Informal Settlement and It’s Upgrading
Ulaanbaatar’s Ger District

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By

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ABSTRACT

On a global scale informal settlements have been perceived as a significant urban problem since they shelter the poorest and most vulnerable groups in developing countries in conditions that threaten human development (Abdelhalim, 2010). Hence, how to upgrade and improve living conditions of these settlement have been a dilemma of developing world. As a means to upgrade informal settlements, there are range of different approaches and interventions have emerged over time; from eradication and replacement with public housing policies to provision on site/in-situ upgrading and to participatory and integration policies. As that experienced in other developing countries, Mongolia has already been challenged by this phenomena of informal settlement and the development issues associated with. The City of Ulaanbaatar, being the biggest urban agglomeration of Mongolia, struggles the most. Due to the country’s political and economic transition during 1990’s, city of Ulaanbaatar has experienced massive population growth on the basis of intense migration from rural to urban. Much of this growth has taken the form of Ger areas/districts/settlement (a form of informal settlement) that covering more than half area of Ulaanbaatar city today. Ger areas present massive concerns from a quality of life and urban environmental health perspectives as the provision of the most basic services (both social and infrastructural) of urban life has been neglected in these areas (Brian&Sinclair). Thus, the Ger district and it’s upgrading are the main urban challenge that face the city of Ulaanbaatar nowadays. Lately, a series of efforts to upgrade Ger areas of Ulaanbaatar have been made by various of national, local as well as international agencies. In this research, I first (1) looked at phenomenon of informal settlement and it’s upgrading mechanisms as a fundamental basis for the research of Ger District in Ulaanbaatar, (2) drew up analyse on Ger District including it’s background, characteristics and problems facing, (3) went through what attempts have been made to improve Ger District in sequence of practices driven by national, local and international agencies (4) acknowledged constraints and limitations challenging the upgrading practices.

Key words: informal settlements, upgrading, improvement, Ger district, Ulaanbaatar
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ABBREVIATIONS

Aimag  Province
Duureg  Administrative division of UB, district
Ger  Portable felt dwelling structure, also known as a yurt
Ger area  UB exurbs, containing both Gers and detached houses
Khashaa  Land plot usually fenced by woods
Khoroo  Administrative division unit of UB, sub-district
Zud  Extreme cold winters
Gan  Extreme hot summers

ADB  Asian Development Bank
JICA  Japan International Cooperation Agency
MNT  Mongolian currency-Tugrik
MUB  Municipality of Ulaanbaatar
UB  Ulaanbaatar, Mongolia
USUG  Ulaanbaatar Water Supply and Sewage Authority
WASH  Water, sanitation, and hygiene

CITIES ALLIANCE  In 1999, the United Nations Human Settlements Programme (UN-HABITAT) and the World Bank jointly launched the Cities Alliance in Berlin aiming to help developing countries grapple with two increasingly significant challenges—the growth of slums, and the long-term health of their large and small cities.
CHAPTER I

1.1. Introduction

Informal settlements are a growing phenomenon of urban life in nations of the developing world (Byambadorj et al, 2011). For last several decades, Mongolia, one of the developing countries, has experienced rapid urbanization along with intense rural to urban migration, and population growth in Ulaanbaatar, resulting in the growth in informal settlements locally known as ‘Ger’ districts. Nomadic families from the rural provinces poured into the city and took place mostly in the peripheral areas of the city, leading to a highly unique urban pattern: the Ger settlements (Mongolian: гэр хороолол, English: yurt settlements) – an accumulation of informally claimed parcels, surrounded by high wooden fences and housing one or more Gers or detached houses. These areas are nowadays rapidly growing in the outskirts of Ulaanbaatar, the capital of Mongolia, as predominantly unplanned settlements. Ger settlements lack essential urban utility services as well as many public services or public spaces. To date, their fast growing populations largely lack formalized self-representation and political representation in

Figure 1. Ger dwellings on the edge of Ulaanbaatar (Source: https://akipress.com/news:573318/)
the city and the national political system (BottGer and Fitz, Ger settlement in Ulaanbaatar, Nomad city). Ger districts became a major source of air, ground and water pollution, eventually risks public health seriously. This puts tremendous pressure in the urban environment of Ulaanbaatar. Thus, the phenomena of Ger district is becoming the biggest urban challenge that face the city of Ulaanbaatar nowadays. In recognition of this urban challenge, Government of Mongolia in association with UB city authority and international organizations has made a series of efforts to upgrade Ger areas of Ulaanbaatar and improve the living conditions of its inhabitants. In this thesis, I will discuss the concept of informal settlement and it’s upgrading mechanisms as a fundamental basis for the research of Ger District and upgrading efforts that are being made to combat the problems of ger area in Ulaanbaatar. As I believed that it is important to understand the local context when to discuss the attempts to upgrade informal settlement, I conducted with broad analysis of Ger District, internationally perceived as form of informal settlement, assessing when, why and how Ger area happens together with the factors that cause its expansion and the characteristics that make it distinct and the problems that need response. Beyond these assessments, my focus is to discuss upgrading efforts, policies and projects carried out by international, national and local agencies, that are being made to improve the living condition of Ger area. Out of discussion, I acknowledged several physical as well as constraints that raise difficulties and challenge the implementation process of Ger area upgrading practices. By drawing insights into the current practices, I tried to provide recommendation of several key aspects that essentially need to be considered in the future upgrading intervention.

