

METHODS FOR IMPROVEMENT OF INFORMAL SETTLEMENT  
IN KABUL CITY, AFGHANISTAN

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## DEDICATION

*To my beloved Father and Mother,*

*Wife, Brother, and Sisters*

This research dedicated to all of you for your endless support  
and encouragement.

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I would like to thank God, the most gracious the most merciful, for giving me the strength and the ability to sense the world around me with the knowledge, and his words are illuminating the right path in front of us.

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## ABSTRACT

Afghanistan witnessed rapid urbanization in recent decades due to the post-war recovery process. When the war ended in 2001 by the fall of Taliban regime, most of Afghans refugees returned back to urban areas of Afghanistan especially in Kabul city. Moreover, the rapid urbanization, migration from rural areas and population growth impacted on Kabul city with the manifestation of informal settlement. Informal settlement in Kabul city refers to the housing and settlement which built up in violation of the master plan of Kabul city. The problems of the informal settlement are considerable challenges to the informal residents and government. Thus, this research aims to investigate the identification of methods for improvement of the informal settlement in District 13 of Kabul city. In order to reach the aim of the research, field survey interview has been conducted with 22 Afghan government officials, and questionnaire survey has been conducted with 200 residents of District 13 of Kabul city. The gathered data includes both qualitative data and quantitative data. The content analysis has been used to analyze qualitative data, and the frequency analysis has been used to analyze the quantitative data. The finding on the built environment problems posed by informal settlement in District 13 are lack of drainage system and sewage system, lack of solid waste management, unpaved narrow street, lack of open spaces, recreation and greenery, lack of water supply and pollution of underground water. Moreover, different factors leading to growth of informal settlement are rapid increase of population, and limited capacity of government. Finally, through the resident's preferences, government capacity, and District 13 physical condition, the research suggests three methods which can be used for the improvement of the informal settlement in District 13 of Kabul city which is settlement upgrading as the first option, the land readjustment as the second option and urban redevelopment as the last option. This research is essential and has significance for the government of Afghanistan and the informal residents, through enhancing the information and awareness of the government officials towards the need, preferences and most problems of informal settlements.

## ABSTRAK

Afghanistan mengalami proses pembandaran pesat sejak kebelakangan ini selari dengan proses pemulihan pasca-peperangan. Setelah peperangan berakhir pada tahun 2001 selepas kejatuhan rejim Taliban, kebanyakan pelarian Afghanistan kembali ke kawasan bandar di Afghanistan terutamanya di bandar Kabul. Dalam proses pembandaran tersebut, migrasi dari kawasan luar bandar dan pertambahan penduduk memberi impak kepada bandar Kabul yang menyebabkan manifestasi petempatan yang tidak terancang. Penempatan tidak terancang ini merujuk kepada perumahan dan kediaman yang dibina tanpa mematuhi pelan induk pembangunan bandar Kabul. Petempatan tidak terancang ini telah menyebabkan pelbagai masalah terutamanya kepada penduduk dan kerajaan. Oleh yang demikian, penyelidikan ini bertujuan untuk mengkaji dan mengenalpasti cara-cara untuk menambah baik situasi petempatan tidak terancang di Daerah 13, bandar Kabul. Untuk mencapai matlamat penyelidikan ini, temubual telah dijalankan dengan 22 pegawai rasmi kerajaan Afghanistan, serta borang soal selidik telah diedarkan kepada 200 penduduk di Daerah 13, bandar Kabul. Maklumat yang didapati merangkumi data kualitatif dan kuantitatif. Analisis kandungan digunakan untuk menganalisa data kualitatif, manakala analisis kekerapan digunakan untuk menganalisa data kuantitatif. Didapati bahawa sistem saliran dan sistem pembentungan yang lemah, pengurusan sisa yang tidak memuaskan, jalan yang sempit dan tidak berturap, kekurangan ruang awam, rekreasi dan kawasan hijau, kekurangan air atau air bawah tanah tercemar merupakan isu-isu utama petempatan tidak terancang di Daerah 13, bandar Kabul. Faktor-faktor yang menyebabkan isu-isu ini termasuk penambahan penduduk tidak rasmi yang pantas dan kapasiti kerajaan yang terhad. Akhir sekali, berdasarkan kehendak penduduk, kapasiti kerajaan dan keadaan fizikal Daerah 13 sedia ada, tiga kaedah telah dikenalpasti untuk menambah baik keadaan di Daerah 13, bandar Kabul. Ini termasuk menaik taraf petempatan sebagai pilihan pertama, penyesuaian tanah sebagai pilihan kedua dan pembangunan semula bandar sebagai pilihan terakhir. Penyelidikan ini penting untuk kerajaan Afghanistan dan penduduk petempatan tidak terancang, di mana penyelidikan ini mampu meningkatkan informasi dan kesedaran pegawai-pegawai kerajaan terhadap keperluan, kehendak, keutamaan dan masalah-masalah yang dihadapi oleh penduduk petempatan tidak terancang.

## TABLE OF CONTENT

	<b>TITLE</b>	<b>PAGE</b>
	<b>DECLARATION</b>	<b>ii</b>
	<b>DEDICATION</b>	<b>iii</b>
	<b>ACKNOWLEDGEMENT</b>	<b>iv</b>
	<b>ABSTRACT</b>	<b>v</b>
	<b>ABSTRAK</b>	<b>vi</b>
	<b>TABLE OF CONTENT</b>	<b>vii</b>
	<b>LIST OF TABLES</b>	<b>x</b>
	<b>LIST OF FIGURES</b>	<b>xi</b>
	<b>LIST OF ABBREVIATIONS</b>	<b>xiii</b>
	<b>LIST OF APPENDICES</b>	<b>xiv</b>
<b>CHAPTER 1</b>	<b>INTRODUCTION</b>	<b>1</b>
	1.1 Background of the Study	
	1.2 Problem Statement	2
	1.3 Research Questions	5
	1.4 Research Aim and Objective	5
	1.5 Scope of the Research	5
	1.6 Research Gap	6
	1.7 Significance of Research	11
	1.8 Research Approach	12
	1.9 Research Limitation	15
	1.10 Structure of Thesis	16
	1.11 Summary	16
<b>CHAPTER 2</b>	<b>LITERATURE REVIEW</b>	<b>17</b>
	2.1 Introduction	17
	2.2 Informal Settlement	18
	2.3 Informal Settlement Problems	21
	2.4 Factors behind the Growth of Informal Settlement	23

