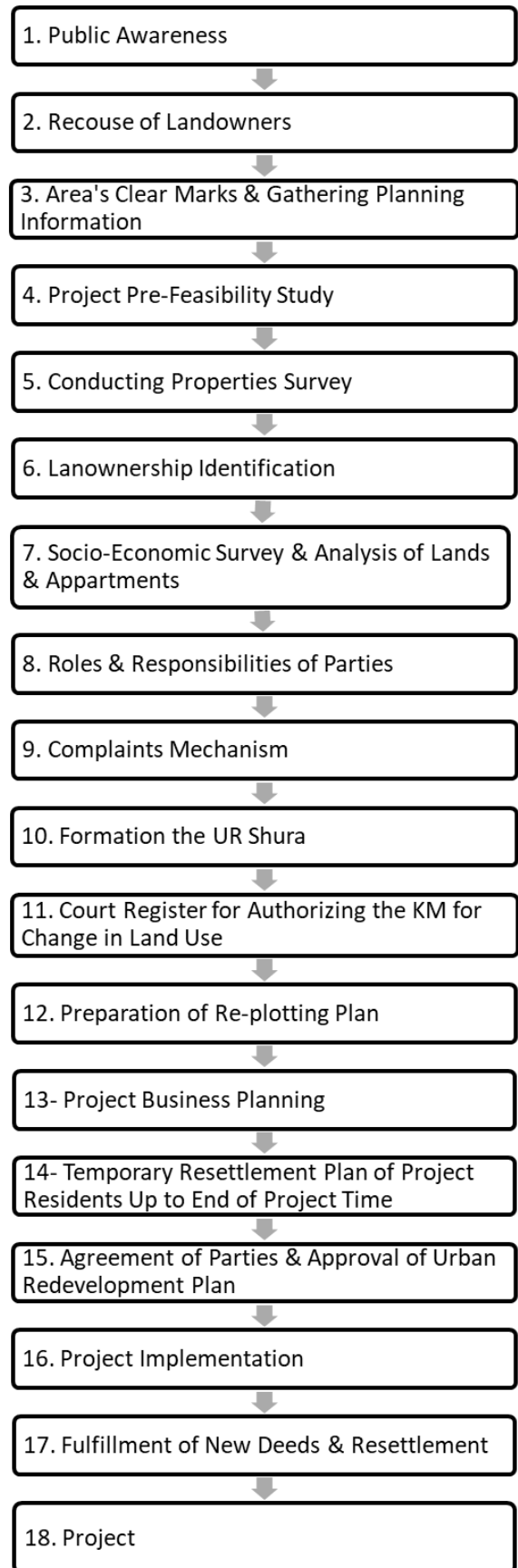


Figure 3: Flow of UR Projects

5- Conducting Properties Survey:

KM will conduct the properties survey and prepare the current plan of the properties boundary and building locations in accordance with handed documents of landowners. This survey will be conducted from the actual site in presence of land owner, Wakil Gozar, representative of related district. And the information of building size and volume, its construction material and boundaries of the land itself with full name of its owner will be gathered and recorded by surveyors.

6- Landownerships Identification :

At this stage, according to present formal legal documents of ownership, KM will conduct the landownership identification process.

7- Socio-Economical Survey & Analysis:

Based on the results of landownership identification and survey of properties, KM will conduct socio-economic survey that contains area's population, land purchase and sell market survey, presence of historical heritages, access distance to city wide services and facilities. Then, the LR members will do the socio-economic analysis in accordance with surveyed data. This analysis will clearly define the requirements and feasibility of the project for preparation re-plotting plan.

8- Roles & Responsibilities of Parties:

After explanation, negotiation and agreement of roles and responsibilities for each party in the UR Shure, all project parties (KM, Private Sector & Landowners) will sign their roles and responsibilities in a formal protocol sheet.

9- Complaints Mechanism:

This mechanism will be established inside the KM organization, and claims and complaints of residents will be processed through leadership of KM.

10- Formation the UR Shura:

For better coordination and participation of all project parties, according to this procedure a joint UR Shura consisting the KM members, representatives of private sector and representatives of landowners will be established.

11- Court Register for Authorizing the KM for Change in Land Use:

At this stage, for better coordination and smother implementation of the UR project related to landownerships, KM in conjunction with members of UR Shura will prepare the required documents and submit them formally to the court. The main reason for this stage is that is necessary for KM to be authorized by court in the light of submitted documents to make any changes in land uses in project area. This process will make the basis for issuing the fulfilment of new deeds and resettlement of residents in stage 16.