1.2. Research problem and justification

Mongolia, as many other developing countries, has an increasing problem with urban expansion and the growth of informal settlements in urban areas (Radnaabazar et al, 2004). Here, city of Ulaanbaatar, the capital of Mongolia, has been chosen as a case study because of its unplanned proliferation of residential plots that has dominated urban development; in parallel with an increase in population, this has caused critical development issues over the past several decades. Although, Ger districts of Ulaanbaatar were identified as informal settlements by UN Habitat (UN HABITAT, 2007), Ulaanbaatar’s Ger area characteretistically differs from those informal settlements in other developing countries and often fail to meet some of the criteria used for identifying informal settlements. Challenges and opportunities within Ger areas can vary enormously as well. Therefore, it would be better not to directly copy some other successful upgrading practices and upgrading methodologies that are commonly employed. While having understanding and referencing of international upgrading methodologies are essential when it comes to
any upgrading attempts, this cannot be divorced from the local context and the peculiarities of national and urban settings (MAD, 2015). This is particularly true of Mongolia, where a number of factors limit and shape the urban landscape and where urbanisation has resulted in some truly unique outcomes – most notably the Ger areas (MAD, 2015). For that reason, if the Mongolian government is to address developmental problems in Ger settlements, it will be essential to understand when, where, and how Ger area happens and to clarify the real factors causing the formation of Ger areas and its expansion. Also, it is necessary to consider the features that make the Ger areas unique, as well as the socioeconomic and physical characteristics associated with them. Such consideration would be beneficial for urban planners and policy makers in mitigating the development challenges associated with the Ger areas in a sustainable manner.

1.3. Research objectives and questions

The overall aim of this thesis is to contribute to the improvement of upgrading policy programs aimed to response to the increasing urbanization of spatial informality in Ulaanbaatar. The research objectives of this thesis are two fold:

- **The first objective** is to explore the phenomenon of informal settlement it’s upgrading as fundamental basis for the research of Ger District and upgrading efforts that are being made to combat the problems of ger area in Ulaanbaatar.

- **The second objective** is to assess existing upgrading policy and practices employed in Ger area considering the current situation of ger area while bringing out the constraints and limitations that challenge the current ger area upgrading practices. By looking insights into the current practices, it aims to provide recommendation of several key aspects that essentially need to be considered for possible future intervention.

In this regard, the thesis tries to give answers to the following questions:

- How informal settlement came to dominate the urban landscape of developing countries and what is the background for the growth of such settlements?
- What policies/methodologies are employed for informal settlement upgrading practices in developing countries?
- How did “Ger area”, internationally perceived as a form of Informal settlement, in Ulaanbaatar exist?
- How Ger area develop and evolve?
- What was the impact of political and economic regimes that Mongolia has gone through in history on the city’s urban development, particularly on ger area?
- What are the main factors that have been influential on rapid expansion of Ger area in Ulaanbaatar?
- What are the main problems facing Ger settlement population, especially the new-migrants?
- What efforts are being provided by the national/local government and international donors to improve the living conditions of Ger area?
- What are the main constraints and limitations than challenges Ger area upgrading practices?
- What key aspects need to be considered for possible future intervention?

1.4. Methodology

As a methodology, my thesis followed a literature research and a case study methods. Literary research through reading reports and articles relevant to the informal settlement and it’s upgrading was vital for me to get a general understanding of what informal settlements are; how they emerge and evolve; how they challenge cities, why it is crucial to upgrade these settlements and what methods are used for upgrading them so that I further develop my research on the particular case study of Ulaanbaatar’s Ger District, internationally perceived as a form of informal settlement. Case study analysis on Ger area was done in a descriptive and observative manner. I was best able to analyse the Ger settlement including how they exist and evolve, how they challenge the city of Ulaanbaatar, why they require immediate response, by drawing upon a wide range of research reports and related papers done by experts, researchers, public institutions, agencies. Ger area has been investigated by several international organizations such as The World Bank (WB) Asian Development Bank (ADB), Cities Alliance etc. Above all sources’ data provided the original contribution not only to the analysis part of Ger area but also to the assessment of upgrading methods practiced in Ger areas. The assessment of upgrading methods employed in the informal settlement of Ulaanbaatar was realized through the observation of several upgrading policies and projects selected according to international, national and local level. A range of recorded documents obtained through official sites of related agencies have served me to gain insights into the upgrading projects and policies carried out and currently carrying on.
1.5. Organization of the thesis

This thesis is divided into five chapters and is structured as follows:

**Chapter one** presents an introduction to the thesis, statement of the research problem, research objective and questions and research methodology. It will also provide the outline and organization of the study that will contribute to answering the main research questions.