2.5	Methods for Improvement of Informal Settlement	24
2.6	Informal Settlement in Kabul City	28
2.6.1	Introduction to Kabul City	29
2.6.2	Structure of Kabul City	30
2.6.3	Factors behind the Growth of Informal Settlement in Kabul City	35
2.6.4	Definition of Informal Settlement in Term of Kabul City	38
2.6.5	Typology of Settlement in Kabul City	39
2.6.6	Typology of Residential Houses in Kabul City	42
2.6.7	Mode of Property Right of Informal Settlement in Kabul City	43
2.7	Problem of Informal Settlement in Kabul City	45
2.8	Summary	47
<b>CHAPTER 3</b>	<b>RESEARCH METHODOLOGY</b>	<b>49</b>
3.1	Introduction	49
3.2	Research Approach	49
3.2.1	Preliminary Understanding	53
3.2.2	Literature Review	54
3.3	Data Collection	54
3.3.1	Primary Data Collection	54
3.3.2	Secondary Data Collection	58
3.3.3	Research Instrument	59
3.4	Data Analysis	60
3.4.1	Qualitative Data Analysis	61
3.4.2	Quantitative Data Analysis	62
3.5	Study Area	63
3.5.1	Population and Population Density	71
3.5.2	The Road Network Situation	71
3.6	Sample Size of Study	73

3.7	Summary	78
<b>CHAPTER 4</b>	<b>FINDING AND DISCUSSION</b>	<b>79</b>
4.1	Introduction	79
4.2	Demographic Background	79
4.3	Site Observation Finding	83
4.4	Key Finding of Interview	85
4.4.1	Theme 1: Built Environmental Problems of Informal Settlement	85
4.4.2	Theme 2: Factors behind the Growth of Informal Settlement	86
4.4.3	Theme 3: Methods for Improvement of Informal Settlement	88
4.5	Policy Review in Addressing Land Tenure Issue	91
4.6	Policy Review in Addressing Built Environmental Problems	96
4.6.1	Land Readjustment	97
4.6.2	Urban Redevelopment	100
4.6.3	Settlement Upgrading	102
4.7	Key Finding of Questionnaire Survey	107
4.8	Selection of Improvement Methods for Different Land Characteristic of Informal Settlement in District 13	115
4.9	Discussion	121
4.10	Summary	124
<b>CHAPTER 5</b>	<b>CONCLUSION AND RECOMMENDATION</b>	<b>125</b>
5.1	Introduction	125
5.2	Summary of Finding	125
5.3	Recommendation	131
5.4	Research Contribution	134
5.5	Research Limitation	135
5.6	Further research	136
5.7	Conclusion	137
<b>References</b>		<b>139</b>



## LIST OF TABLES

<b>TABLE NO.</b>	<b>TITLE</b>	<b>PAGE</b>
Table 1.1	Research Gap between this research and recent similar research	10
Table 2.1	Type of settlement in Kabul city	40
Table 3.1	Objective, data, data source, processing tools and finding	55
Table 3.2	Total interviewees of research	57
Table 3.3	Size of each Zone of District 13 of Kabul city	68
Table 3.4	Size and number of household of Gozars in District 13 of Kabul cit	69
Table 4.1	Position of interviewees	80
Table 4.2	Interviewee's age	81
Table 4.3	Interviewee's education level	81
Table 4.4	Respondent's age	82
Table 4.5	The respondent's job	82
Table 4.6	The respondent's education level	83
Table 4.7	Perception of interviewees towards the methods for improvement of informal settlement	90
Table 4.8	Occupancy status	108
Table 4.9	Perception of residents towards the built environmental problems posed by informal settlement in District 13 of Kabul city	111
Table 4.10	Perception of residents towards the factors behind the growth of informal settlement in District 13 of Kabul city	113
Table 4.11	Agreement of residents towards the methods for improvement of their settlements	115

## LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
Figure 1.1	The problem of informal settlement in Kabul city	4
Figure 2.1	Urban and rural populations, by development group, 1950-2050	18
Figure 2.2	Concept of informal settlement	19
Figure 2.3	Different methods for improvement of informal settlement	27
Figure 2.4	Kabul Municipality Areas	30
Figure 2.5	Growth of built-up areas in Kabul	31
Figure 2.6	First Master Plan of Kabul city	32
Figure 2.7	Second Master Plan of Kabul city	33
Figure 2.8	Third Kabul master plan	34
Figure 2.9	Kabul city Master Plan	35
Figure 2.10	Kabul formal and informal areas	37
Figure 2.11	Type of courtyard houses, detached houses and apartment blocks in Kabul city	41
Figure 2.12	Formal and informal settlement in Kabul based on housing typology	42
Figure 2.13	Population density in Kabul Afghanistan	43
Figure 3.1	Research Flowchart	50
Figure 3.2	Location map of Afghanistan	63
Figure 3.3	Kabul location map	64
Figure 3.4	Location of Kabul city in Kabul province	65
Figure 3.5	The land used of Kabul city	65
Figure 3. 8	Kabul Metropolitan Areas	66
Figure 3. 9	Location of District 13 in Kabul Metropolitan Area	67
Figure 3. 10	Land use of District 13 of Kabul city	67
Figure 3.11	Map of different Zone of District 13	68
Figure 3.12	Population Density in District 13	71
Figure 3.13	Main road in Districts	72
Figure 3.14	Cluster sample size of the research	77