12- Preparation of Urban Redevelopment Plans:

In accordance to the results of stages (1-11), the urban redevelopment plans will be prepared.

13- Project Business Planning:

At this stage, KM will allocate the required budget and resources for implementation of UR project.

14- Temporary Resettlement Plan of Project Residents Up to End of Project Time:

At this stage, a temporary resettlement plan for the project residents will be prepared.

15- Agreement of Parties & Approval of Redevelopment Plan:

The prepared urban redevelopment plans in the stage-12 and Temporary Resettlement Plan in stage-14 will be shared with the project parties (KM, Private sector & Landowners), and their comments and feedback will be collected. After negotiation and comprehensive approval of project parties, if required the urban redevelopment plan and temporary resettlement plan will be revised. The final approval of mentioned plans will be through Board for Visa of City Plans and Mayor's office. The final approved plans will be saved in the archive of KM.

16- Project Implementation:

Following the stages 8-15, the project action plan will be prepared by KM or Private Sector. Then it will be shared to the landowners through UR Shura, and after their approval, this plan will be saved in the project file in KM. Following, in the light of current laws and regulations, the project implementation will be done.

For transparency of project evaluation, a council of project residents or a third party that none of project parties have membership will be established.

17- Fulfilment of New Deeds and Resettlement:

Fulfilment of new deeds will be done for the flats inside the redevelopment plan following the stage 11 according to current laws and regulations in related courts.

If a landowner does not want to live in the provided apartment, then proper restoration of his/her rights will be applied in the light of current laws and regulations.

18- Project Results:

After project implementation, the results and outcomes of project will be analyzed through affected residents in the area.

**Article 28. Formation of Urban Redevelopment Shura
(Council):**

For better communication with landowners, private sector and KM, there is a need to establish UR Shura.

1. The UR council's members shall be as follow:
 - Head of related district (Leader of Council)
 - Wakil Gozar (Deputy of Council)
 - Representative of Private Sector as member (if involved to the project planning or implementation)
 - Representative from LR Department (Member)
 - Representative of City Planning & Implementation Directorate (Member)
 - Representatives of Landowners (two members)
2. The above formation is applicable when the number of landowners is from 6 to 10, if they are more than 10 landowners, then the numbers of representatives will be decided according to the needs of project. (For each 5-10 lands one representative from landowners' side)
3. The major conditions for UR Shura are as follow:
 - Landowners shall be members of UR Shura, not the current residents and tenants.
 - The presence of landowners or their formal representative is a must.
 - If there are less than 6 landowners in the UR project, than, there is no need to establish the UR Shura, as all landowners can coordinate and cooperate with project's implementation body.
 - If there is no UR Shura, then LR department can arrange and proceed its activities according to their programs in close coordination with area's residents.

Article 29. Conditions of Urban Redevelopments Implementation

1. The acceptance of more than 50% of landowners is essential for conducting the UR project. And if negotiation with remained landowners was failed, in that case the process of land acquisition law will be applied to them. But, governmental and affected areas by natural disasters are exceptional from this condition.
2. Followings are the two methods of urban redevelopment projects (based on conversion of lands to flats):
 - **Flat for Land "FFL: Method:** considering the constant conversion rate in the range of 55- 65% to lands to flats in close relation and agreement with landowners. In this method only area based conversion will be applied.
 - **Urban Redevelopment Method:** considering the conversion range of 40-70% lands (according to land value and location of each land) to flats in close relation and

agreement with landowners. This method is applicable when the land management systems is fully responsive to the requirements of the UR project.

Article 30. Preparing the Urban Redevelopment Plans

In preparation of Urban Redevelopment Plans, the following points shall be considered:

1. Urban Redevelopment Plan will be prepared by LR members or Private Sector in accordance with conversion ratio of land to flats in close coordination and agreement of landowners.
2. The Urban redevelopment plans for the project area will be prepared based on results of landownership identification, survey of properties, city master plan, requirement of project area in relation with integrating the land uses, provision of land for urban infrastructures and financial flats.
3. Also, in preparation of redevelopment plan, the zoning as stated in the master plan, requirements of area in relation with population and adjacent projects, ratio of FAR and land plots, and BCR in the light of FFL will be prepared.
4. During the conversion of land to flat if a land plot area is less than a flat area, then the landowner shall pay to KM the remained part based on flat unit price determined by KM. But if during this conversion of areas, the land plot area is more than one or several flats, in this case, the extra land plot area will be sold in coordination and agreement of landowner based on land unit price determined by KM and will be given as cash to its landowner.