**Chapter two** explores the themes underpinning this research in detail, which is divided into sections focusing on “informal settlement” and “upgrading”. It will start with how informal settlement came to dominate the urban settlement pattern of cities in developing world, followed by underlying forces that lead to the growth of informal settlements. Then, it will continue with the discussion on contradictory perceptions about informal settlements and its working definitions that area internationally used for understanding what is informal settlement. Lastly, the brief overview on concept of upgrading and upgrading approaches and policies that have been adopted for improving informal settlement over time will be explored.

**Chapter three** gives an insight to the case study. Following the brief profile of case city, a broad overview on the urban development processes of Ulaanbaatar that has given rise to informal settlements in the city will be presented in this chapter. Also, it will present a detailed study regarding the current situation of the informal settlement, locally known as Ger-Area/District, and the narrative of factors that has been influential on spatial expansion of informal quarters in Ulaanbaatar.

**Chapter four** critically discusses the current attempts to upgrading the informal settlement in Ulaanbaatar made by both national and international agencies. Some of the most fundamental policies and projects that are developed for improving the living conditions in Ger areas will be presented and discussed sequentially. Lastly, some of critical constraints and limitations that challenges the implementation process of Ger area upgrading practices will be discussed.

**Chapter five** will draw conclusion with remarks and make recommendation of key aspects, based on the insights from a study of Ger district in Ulaanbaatar and ongoing policy implications and projects for it’s upgrading, to be considered when intervening informal settlements in Ulaanbaatar by means of improvement and formalization.
CHAPTER II

In chapter two, the themes underpinning this research are explored in more detail, which is divided into sections focusing on “informal settlement” and “upgrading”. It will start with how informal settlement came to dominate the urban settlement pattern of cities in developing world, followed by underlying forces that lead to the growth of informal settlements. Then, it will continue with the discussion on contradictory perceptions about informal settlements. Lastly, the brief overview on concept of upgrading and upgrading approaches and policies that have been adopted for improving informal settlement over time will be explored.

2.1. RISE OF INFORMAL SETTLEMENT

Despite standing out as centers of civilization and economic activity for eight millennia, cities never attracted more than ten percent of the global population until the second half of the 19th century. Thereafter, world cities has gone through a process of rapid urbanization. Now, cities have become the world’s social, economic, cultural and political hubs where more than 50 percent of global population lives. Virtually all the expected population growth at the world level after 2010 would concentrate in urban areas (See Figure 2). According to the recently released United Nations 2014 World Urbanization Prospects report, the world will be one-third rural (34 per cent) and two-thirds urban (66 per cent) by 2050 (United Nations, 2014, p.7).

![Figure 2. Urban and rural population of the world, 1950–2050 (Source: United Nations, World Urbanization Prospects, 2014)](image-url)
Urban growth rates are highest in the countries of the “Global South” or the “Developing World”, where cities grow by an average of five million new urban residents every month (UN-Habitat 2008: xi). Since 1950, the pace of urbanization is getting faster particularly in the developing countries while the more developed parts of the world have already urbanized therefore the pace is slower (United Nations, 2014, p.10). In 1950, a majority of the population of developed countries having high income already lived in urban areas (see Figure 3), while only 20 per cent of the population of low income countries lived in urban areas but these countries urbanized rapidly and now 63 percent are urban. According to UN-Habitat (2008: 15), over the next four decades developing world will absorb 95 per cent of the world’s urban population growth.

![Figure 3](http://example.com/figure3.png)