Figure 4.1	Housing and street condition different parts of District 13 of Kabul city	84
Figure 4.2	Housing ownership in District 13 of Kabul city	95
Figure 4.3	Purchased period of the property in District 13 of Kabul city	95
Figure 4.4	The land readjustment process in Kabul city	98
Figure 4.5	Urban redevelopment process in Kabul city	102
Figure 4.6	Settlement upgrading process in Kabul city	106
Figure 4.7	Size of housing plots in District 13 of Kabul city	107
Figure 4.8	Agreement of residents towards giving part of their land	108
Figure 4.9	Reasons for placement in District 13 of Kabul city	109
Figure 4.10	Resident's built environmental satisfaction level	110
Figure 4.11	Ranking of built environmental problems posed by informal settlement in District 13 of Kabul city	112
Figure 4.12	Most influential factors behind the growth of informal settlement in District 13 of Kabul city	114
Figure 4.13	Physical condition of Dasht-E Bist Hazari	118
Figure 4.14	Physical condition of Midan-E Tolo and Qala-E Sultan Jan areas	119
Figure 4.15	Physical condition of Sharak E- 12 Emam areas	120
Figure 4.16	Physical condition of Sar Kariz Qala-E Jabar Khan	120
Figure 4.17	Physical condition of Deh Qabel and Qala-E Chetgar	121
Figure 5.1	Ranking of built environmental problems with impact on more than 50 % of the resident of District 13 of Kabul city	127
Figure 5.2	Ranking of factors behind the growth of informal settlement in District 13 of Kabul city	129
Figure 5.3	Methods for improvement of informal settlement in District 13 of Kabul city	130

## LIST OF ABBREVIATIONS

JICA	-	Japan International Cooperation Agency
KAM	-	Kabul Metropolitan area
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
CRIAD	-	Capital Region Interdependent Authority Development
MUDH	-	Ministry of Urban Development and Housing.
USSR	-	Union of Soviet Socialist Republics
USAID	-	United States Agency for International Development
KMAUD	-	Kabul Metropolitan Area Urban Development
DCDA	-	Dehsabz City Development Authority

## LIST OF APPENDICES

<b>APPENDIX</b>	<b>TITLE</b>	<b>PAGE</b>
Appendix A	Site Observation Form	145
Appendix B	Interview Questionnaire	146
Appendix C	Field Survey Questionnaire	150

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the Study

In the developing and developed countries, the cities are facing rapid urbanization. Rapid urbanization is accentuating urban challenges, mostly leading to urban sprawl, uncontrolled and unmanaged development of cities, and development of informal settlement as result affecting the reduction of agriculture land, natural and rural areas surrounding the cities. Apart from that the rapid urbanization leading to mobility issues and increased length and number of daily displacement, with the consequence of increasing traffic congestion as well as transportation-related emission. The rate of urbanization in developing countries is higher than in developed countries. Because in the developing countries both the push factors like poverty, insecurity, civil conflicts and pull factors like better jobs opportunities, better education facilities, better quality of life, health facilities, and higher income convince the people to migrate to urban areas (Nazire, 2016). Afghanistan as a developing country witnessed rapid urbanization in recent decades, where the rate of population growth is faster than the economic growth (Ranjbar and Mizokami, 2015). Afghan people witnessed the displacement and repeated migration to other countries in the last decades because of political conflicts and civil war. When the war ended in 2001 by the fall of Taliban regime most of those refugees returned back to Afghanistan and took place in the urban areas, especially in Kabul city. The growth of population in Kabul changed the Kabul to fast-growing city in the region with many problems including the manifestation of informal settlement which has become an inevitable action (Fazli, 2016).

Kabul which is the capital of Afghanistan affected more than other cities by the migration “according to Nabizada (2012) the 52.3% of urban populations in Afghanistan live in Kabul city, while 47.7% live in other cities.” As a result, Kabul

witnessed rapid urbanization and population growth in recent decades. The Kabul population estimated 2 million people in 2002 which increase up to 5 million people ten years after (Nabizada, 2012). According to Nazire (2016) the population has grown 15 % per year between 1999 and 2004. Population growth in Kabul city is outpacing the city's capacity to provide infrastructure, basic services, and public amenities. In addition, the limited capacity of the government to provide the plots for the resident and lack of enough budget for urban sector and urban management have led to the growth of informal settlement in Kabul city. Most residents provided the shelter for themselves informally, Thus 80 % population of Kabul city is now living in informal areas, which includes 69 % of the entire Kabul city (Fazli, 2016). The Kabul master plan and detail plans prepared for 2 million people in 1976 and approved in 1978 ( JICA, 2011). But because of many reasons like political and social problems, the economic inability of the government and the war between different regimes in Kabul the master plan did not implement completely. According to Nazire (2016) by 2002, only 20 percent of the master plan implemented. The areas which allocated for the recreation, public facilities, healthcare, education, safety, and public space, had been taken by the people and sold it to the people who return back to Kabul from the neighbor countries and those who migrated from rural areas to Kabul and developed the informal settlement.

## **1.2 Problem Statement**

According to Nazire (2016) although the informal settlement provides critical function in Afghanistan, the informal settlement is not without problem. The informal settlements do not have proper built environmental condition then, built environmental and social problems of informal settlements are huge and serious challenges to informal residents which negatively impacts and treats the inhabitant's health and happiness. Absence of proper basic services and infrastructure affect on the health condition of informal settlements, improper sanitation, polluted the environment including the shallow wells and negatively impacts on health condition of the inhabitant (Bertaud, 2005). The most important absence of the water services in the

hillside of informal settlement causes a serious problem to the residents, it is difficult for the residents of these areas to provide the water.

The absence of planned areas and proximity of the housing plots to each other are challenges regarding access to the streets and main roads and the development of high rise buildings approach to neighbor houses violated the private privacy. The basic services and infrastructure such as water supply, sewage system, solid waste management, electricity and public services such as education facilities, healthcare facilities, recreation areas, and public space did not provide properly in the informal areas.

Most roads in informal settlements are very narrow, from 4 to 6 m wide, (Bertaud, 2005) which is creating problem for the residents to have normal vehicular traffic to flow neighborhoods. Challenge is not just the narrow streets but also the absence of street hierarchy is the major challenge, in most cases, it creates the problem for the municipal trucks which collect the solid waste form collection point. Many of the roads are unpaved, there are piles of trash on the sides of road and streets, no trash cans are installed in cities by the municipality. Then when the cars move, they throw up dust which adds to the poor air quality in Kabul city.