Article 31. UR Project Business Planning

This part contains the following items:

1. Financial and Economic Planning and analysis of land conversion to flats, list of the conversion with full name of landowners, number and area of their lands and converted flats, and remained land area or converted flat area.
2. Also, the financial and economic analysis shall include the construction cost of project (Building & Facilities), land and flats sale and purchase prices in the area, project cash flow projection, resettlement costs, project's promotional material and method.
3. Establishment and development of public facilities will be conducted based on articles 12 and 14 of this procedure.
4. For distribution of flats to landowners, KM will specify the floor stories and after its approval in the UR shura, KM will do a random selection (Lottery) and distribute the flats to landowners.

Article 32. Temporary/ Permanent Resettlement Planning

Both (permanent and temporary) resettlement plans shall contain the followings:

1. In both methods of (UR & FFL), resettlement of landowners (permanent or temporary) is imperative.
2. In planning and preparation of urban redevelopment plan, LR members shall perform enough efforts to decrease the number of landowners in resettlement. This effort can be applied by dividing the project in multiple phases in order to control and avoid extra resettlement costs in the project.
3. Resettlement plan will be prepared by LR members in close coordination with project's landowners. This plan will include the feasibility analysis, action planning, economic analysis, and negotiation with project landowners. After agreement and sign of parties, this plan will be saved in archive of KM in project file.
4. In case of temporary resettlement, KM can offer residents the two options as follow:
 - a. Resettlement of residents into residential buildings that are related to KM's ownership or ownership of government those are available in KM's coordination.
 - b. KM can obtain budget from the ministry of Finance and taking some rental residential blocks or buildings that are equivalent in quality and value to the lands before project.
5. In case of landowner request, his/her land can be processed through land acquisition process by KM and his/her rights will be given to the landowner.

Article 33. Construction of Buildings & Sale of Financial Flats

For the construction of buildings and sale price of flat in the UR (land value based) project, the following points shall be considered:

1. If the construction of buildings are going to be done by private sector, then it will be processed based on the protocol of parties (KM & Private sector), and the required flats for landowners will be counted to them as price of constructed flats without any benefits.
2. If the construction is done by KM, then the flats will be counted to landowners to the price of construction costs without any benefits.
3. The land plots will be estimated to the market prices and the flats will be estimated to the market prices in consideration with difference in prices of lands and flats. If the land price is less than flat price, then the landowner can pay the remaining amount in

separate instalments only if he/she has financial problems. If the landowner could not pay his/her instalments on time, then according to current regulations the ticket will be charged to the landowner. If the land price is more than flat price, in this case the remaining part will be paid to the landowners as cash by KM.

Article 34. Project Constructor & Its Result

For the UR project construction, the following points shall be considered:

1. Landowners who have the financial ability to implement the project can implement the project based on the approved plans by UR Shura and KM and agreement of parties (KM & Landowners).
2. If landowners want to implement the public facilities such as roads, larger parks, sanitary and water systems...etc., or want to implement the social facilities such as small parks, mosques, clinics, kindergarten...etc. in these cases, LR department will manage and arrange the redevelopment plan for the area and will be processed according to current laws in KM.
3. If the private or governmental sector is responsible for the project implementation, then the following items shall be considered:
 - Private or governmental sector shall implement the approved redevelopment plan and drawings by KM.
 - Private or governmental sector shall implement the project according to prepared project action plan by KM (based on Art. 23).
 - Private or governmental sector is responsible to provide temporary or permanent resettlement or paying rental fee to affected landowners of UR project.
 - If according to agreed protocol, the planning and design of urban redevelopment plans and construction drawings are responsibilities of private or governmental sector, then, all the drawings and redevelopment plans shall be checked and authorized by KM from urban, technical, social and safety aspects, and then they can implement the project.
4. The project results will defined according to Art. 24 of this procedure.

Article 35. Acceptance and Execution of LR/UR Procedure

- This procedure is prepared in two chapters and 35 articles.
- After approval date of KM's leadership, this procedure is executable.

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