**Figure 3. Urbanization across countries, 1950–2050** *(Source: United Nations, World Urbanization Prospects, 2014)*

These processes of rapid population growth and spontaneous urbanization adversely affected the outlook of cities especially in developing world and generating what we define internationally as “slums, squatter or informal settlement” where one third of the global urban population lives today (UN Habitat, 2014). The growth of slums was not a wholly organic development that occurred along with the increasing urban population. It was a result of various interrelated factors predominantly by rural to urban migration, lack of affordable housing, weak governance, economic vulnerability and underpaid work, discrimination and marginalization, and displacement that were induced by globalization process of 1980s-90s (Habitat III Issue Papers, 2015 & Almeida, 2013). A global economic system based on capitalist/neoliberal principles stimulated the formation of large cities through foreign investment and capital industries so that cities
function as a node in a larger global capitalist network (Almeida, 2013). But capital flows and services spread unevenly and favored only developed countries at the expense of developing countries, thereafter the global economic gap between “developing” and “developed” countries has rather increased under the neoliberal globalisation dynamics (Ehebrecht, 2014, p.30). The way neoliberal globalization has implemented put emphasis on high industry (communication, technology, finance and banking) and ignored agricultural industries in rural hinterland. The priority given to high industry required increasing concentration of development, investment, technology, employment into cities, that ended up with urbanization (Almeida, 2013). As developing countries attempted to shift from agricultural based rural to industrial based urban, they commercialized, deregulated, and privatized and made their economies dependent on its placement global market, which brought significant consequences on spatial and social order in developing countries (Harvey, 2007 & Almeida, 2013). However, industrialization in developing countries did not grow in proportion to urbanization and the urban cities in the developing world lack the capacities to absorb all the people coming to the cities (Almeida, 2013). On the other hand, rural population did not stop migrate to cities in search of better life and employment opportunity, this ended up with massive urban population growth. This growth drove up land values, lowered wages, and increased unemployment in the cities. While urban formal land and housing markets in the cities are dominated by urban minority-elites, poor urban dwellers do not have the means to participate in these markets, therefore often excluded. In such circumstances, for the urban poor, the only way to access land and housing is via informal sector which provides basic human needs for shelter and giving access to the wider urban environment (Ehebrecht, 2014). In this view, the growth and persistence of informal settlements are an indirect component and consequence of globalisation, based on the massive urbanisation trend it has engendered. Informal settlements not only a result but also represent and reproduce socio-economic inequalities and exclusion, competition for urban space and failed urban management (Ehebrecht, 2014). Informal residents often confront with environmental, political and mostly social problems due to poor physical conditions and informal status of these settlements (Malusardi & Occhipinti, 2003).
In this way, the phenomena of informal settlements has become the biggest challenge that face the development of the cities in developing countries. For last several decades, international and national scholars and institutions concentrated on the problem of informal settlements and it’s upgrading and reached to the conclusion that the solution of the problem with its different aspects and impact in the various regions of the world, is closely correlated with the interaction of different factors: the participation of inhabitants in the choices, the local government capacity, the available resources and among others (Malusardi & Occhipinti, 2003).

2.2. WORLDWIDE PERCEPTION OF INFORMAL SETTLEMENT

Informal settlements, slums and other poor residential neighbourhoods are a global urban phenomenon (UN Habitat III Issue paper, 2015) and they exist in urban contexts all over the world, in various forms and typologies, dimensions, and by a range of names (slums, squatter settlements, favelas, shacks, gecekondu, bidonvilles) (Srinivas, 2015). Perceptions about them can be contradictory and one might focus on their will and capability to secure a livelihood or, in contrast, on the negative characteristics of them (Ehebrecht, 2014). On one hand, informal settlements offer what neither the state nor the formal
market could yet provide. Even in an informal way they provide rental accommodation or affordable land for self-build shelter which is beneficial for those, who do not find a better place to stay as a consequence of their socio-economic situation and a lack of affordable formal housing, in getting access and adjust to the wider urban environment (Ehebrecht, 2014, p.36). Also, informal settlements function as vibrant places of (informal) income generating activities that can secure the inhabitant’s livelihoods and moreover fulfil certain social functions that the formal sector does not provide (Ehebrecht, 2014, p.36). In this regard, informal settlements are not necessarily perceived as a problem which immediately needs to be eliminated but rather as a solution developed by the urban poor under the existing conditions of limited economic resources and bureaucratic control, and when neither the government nor the private sector could provide affordable housing (Khalifa, 2015). On the other hand, in spite of favorable functions informal settlements provide for those in need, the physical conditions of informal settlements and their informal status and potential social problems such as crime, diseases and poverty often pose serious threats to informal dweller’s well-being or even to the society at large (Ehebrecht, 2014, p.37). Though, not all informal dwellers suffer from the same degree of deprivation since informal settlements exist in heterogeneous way owing to the differentiated urban contexts among countries. They can differ in their size, structure, formation, population, availability of socio-economic facilities, legal status and various other aspects. Despite of being very different in composition, some similar characteristics can be identified among informal settlement (United Nations, 2015; UNHabitat, 2015b):

- **Inhabitants have no security of tenure, land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing lacking a municipal permit**
- **Neighbourhoods usually lack, or are cut off from, basic services and formal city infrastructures,**
- **Poor structural quality of housing, often inconsistent with current planning and building regulations, is often situated in geographically and environmentally hazardous areas, e. g. on steep slopes, on land that is prone to flooding or on contaminated land.**

As urban areas are dynamic and constantly changing through time, informal settlements should be perceived as a relative urban component that might not be constant over time and location. Above all, it is the perception of informal settlements that determines the future interventions devoted to these settlements, either they are a problem needed to be eliminated or a solution should be supported.
2.3. INFORMAL SETTLEMENT UPGRADING

Upgrading informal settlements is important step toward meeting the basic needs of most vulnerable urban populations and is profoundly needed in order to protect the rights, livelihoods, health, and safety of the residents of informal settlements.