Informal settlements which built on slopes areas are different from the settlements which located on the plain areas, on many houses no vehicular access and plots on the steeper slopes are smaller. Apart from that, the settlements on slope areas do not have enough circulation and access to public facilities and residential units. It is serious challenges to provide services such as emergency provision, firefighting, and garbage collection moreover the housing development with low quality and being prone to natural hazard. (Bertaud, 2005). The city does have not beautiful visual view because of development of low-quality houses, especially in steep slopes areas.



In addition, in most cases, the property right violates then, insecurity of land property right (land tenure) is the challenge for both government and residents. Because the illegal land grabbing without official permission and approval is threat of eviction and displacement. The land without property right like environmentally conserved areas, region vulnerable to natural hazard like flood landslide, have been taking by the low-income people and developed the houses which are prone to natural hazard. In addition in many cases the informal settlement located to unsuitable areas such as steep slopes, prone to flooding, approach to river, hence it is possible to be contaminated and pose the risks for the (Nazire, 2016). Figure1.1 shows the problems of informal settlement in Kabul city.



Figure 1.1 The problems of informal settlement in Kabul city

Source: Field survey (2019)

In term of governance, it is hard and difficult for urban authorities to make the progress in the improvement of informal settlement because of weaknesses in Afghan urban skill, financial capacity, and lack of proper urban tools to deal with the Kabul city’s challenges.

### **1.3 Research Questions**

The following are the questions for this research:

1. What are built environment problems posed by informal settlement in District 13 of Kabul city?
2. Why did the informal settlements grow in District 13 of Kabul city leading to above built environmental problems?
3. Which methods are the most applicable methods for improvement of informal settlement in District 13 of Kabul city?

### **1.4 Research Aim and Objective**

The main aim of this research is to investigate the identification of methods for improvement of informal settlement in District 13 of Kabul city. And the following are the objective of this research:

1. To identify the built environment problems posed by informal settlement in District 13 of Kabul city,
2. To examine the factors behind the growth of informal settlements leading to the above built environmental problems in District 13 of Kabul city,
3. To identify the methods for improvement of informal settlement, in District 13 of Kabul city.

### **1.5 Scope of the Research**

The following are the scope of this research

1. This research is confined in District 13 of Kabul city.
2. This research investigates on informal settlement after 2001 when the Taliban regime fall and war ended.
3. This research is limited to built environmental problems of informal settlement, factors behind the growth of informal settlement and the methods for improvement of informal settlement.
4. The target group of people of this research are the government officials and residents of informal settlement.

## **1.6 Research Gap**

According to UN-Habitat (2007) from 1960 in developing countries, the cities confronted the rapid urbanization and increasing poverty which caused the development of informal settlement. The land has been taken illegally and shelter constructed poorly where people live in improper housing and improper living facilities, (Ackelman and Andersson, 2008).

Informal settlement is a huge challenge in developing countries, the problems of informal settlement refer to low-quality housing, overcrowding with high health and environment treats. Insecure land tenure which may cause the displacement, improper physical condition of neighborhood, shortage or lack of greenery and recreation which negatively impacts on integration, among the settlement. The residents of informal settlement suffer social, spatial and economic exclusion from the benefit and opportunity of urban environment. The residents of informal settlement experience disadvantage by geographical marginalization, shortage of basic infrastructure, improper governance framework, vulnerability into effect of poor environment and natural disaster (Un-Habitat, 2015; Abebe, 2011). Apart from in most cases, the informal settlements are vulnerable to natural hazards like flood and others natural hazards, the informal settlement which located near river is possible to be contaminated and pose the natural disaster for informal residents (Nazire, 2016; Abebe, 2011).

It is needed to move from informal settlement to sustainable neighborhood by addressing the problem of informal settlement. There have been several approaches, methods, and strategies devised by developing countries to address the problem of informal settlement. These methods are, settlement upgrading, urban redevelopment, infilled development, and land readjustment (Nassar and Elsayed, 2017). Thus the main focus of this research is to investigate the identification of methods for improvement of informal settlement to address the problem of informal settlement in District 13 of Kabul city.

Afghanistan as a developing country is not except, the most proportion of Afghan people live in the informal settlement, particularly in Kabul city. Fazli (2016) states that 80% of Kabul residents live in the informal settlement. Kabul Municipality Areas divided into 22 Districts. Informal settlement differs in size and other characteristics from District to District, and includes different setting, feature and accommodate a wide range of social and economic group of people. They range from high density to low density, located centrally in the cities or sprawling at the edge of the city.

Most proportion of Kabul city can be studied for this research, but in many Districts of Kabul city researches have been conducted regarding informal settlement. However, for this research, the District must be chosen which has been missed in previous researches. District 13 is one the District which did not include in the similar previous researches and has been chosen for this research. Moreover the entire of this District developed informally and residents are facing huge problems of informal settlements in contrast to other Districts. Thus, it is needed to conduct the research to find the problems posed by informal settlement and, the methods to address the above problems of informal settlement in District 13 of Kabul city.

Recent researches have been conducted to find the problems of informal settlement, and the factors behind its growth in Kabul city. However, there have not been the researches and studies to identify the methods for improvement of informal settlement. Researches have been done which is relevant to entire of Kabul informal settlement or other Districts of Kabul city. But no previous research has been done to

study the problems of informal settlement in District 13 of Kabul city. For example, Gebremedhin (2005), JICA (2011), Nabizada (2012), Bismill (2014), Habib, (2013), Nazire et al (2016), Nazire and Kita (2016), and Nazire (2016) are the authors who have been conducting the research in Kabul city in different content and subjects, but they did not cover District 13.

Based on the previous researches, it was found that the researcher did not study in depth the problems of informal settlement in District13 of Kabul city. For example, Gebremedhin (2005) conducted the research by the title “Preliminary Assessment of Informal Settlements in Kabul City”. This assessment focused mainly on mode of inhabitants land acquisition, community organization, and typology of informal settlement in Kabul city. This study is useful for classifying the different types of occupants of informal settlement.

Nabizada (2012) has done research on the Spatial Structure of Houses and Open Spaces by the Analysis of Physical Improvements and Daily Activities in the Typical Residential Areas in Kabul City. This research focused on exploring the transformation process in the settlements in relation to their typology and analyzing and evaluating the relationship between the spatial structure of open spaces and outdoor activities. This study did not focus directly on the informal settlement but engage as comparative case. This study is useful for underacting the housing transformation process in Kabul. Then the identification of methods for improvement of informal settlement has been missed.

JICA (2011) has done study on the promotion of Kabul Metropolitan Areas, this study focused on classifying the residential areas. This study also did not cover the informal settlement directly but it insists that informal settlement developed under different condition and during different period of time. This study is useful for understanding different type of areas in Kabul city. The methods for improvement of informal settlement missed in this study.

Bismill (2014) conducted research to examine the concept of informal settlements in a broader context and to ascertain the problems affecting the residents

who are living in informal settlements. This research is significant for understanding the informal settlement and the problem which affect the resident of the areas. But still, identification of method for improvement of informal settlement missed in this study.

Nazire (2016) has been conducted the research to understand effect of upgrading program in Kabul city's informal settlement by exploring how upgrading of informal areas affect housing improving, local economy and accessibility. And to analyze the comprehensive characteristics and conditions of informal settlement in Kabul city. This research is useful for understanding the characteristic of informal settlement and most importantly to understand the impact of upgrading policy toward informal settlement. This research also did not include the method to address the problem of informal settlement.

Most of these studies focused on the same Districts, for example, Gebremedhin (2005) focused on Districts 7, 8, 6, 3, 13. Nabizada (2012) focused on Districts 1,8,11. Bismill (2014) focused on Districts 7, 6. Habib (2013) focused on the Kabul city fringe areas. And Nazire (2016) covers the Districts, 5, 11, 15, 7, 8. Based on the previous research, it was found that most Districts of Kabul city have been missed in the recent researches, and most researches have been conducted in Districts, 8, 6, 11. Thus in District 13, which has been missed in recent researches, it is needed to conduct a research to know the problems of informal settlement, and accordingly identify the methods for its improvement. In addition, even the large number of population of Kabul live in District 13 but the entire of District 13 developed informally, and the urban authorities have not been paying attention to this District, the residents are facing to serious challenges in daily activities, then the research is needed to enhance the awareness of government authority towards the built environmental problems of informal settlement in this District.

Therefore this research covers the content and the subject which missed in the previous research which is identification of methods for the improvement of informal settlement, and this research is covering the areas which are missed in the other similar researches. Table 1.1 shows the gap between this research and recent similar research.

Table 1.1 Research gap between this research and recent similar researches

Author	Study area condition		Research gap
	Scope or areas.	Content and subject	
Nazire, H.(2016)	1: Districts 5 2: Districts 11 3: District 15 4: Districts 7 5: District 8	1: To find the comprehensive characteristics and conditions of informal settlements. 2: to understand the effect of upgrading program in Kabul city's informal settlement	1: This research investigates on the analysis of method for improvement of informal settlement which is missed in the previous study. 2: This research covers District 13 of Kabul Municipality areas which missed in the previous research.
Nabizada, T.(2012)	1: District 1 2: District 8 3: District 11	1: To explore the transformation process in the settlements in relation to their typology. 2: To analyze and evaluate the relationship between the spatial structure of open spaces and Outdoor activities.	
Bismill, A, R.(2014)	1: District 7 2: District 6	1: Examine the concept of informal settlements in a broader context. 2: Ascertain the problems affecting the city residents living in informal settlements. 3: Assess the urban governance system of Afghanistan.	
Habib, A. J. (2013)	Kabul city fringe areas. And Baba Qashkhar village in the center of Kabul new city.	Cover the systematic approach to help the introducing a cooperative urban and development technique by landowner which is a land readjustment in Afghanistan, in addition, to analyze the responses of the landowners towards land readjustment technique.	
Nazire, H. et.al. (2016).	1: Districts 5	1: This research focuses on understanding the effects of this upgrading program. 2: This research provides an insight into the implementation and effects of the national upgrading program in Kabul city	
Nazire, H. and Kita, M. (2016).	1: Districts 11 2: Districts 7 3: District 8	This research attempt to analyze the characteristics and condition of informal settlement in Kabul city, in order to assist in formulating the most appropriate planning and policy strategy for their improvement.	
JICA, (2011)	All 22 Districts	1: Study the promotion of Kabul Metropolitan Areas, 2: Classify the residential areas, in Kabul Metropolitan areas.	
Gebremedhin, Y (2005),	1: District 7 2: District 8 3: District 6 4: District 3 5. District 13	This research covers the mode of inhabitants land acquisition, community organization, and community cohesion, typology of informal settlement in Kabul city.	

## **1.7 Significance of Research**

After ending the war in Afghanistan in 2001 the Kabul developed informally especially District 13 and its residents confronted to serious physical, social and economic challenges. This research is based on the current situation of informal settlement in Kabul city. This study clarifies the built environment problems posed by informal settlement, the factors which caused the growth of informal settlement leading to above built environmental problems in District 13 of Kabul city. And highlights the preferences, and needs of informal residents, as well as identifies the method for improvement of informal settlement in District 13 of Kabul city. It attempts to enhance the information and awareness of the government official and residents toward informal settlement in District 13 of Kabul city. This research is important and has significance for the government of Afghanistan and residents of the informal settlement, the following are the significance of this study.

This research has identified the built environmental problems posed by informal settlement, and the most influential factors behind the growth of informal settlement leading to above built environmental problems. The benefit will arrive in the government because the urban authorities do not need to conduct the research towards these issues. It does not have not just economic benefit but also prevent spending of time toward conducting the research regarding these issues.