2.3.1. Upgrading

Upgrading, as defined by World Bank (1996), is any attempt to improve the physical environment of slums and informal settlements which includes improvement and establishment of basic infrastructure such as water, sanitation, water collection, drainage, access roads, lighting and land regularization. The Cities Alliance (2016) defines it slightly different by saying that upgrading is a process in which informal areas are gradually improved, formalised and incorporated into the city through not only an improvement of physical environment but also social, economic and organizational improvement undertaken cooperatively among all parties citizens, community groups and local and national authorities. It is about putting into motion the economic, social, institutional and community activities that aim to create a dynamic in the community where there is a sense of ownership, entitlement and inward investment in the settlement area (Cities Alliance, 2016). Ultimately, what is underlined through these definitions is that upgrading is not all about physical improvement or provision of basic services. Indeed, various social, economic and cultural functions that informal settlements generate are equally important and need to be improved so that informality can be eroded in a more comprehensive and sustained way (Ehebrecht, 2014, p.35). In most informal settlements, people access to the land and build their houses on their own and they incrementally improve their dwellings and physical environment of the area as much as they can. However, there are bigger issues that individuals/residents cannot solve by themselves apart from government settings; infrastructural deficiency, poor accessibility, lack of social services, insecure tenure and planning among other things. For this reason, systematic upgrading responses from national and municipal governments in association with international agencies and non-governmental and community based organizations became prevalent in improving living conditions of informal settlements. It has to be noted that upgrading of informal settlement has to deal with not only addressing the some specific problems of settlement, whether they are inadequate housing, lack of infrastructure or services or severe environmental deterioration but also underlying causes of urban informality (Khalifa, 2015).
2.3.2. Why upgrade informal settlements

Although commonly perceived as a burden on society and a source of endless problems and conflicts, informal areas are the only feasible choice for many vulnerable urban poors and already shelter a big portion of the urban population worldwide (Abdelhalim, 2010). In spite of underestimated and underused capacities due to their illegal status, informal settlements appear to carry multiple values not only in terms of their socio-economic values, but also in terms of their use value for residents; the benefits and advantages they get by living in these areas (Abdelhalim, 2010). These make it worth to improve the informal urban areas in which a big segment of urban population already lives and will live in the future rather than trying to remove them.

2.3.4. Informal Settlement Upgrading Methodologies

Informal settlements accommodate a significant percentage of the population of developing cities, yet they do not represent a homogeneous phenomenon as they display varying levels of regularity and legality. For decades, international bodies such as the World Bank and the United Nations Human Settlements Programme (UN-Habitat) in cooperation with national governments, non-governmental organisations (NGOs) and other stakeholders, have been trying to find effective solutions to this urban phenomenon (Ehebrecht, 2014). Yet, there is no common planning framework found for upgrading that is uniformly applicable to all the settlements (Abbott and Douglas, 2001). Indeed, there are a range of potential interventions and a number of different approaches that have emerged over time.

By the time of 1950s, the dominant approach to informal settlements was provide-driven approaches, slum clearance and redevelopment that go for eviction of informal settlements and re-housing the people in elsewhere by public housing (Abbott, 2002). Such strongly interventionist top-down approach, transplanted from developed countries where it had proved successful in the immediate post-war period, was assumed to heal the disorders of informal settlements (Abbott, 2002). It aimed to reduce housing deficits and to improve housing quality through capital-intensive mass production of standardised public houses. Many developing countries pursued this approach until international experience started to provide evidence of the failures of these eradication policies (Khalifa, 2015). The approach largely failed to meet the target population’s need in scale, cost and location, thus never effectively replaced informal settlements (Ehebrecht, 2014, p.43). Provide-driven approach has often been criticized by it’s failure to consider specific needs of the affected project beneficiaries, a neglect of specific local contexts, wrong
assumptions about the beneficiaries and a failure to consider long-term effects of respective projects (Ehebrecht, 2014, p.15).

Around 1960s, when former approach has proved itself insufficient in dealing with informal settlements, the idea of self-help housing provision was discovered and increasingly promoted by a group of academics and housing experts as alternative upgrading method to improve living and housing conditions of the poor. The emphasis was to minimize the harmful social, economic and environmental impacts derived from former eviction policies, and it maintains the existing social relationships and community value where they exist (Khalifa, 2015). This approach gives more room to the ability of urban squatters/informal communities as they are the best judges of their own needs and are better able to address their issues (Harris, 2003, p. 248). Therefore, it brought changes in power structure over the settlement development process that favors empowerment of poor and reduces control of authorities (Ehebrecht, 2014, p.47). So, responsibilities and costs for housing were transferred from the state onto the poor and cost recovery, individualism instead of collective action were promoted. In this regard, self-help housing would be more flexible, more affordable and would satisfy individual needs. Since the mid 1970s, self-help housing has became mainstream in upgrading practices and influenced the World Bank to initiate major “sites and services” projects where served land plots with secure tenure was granted to future residents whom should develop their dwellings on their own with their own resource or government loans (Ehebrecht, 2014 & Njamwea, 2003). Indeed, self-help housing and associated “site and service” upgrading projects were quite distorted in their implementation process and criticised for a number of failures; being unable to satisfy the massive demand for housing, reduction of housing standards and its cost recovery concerns. Also, without external support from government, self-help housing alone was insufficient in bringing broader social change thereby could not lead to a permanent improvement of living conditions (Ehebrecht, 2014).