The research increases the information of government officials toward the growth of informal settlement, by clarifying the most influential factors behind the growth of informal settlement. The Afghanistan government can prepare the strategy in order to prevent future growth of informal settlement, and the benefit will arrive in government officials.

This research aims to find methods for improvement of informal settlement the benefit will arrive at the residents of informal settlement.

This research prioritizes the built environment problems posed by informal settlement, accordingly, the methods have been suggested for its improvement. It will help the government to improve the informal settlement which is most suitable for both the government and the local residents.



This research contributes to achieve the vision of global initiative (Sustainable Development Goal, New Urban Agenda and Paris Agreement). Because the aim of this research to find the methods for improvement of informal settlement. Thus after improvement, the clean water and clean energy will be provided in the areas which are the 6<sup>th</sup> and 7<sup>th</sup> goals of the Sustainable Development Goals. And by improvement, the informal settlement, the basic infrastructure, basic services, water supply, recreation areas, public amenities, will be provided in the areas.

In addition, by improvement of informal settlement, it will recognize as part of urban fabric, which can prevent future displacement, and ensure access to safe and affordable housing. Apart from that, the recreation and public spaces will be improved to provide public spaces for women children, older and young people, which enhance the inclusive capacity for participatory, integration, among the settlement. The street and roads condition will improve with proper hierarchy, it ensures the improvement of road safety and access to public transportation system, which is the vision of New Urban Agenda and 11<sup>th</sup> goal of Sustainable Development Goals.

Moreover, by improvement of informal settlement, first, the clean energy will replace fossil fuels, which will reduce the production of CO<sub>2</sub> and greenhouse gas. Second, the greenery and public space will be improved properly and the greenery will absorb the CO<sub>2</sub> it will help to reduce the CO<sub>2</sub> from climate system. Third, it is possible to have proper public transportation because the street already improved. Moreover, by allocation of land for public amenities, such as healthcare facilities, education facilities, business shops, and offices, it is possible to reduce the daily trip and displacement. It will help reduce the CO<sub>2</sub> production which is generated by transportation, then all mentioned above will contribute to achieve the vision of Paris Agreement and 13<sup>th</sup> goal of Sustainable Development Goals.

## **1.8 Research Approach**

This research includes the preliminary understanding, literature review, data collection and data analysis, result and finding, conclusion and recommendation.

Preliminary understanding is the first stage of this research in which the background of the informal settlement in Kabul city is identified. The literature review is the second stage of this research and includes the definition of the informal settlement, characteristic of informal settlement, the problems, and challenges of informal settlement.

Data collection is the third stage of this research, the qualitative and quantitative data collection based on primary data and secondary data is the methodology for this research. In primary data collection, the site observation, and people perception are the methodology. In the site observation, the areas have been visited and the questionnaire has been used for evaluation of their built environment condition. In the people perception, the interview has been conducted with government officials and questionnaire survey has been conducted with local residents.

In interview with the government official, the interview has been conducted with officials of, Ministry of Urban Development and Housing, Kabul Municipality, Capital Region Independent Development Authority (CRIDA), Directorate of District 13, members of JICA, and members of Un-Habitat. In interview with government officials the open-ended questions have been used, to know their idea toward the built environmental problems posed by informal settlements, factors behind the growth of informal settlement leading to above built environmental problems, and the methods for improvement of informal settlement. As well as to know the government strategy and policy toward informal settlement, the participants and respondents of interview are an important part of the research. Since they have been working in different government administrations and have important role in land developing in Kabul city. It is must be mentioned that the Ministry of Urban Development and Housing, and Land Independent Authority of Afghanistan recently merge together by name of Ministry of Urban Development and Land.

In questionnaire survey with local residents, the printed survey questionnaire has been used and distributed among the residents randomly, to know their ideas towards informal settlement, their challenges, needs, preferences, demand. And to know whether they agree or disagree with the method for improvement of their

settlements. Different group of people including, young, old, male, female, low-income, high- income, medium - income, different ethnic group of people, the people with different education level and people from different part of District 13 have been chosen for survey. In secondary data collection the source form the local authority, government record published data and electronic data, have been used to know the built environment problems which have posed by informal settlements, the factors behind the growth of informal settlement leading to above built environmental problems and especially what is the thought and policy of government toward the future of this informal settlement.

Data analysis is the fourth stage of this research, after gathering the data, the SPSS software has been used to analyze the result from the questionnaire to prioritize informal settlement problems and cause for its growth. As well as the SPSS has been used to measure the agreement of residents towards the methods for improvement of their settlements. In order to analyze the quantitative data, the frequency analysis, has been used to find the result of response that respondents gave to statement in the questionnaire. Content analysis has been used to analyze the qualitative data the NVIVO software has been used to simply manage the qualitative data (the data which has been gathered from interview) and makes handling of them easier.

The result and finding is the fifth stage of this research which come up data analysis, and finding has been shown in the pie chart, smart chart, and diagram for better understanding. Conclusion and recommendation is the sixth stage of this research, the framework of solution and recommendation according to finding and result have been suggested for improving informal settlement in District 13 of Kabul city.

## 1.9 Research Limitation

Because the research has been done based on people perception, the questionnaire survey and interview have been conducted with related government officials and local residents. Then it is not without limitation, the limitation for this research listed as below:

1. The data has been gathered from questionnaire survey with local resident and interview with government officials. The unwillingness of them to participate and cooperate is the problem for this research, because of unwillingness, they might respond to the question without thinking quickly and incorrectly. In addition, because of cultural issues, it is hard to convince the female for the interview and questionnaire survey especially the old one.
2. The residents of informal areas do not have secure land tenure. Thus they may feel threatened, when the researcher asked them for information, they may feel that by this information the government will expropriate their land and houses, they may not respond honestly.
3. Because the insecurity recently increased in the Districts 13 of Kabul city. It is problems for researcher especially for taking the photo. The residents are afraid of taking the photos and site observation, particularly the areas near to school and other public facilities. It prevented to observe all parts of the study areas and take the photos.
4. Because the informal settlement differs in size and other characteristics from District to District. And this research has been done based on the perception of residents of District 13 of Kabul city. Thus this research may not be applicable in other Districts of Kabul city. In addition, the characteristics of informal settlement in Afghanistan differs from other countries, thus the methods which have been suggested in this research may not be applicable in other countries.

## **1.10 Structure of Thesis**

The structure of the research is organized into five chapters, including introduction, literature review, Research Methodology, Data Analysis and Finding, and conclusion and recommendation.

**Chapter One** of the research gives information about the background of the informal settlement and discusses the problem statement, main aim, objective, scope of the study, significant of the study as well as the research approach.

**Chapter Two** of this research includes the literature review of the informal settlement, including the definition of informal settlement, the factors behind the growth of informal settlement, the spatial characteristic of informal settlement, typology of informal settlement and the built environmental problems of informal settlement.

**Chapter Three** of this research includes the methodology of the research which is done for this study, it explains the paths which is using for collecting the data, and the source of data, data process, as well as this chapter introduces the study area.

**Chapter Four** of this research discusses the finding of the study and consists of the analysis of gathered data which has been carried out towards informal settlement in District 13 of Kabul city.

**Chapter Five** of this research includes conclusion, recommendation, and suggestion, for improvement of informal settlement in District 13 of Kabul city.

## **1.11 Summary**

This chapter includes the background of informal settlement, problem statement of informal settlement in Kabul city. This chapter covers the aim, objective and scope of this research, as well as the significant of the study, apart from that this chapter includes the research gap between this research and previous researches.

## References

- Ahmadi, A. S. and Kajita, Y. (2017). Evaluation of urban land development direction in Kabul city, Afghanistan. *International Journal of Urban and Civil Engineering*, 11(2), 152-162.
- Azila, H. (2015). *Delay in settlement of final account*. MSc Thesis, Universiti Teknologi Malaysia, Skudai, Johor Bahru, Johor Malaysia.
- Abebe, F. K. (2011). *Methoding informal settlement growth in Dar Es Salaam, Tanzania*. MSc Thesis, University of Twente, the Netherlands.
- Ackelman, H. and Andersson, M. (2008). *Methods to Solve the Problem of Informal Settlements, the Case of Hangberg, South Africa*. MSc Thesis, Royal Institute of Technology, Stockholm, Sweden.
- Abbott, J. (2002). An analysis of informal settlement upgrading and critique of existing methodological approaches. *Habitat International* 26(3), 303-315.
- Bismill, R.A. (2014). *Unperceptive Urban Growth : A case study on the growth of informal settlements of Kabul, Afghanistan*. MSc Thesis, University of Birmingham, Birmingham.
- Bird, D.K. (2009). The use of questionnaire for acquiring information on public perception of natural hazards and risks mitigation. *Copernicus Publications on behalf of the European Geosciences Union*, 1307-1325.
- Burnard, p., Gill, p., Stewart, K., Treasure, E. and Chadwick B. (2008). Analyzing and presenting qualitative data. *British Dental Journal*, 204(8), 429-432. doi: 10.1038/sj.bdj.2008.292
- Bolay, J. (2006) Slums and urban development: questions on society and globalization. *The European Journal of Development Research*,18, 284-298.
- Bertaud, A. (2005). *Urban Land Management in Afghanistan Kabul Urban Development Current city structure, spatial issues, recommendations on urban*

- planning*. Kabul Report 2 with graphs. pp. 1-31. Retrieved from: [http://alainbertaud.com/wpcontent/uploads/2013/06/AB\\_Kabul\\_Report\\_2-with\\_graphs.pdf](http://alainbertaud.com/wpcontent/uploads/2013/06/AB_Kabul_Report_2-with_graphs.pdf).
- Burra, S. (2005). Towards a pro-poor framework for slum upgrading in Mumbai, India. *Environment and Urbanization*, 17(1), 67-88.
- Burra, S. (2005). Towards a pro-poor framework for slum upgrading in Mumbai, India. *Environment and Urbanization*, 17 (1), 67-88.
- Calogero, A. P. (2011). Planning Kabul: The politics of urbanization in Afghanistan.
- Choguill, C. L. (2007). The search for policies to support sustainable housing. *Habitat International*, 31, 143–149.
- Erman, T. (2001). The politics of squatter (Gecekondu) studies in Turkey: the changing representation of rural migrant in the academic discourse. *Urban Studies*, 38(7), 983-1002.
- Fazli, M. (2016). *Factors behind the Growth of Informal Settlements in Kabul*. Institute of Urban and Spatial planning, Faculty of Architecture, the Slovak University of Technology in Bratislava. DOI: 10.13164/ACAU.FA2016.9.
- Galuska, J. (2014). Community-based approaches to settlement upgrading as manifested through the big ACCA projects in Metro Manila, Philippines. *Environment and Urbanization*, 26(1), 276-296.
- Green, R. A. (2008). Unauthorized development and seismic hazard vulnerability: a study of squatters and engineers in Istanbul, Turkey. *Disasters*, 32 (3), 358-376.
- Gebremedhin, Y. (2005). *Preliminary Assessment of Informal Settlements in Kabul City*. pp. 3-26. Retrieved from: [http://www.terrainstitute.org/pdf/Informal\\_settlement\\_yohannes.pdf](http://www.terrainstitute.org/pdf/Informal_settlement_yohannes.pdf).
- Grant, R. and Nijman, J. (2002). Globalization and the corporate geography of cities in the less-developed world. *Annals of the Association of American Geographers*, 92, 320-340.