From the early 1980s onwards, the prevailing site and service upgrading projects took a back seat due to their limited success. Instead, upgrading policies became to be driven by more holistic and support-driven approach, which shifts the focus from technical infrastructure and service delivery toward more socio-economic aspects such as protecting existing social networks and livelihoods, understanding local needs, allowing for active and comprehensive participation of residents and fostering local economic development (Abbott, 2001 & Jordhus-Lier & de Wet, 2013 & Ehebrecht, 2014). With regard to informal settlements, approach finds its expression in the promotion of incremental in situ - on site improvement of existing settlements as alternative approach to upgrade living conditions of informal dwellers
In situ upgrading can be described as participatory and incremental improvement with minimum relocation of people and maximum protection of local livelihoods (Ehebrecht, 2014). Also, it has to be noted that in situ upgrading can mean different things and can focus on different aspects of informal settlements that are to be upgraded. On the whole, two types of in situ upgrading interventions can be distinguished: comprehensive upgrading that is externally designed and support-based upgrading that is initiated either by a government or by an NGO (Huchzermeyer, 2004, p.55). The former one, usually introduced through pilot projects, seeks to transform an illegal and subs-standard environment to acceptable standards through a capital intensive technical upgrading that concentrates on housing and infrastructure provision as well as secure tenure (Ehebrecht, 2014 & Huchzermeyer, 2004). Yet, it usually fails to acknowledge the social reality in informal settlements. The latter one instead embraces development from bottom-up, thus responds and encourages collective initiatives of organized community and strongly depends on extensive community participation (Huchzermeyer, 2004, p.54).

Upgrading projects that are based on an extensive level of community participation seem to be more sustained in the longterm (Ehebrecht, 2014). However, extensive level of community participation can create problems regarding power relation and conflicts among the project stakeholders. Nevertheless, the approach of in-situ development and its practical implementation has remained a constant feature of international development discourse.

Since the early 1990s, newer concepts and approaches have emerged in association with the increasing growth of informal settlement. This time, more practical approach focusing on what actually worked in a specific local context was keenly promoted (Ehebrecht, 2014, p.51). That was the development of best practices, accumulation and dissemination of experience. UN-Habitat’s Best Practices Programme-Local Leadership (BLP) was established in 1997 in order to identify and showcase innovative, exemplary projects of sustainable development, especially in urban area. By now, it has become a global network possessing a database that contains more than 4,000 projects. It demonstrates practical ways in which local communities, governments, NGOs and private sector are working together to improve governance, eradicate poverty, provide access to shelter, land and basic services, protect the environment and support economic development.

1 UN-HABITAT. Best Practices and Local Leadership Program.
The key aspect of the approach was the acknowledgement of local experience, knowledge, methods and resources and allow others to take advantage of it (Ehebrecht, 2014, p.51). However, the best practice program of UN often questioned on the ground of it’s tendency to reflect the successes and underplay the failings, thereby failing to reflect accurately the complete picture (Abbott, 2002).

During the 2000s, the adopted approach to deal with the informal settlement problems shifted from dealing with informal settlements exclusively to more integration into programs in citywide policies and institutional reforms (Khalifa, 2015). It became convincing that upgrading might be most effective if it becomes part of an integrated development approach, which aims at joining physical with socio-economic development (Ehebrecht, 2014, p.158). In relation to upgrading informal settlement, all levels of government must develop and coordinate broader integrated policy frameworks that are reinforced by urban planning, legislation, finance arrangements and well coordinated institutional environment (UN Habitat, 2015). Most importantly, government must ensure the inclusion of informal settlement dwellers in the policy development process. At this stage, community involvement becomes necessity in integrated methodology, for ensuring a more complete understanding of the inhabitants and the existing community contexts and implementing practical changes that ultimately result in the regularization of informal settlement linked into the broader urban environment (UN Habitat, 2015).

A review of informal settlements upgrading approaches, shows us that the way of upgrading underwent an evolutionary process in the past decades; from eradication and replacement policies to provision on site/in-situ upgrading and to participatory and integration policies. These radical shifts could be motivated by the recognition that informal settlements were not a problem but a solution to the housing crisis stimulated by the society when the formal housing markets cannot fulfill its demand (Khalifa, 2015). Indeed, there is no sole method of intervention recognized that is universally applicable to all informal settlements. Each method is foreseen appropriate under the particular physical, socioeconomic and environmental framework conditions that are found in or affecting the informal areas (Khalifa, 2015). In other words, how to approach and what to deliver so as to improve the living condition of the residents and to formalize the settlement differs depending on the given context of informal settlement; physical conditions of informal settlements, social and economic environment, the degree of organisation of the respective community and also type of land (state land or private land) and the way in which the land is held (illegal or not) among others.
CHAPTER III

Chapter three will give an insight to the case study. Following an introduction to the case city, a broad overview on the urban development processes that has given rise to informal settlements in Ulaanbaatar city will be presented in this chapter. Also, it will present a detailed study regarding the current situation of the informal settlement, locally known as Ger-area/district, and the narrative of factors that has been influential on spatial expansion of informal quarters in Ulaanbaatar.