- Hegazy, I. R. (2016) Informal settlement upgrading policies in Egypt: towards improvement in the upgrading process. *Journal of Urbanism*, 9(3), 254-275.
- Habib, A. J. (2013). *A Study on Cooperative Land Development by Landowners in Afghanistan's Context Considering Land Readjustment as Case Study*. MSc Thesis, University of Tokyo. Bunkyo, Tokyo, Japan.
- Habib, J (2011). Urban cohesiveness in Kabul City: challenges and threats. *International Journal of Environmental Studies*, 68(3), 363-371.
- Huang, B., Xie, C. and Tay, R. (2010). Support vector machines for urban growth modelling. *Geoinformatica*, 14: 83-99
- Hasan, A. (2006). Orangi Pilot Project: The Expansion of Work beyond Orangi and the Mapping of Informal Settlements and Infrastructure. *Environment and Urbanization*, 18(2), 451- 480.
- Jamshid, S. (2014). Qualitative research method-interviewing and observation. *Journal of Basic and Clinical Pharmacy*, 5(4), 87-88
- JICA. (2011). *Draft Kabul City Master Plan- Product of Technical Cooperation Project for Promotion of Kabul Metropolitan Area Development, Sub Project for Revise the Kabul City Master Plan*. Pp 1- 46.
- JICA, MUDH, KM and DCDA. (2011). *Promotion of Kabul Metropolitan Area Development: Capacity Development Project, Kabul City Current Status Report for Urban Development*. Pp.1-103.
- Jabeen, H., Johnson, C., and Allen, A. (2010). Built-in resilience: learning from grassroots coping strategies for climate variability. *International Institute for Environment and Development (IIED)*, 22(2), 415-431
- Kabul Municipality. (2019). <http://km.gov.af>.
- Khalifa, M. A. (2015). Evolution of Informal Settlements Upgrading Strategies in Egypt: From Negligence to Participatory Development. *Ain Shams Engineering Journal*, 6 (4), 1151-1159.



- Lombard, M. (2014). Constructing Ordinary Places: Place-Making in Urban Informal Settlements in Mexico. *Progress in Planning*, 94(2014), 1-53.
- MUDH. (2018). *Policy on upgrading and redevelopment of unplanned settlements in Afghanistan*. Kabul Afghanistan.
- MUDH, KM, Un-Habitat and USAID. (2016). *City for All, Strategic Nahia Action Plan*. District 13.
- MUDH, KM and IDLG. (2015). *State of Afghan Cities*. Volume 1(2015), Kabul Afghanistan.
- Muchadenyika, D. (2015). Slum upgrading and inclusive municipal governance in Harare, Zimbabwe: New perspectives for the urban poor. *Habitat International*, 48 (2015) 1-10.
- Mistro, R. D. and Hensher, A.D. (2009). Upgrading informal settlements in South Africa: policy, rhetoric, and what residents really value. *Housing Studies*, 24 (3), 333-354.
- Majale, M. (2008). Employment creation through participatory urban planning and slum upgrading: the case of Kitale, Kenya. *Habitat International*, 32, 270-282.
- Nassar, D. M. and Elsayed H. G. (2017). From Informal Settlements to sustainable communities, *Alexandria Engineering Journal*, <https://doi.org/10.1016/j.aej.2017.09.004>.
- Nazire, H. and Kita, M. (2016). Specifying Characteristics of Informal Settlements by Comparing Four Areas from the Aspects of Houses, Land Tenure and Social Factors in Kabul, Afghanistan. *Journal of Architecture and Planning*, 81(728), 2197-2206. <https://doi.org/10.3130/aija.81.2197>.
- Nazire, H., Kita, M., Okyere, S. A. and Matsubara, S. (2016). Effects of Informal Settlement Upgrading in Kabul City, Afghanistan: A Case Study of Afshar Area, *Journal of Architecture and Planning*, 04(04), 476-494. <https://doi.org/10.3130/aija.81.2197>.

- Nazire, H. (2016). *A Study on Characteristics of Informal Settlements and Effects of Upgrading from Aspects of Houses, Land Acquisition, and Social Factors in Kabul City, Afghanistan*. PhD Thesis, Osaka University, Yamadaoka, Suita, Osaka.
- Nabizada, T. (2012). *A Study on the Spatial Structure of Houses and Open Spaces by the Analysis of Physical Improvements and Daily Activities in the Typical Residential Areas in Kabul City*. PhD Thesis, Osaka University, Yamadaoka, Suita, Osaka.
- Nijman, J. (2008). Against the odds: slum rehabilitation in neoliberal Mumbai. *Cities*, 25 (2008), 73-85
- Nagamine, H. (1986). The Land Readjustment techniques of Japan. *habitational*, 10 (112), 51-58.
- Okyere, A.S. and Kita, M. (2015) Rethinking urban informality and informal settlements growth in urban Africa: A literature discussion. *Journal of Sustainable Development in Africa*, 14 (6), 101-121.
- Otiso, K. M. (2003). State, voluntary and private sector partnerships for slum upgrading and basic service delivery in Nairobi City, Kenya. *Cities*, 20(4), 221-229.
- Procedure on Land Readjustment and Urban Redevelopment. (2017). Kabul Municipality.
- Regulation on Registration of Urban Informal Properties. (2017). Afghanistan
- Ranjbar, A. S. and Mizokami, S. (2015). Implementation of land readjustment process in Kabul Afghanistan. *International Journal of Technical Research and Applications*, 32(32), 37-41.
- Roy, A. (2005). Urban Informality: Toward an Epistemology of Planning. *Journal of the American Planning Association*, 71 (2) spring.
- Taherdoost, H. (2018). Determining sample size; How to calculate survey sample size. *International Journal of Economics and Management Systems*.2 (2017), 2367-8925.

- Un-Habitat, (2015). *Habitat III, Issue paper on informal settlement*, New York, 31 May 2015. Pp. 1-9.
- Un-Habitat. (2015). *Knowing Kabul a potential powerhouse of social and economic development*. Discussion paper.
- Uzun, B., Çete, M. and Palancıoğlu, H. M. (2010). Legalizing and upgrading illegal settlements in Turkey. *Habitat International*, 34 (2010) 204-209.
- World Bank (2005) Kabul urban policy, why and how should Kabul upgrade its informal settlements, a policy note pp. 1-8.
- Weru, J. (2004). Community federations and city upgrading: the work of Pamoja Trust and Muungano in Kenya. *Environment and Urbanization*, 16 (1), 2004.
- Winayanti, L. and Lang, H. C. (2004). Provision of urban services in an informal settlement: a case study of Kampung Penas Tanggul, Jakarta. *Habitat International*, 28 (2004), 41-65.