3.1. PROFILE OF CASE CITY: ULAANBAATAR, MONGOLIA

3.1.1. Foundation and location of Ulaanbaatar

Historically, Mongolian society has been shaped by pastoral nomadic population therefore, urbanization process has shallow roots in Mongolia (MAD, 2015, p.19). The very first city is popularly considered to have been founded in 1639 at Shireet Tsagaan Nuur (lake), several hundred kilometers to the southwest of the current city. The name of the city has changed for several times. It was initially called as URGOO (the tent-palace) in 1639-1706, IKH KHUREE (the great encampment) in 1706-1911, NIISLEL KHUREE (capital encampment) between 1912-1923, and renamed as ULAANBAATAR (‘the red hero’), right after the proclamation of the Mongolian People’s republic in 1924 (Chuluun, 2002, p.914). Since then, Ulaanbaatar has been the capital of Mongolia a landlocked country located in the northern part of Central Asia between Russia and China (see Figure 5) (Neupert & Goldstein, 1994, p.11). The city lies at an altitude of 1350 meters above sea level, covering total area of about 4,700 km2 (Takuya et al, 2010). Ulaanbaatar is located on the bank of the Tuul River and surrounded by four sacred mountains, which are Bogd khan, Songino Khairkhan, Chingeltei and Bayanzurkh.
3.1.2. Population

Ulaanbaatar is Mongolia’s biggest urban agglomeration by far. It is the country’s cultural, political and financial center populated around 1.377,000 inhabitants, approximately 64.2% of Mongolia’s total population (UN Data). The city’s population has grown from 600,000 in 1989 to more than 1 million in 2007 and is expected to reach 1.3 million in 2016 (Takuya et al, 2010). As of 2016, population of Mongolia is recorded as 3,006,000 in the UN Data Retrieval System.

3.1.3. Economy

Ulaanbaatar is an important economic region, accounting for approximately 64% of national Gross Domestic Product (GDP) despite of occupying only 0.3 percent of the total territory of the nation (Asian Foundation & Tsogtsaihan, 2008). The city has been an engine of innovation, job creation and economic development. For that reason the most prominent public and private institutions of economics, higher learning, medical services and availability of work force in labor market are centered in this capital city (Tsogtsaihan, 2008).

Figure 5. Physical map of Mongolia and location of Ulaanbaatar
3.1.3. Administrative structure

The city of Ulaanbaatar covers a territory of about 470,000 hectares and is administratively divided into 9 districts (Janzen, 2005). Six of them are central districts called Bayangol, Bayanzurh, Chingeltei, Khan-Uul, Songinokhairkhan, Sukhbaatar while three of them are satellite to the capital; Baganuur, Bagahangai and Nalaikh (Report 2012 Mongolia, p.137) (See Figure 6). Districts are subdivided into sub-districts (khoroo) and currently there area more than 100 subdistricts in Ulaanbaatar. Also, each of these khoroos includes several sub-khoroos, called khesegs.


3.1.4. Urban Structure

Ulaanbaatar's urban fabric has two distinct components (i) the city core (planned area), which is established according to the city development plan and mainly consisted of high-rise office and apartment blocks with comprehensive utility services including central system of heating, hot water and sanitation; (ii) the peri-urban Ger areas, which is characterized by expanding, old, informal settlements of low and medium income households came out with rapid migration from the countryside without any state control or permission (See Figure 7) (JICA, 2007).
Ger areas spread into a wide region stretching from around the city center to the outskirts and slope of hills, mainly north of the city as seen in the figure above (World Bank, 2009). Differences of city core and peri-urban Ger area are significant in various matters, such as living condition, availability of basic infrastructure and socioeconomic services. While apartments are home to the least disadvantaged of Ulaanbaatar’s residents, fringe Ger districts are increasingly home to the most disadvantaged (Byambadorj et al, 2011). Compared to the apartment areas, Ger areas suffer from a wide range of development issues including weak governance, inadequate planning, elevated poverty, limited economic opportunities (MAD, 2015, p.24). Also, there is a serious need of social infrastructure (health clinics, schools, and housing and recreation facilities) in Ger areas. Wide inequalities that exist between the two types of dwelling of Ulaanbaatar, Ger and apartment, in terms of access to proper infrastructure facilities such as heating, electricity, water, sanitation and communication system and access to social services like public transportation, health clinics and schools (Dore and Nagpal, 2006) lead to another issues that affect whole city including unbalanced development, constrained economic growth, pollution and congestion.
3.2. INFORMAL SETTLEMENT IN ULAANBAATAR

3.2.1. Ger-areas of Ulaanbaatar

The term ‘Ger areas’ is the most commonly used reference to the informal quarters that comprise much of the areal portion of Ulaanbaatar, filling the flatlands around the urban core, pushing into valleys east, north, and west of the city, climbing the steeply graded hillsides (Miller, 2013, p.54). Ger settlements are dynamic, hybrid spaces in which nomadic rural and urban lifestyles merge, bearing problems for the city (BottGer and Fitz, 2014). The Ger areas have always existed in Mongolia but their accumulation in Ulaanbaatar has been intensified in scale in over the last two decades, which brought along a various of development issues, including poverty, a lack of infrastructure, services, and social facilities, weak governance, limited economic opportunities (MAD, 2015). These issues cause a number of negative externalities that affect the whole city of Ulaanbaatar, including including high levels of pollution, constrained economic growth, socioeconomic inequality and unbalanced development that limits the connections between the Ger areas and the wider city (MAD, 2015). Therefore, the unprecedented expansion of the Ger settlements in Ulaanbaatar is one of the critical development issues facing the country today. Radical political changes from communism to a democratic market economy together with the natural disasters and harsh climate condition in rural have drastically forced many nomads to leave their nomadic life and move to the capital (Caldieron, 2013, p.12). Presently, Ulaanbaatar, with less than 0.3% of the total land area of the country already hosts 45% of its population (Caldieron, 2013, p.13). In the last ten years alone, the city’s population has increased by 54% 1. Eventually, more than 60 % (approximately 800,000 people) of Ulaanbaatar’s population live in Ger-areas that are characterized by low-density (40 person per hectare) scattered arrays of fenced property containing informal housing structures, a mix of Gers and detached houses often built on or along sites prone to natural disasters (Takuya et al, 2010, p.2). Today, Ger areas exist in all nine districts of Ulaanbaatar with particular growth over the hills and hollow valleys in Sukhbaatar, Chingeltei, Songinokhairkhan and Bayanzurkh districts (see Figure 8 below) (Bayartsetseg, 2015). The average size of a ger area household is just above four persons, almost one person larger than in apartment areas. Ger area household incomes are generally low to medium2 and they account for 25% of Mongolia’s poor.

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1 ADB country partnership strategy for Mongolia, 2012–2016
Figure 8. Map of Ulaanbaatar presenting Ger-area in grey (Source: Ulaanbaatar Clean Air Project, 2012)

3.2.2. Ger areas as informal settlements

In 2007, UN Habitat identified the Ger districts of Ulaanbaatar as informal settlements (UN HABITAT, 2007). Indeed, the identification of Ger area as informal settlements has received considerable resistance from both citizens and government officials in Mongolia as Gers are associated with tradition and culture and fail to meet some of the criteria used for identifying informal settlements. The conditions and nature of the Ger areas in Ulaanbaatar are differentiated from characteristics of those informal settlements in other developing countries (Norovsambuu and Theunissen, 2013).

- In terms of dwelling structure, most of informal settlements in African and Latin American cities are made up of either self-built dwellings built with light and less indurable materials (wood, corrugated metal) or permanent buildings, made up of brick and cement, built with the help of NGOs or international programs (Ehebrecht, 2014 & Caldieron, 2013). While, in several Asian countries, landlords renting shacks is a very common practice. In the case of Ger area of Ulaanbaatar, Ger (felt tents), a symbol of a housing type that is unique to Mongolia and its nomadic herders, affords the housing needs of urban inhabitants in these settlement (Byambadorj et al, 2011). However, the provisional nature of the Ger is contradictory to
permanent urban housing due to the lack of basic services in the traditional dwelling (Caldieron, 2013). When the Ger dwellers get economically better off, they build permanent dwellings made out of durable materials. Most of them fail to ensure a minimum level of construction and quality, indeed they are legally registered and protected by property right.

- In terms of type of land (state land or private land) and the way in which the land is held (illegally or with permission), Ger districts in Ulaanbaatar appear to be differentiated from other informal settlements in other developing countries. Unlike other informal settlements where usually self-built informal neighborhoods and slums are originally part of the invasions of public and private land, informal nature of Ger districts is being eroded by a unique feature that each new migrant has the right to get land ownership (Bolchover, 2015 & Caldieron, 2013). The land policy is unique by international standards in that every citizen is eligible one time to acquire for free a land of 700 m² owing to the 2002-law of free high land allowance and privatisation of land ownership (Norovsambuu and Theunissen, 2013). According to the latest statistics, over 90 per cent of Ger areas’ residents have privatized the plots of land. In this sense, access to land and secure tenure is not a serious issue in Ger areas (GUSIP, 2010, p.1). Indeed, it can be considered as an important factor to improve the quality of the self-built dwellings and to encourage residents to reside for a long term in one location (Caldieron, 2013).

- In terms of spatial structure, it is common that most of informal settlements in developing countries tend to have a dense structure that only allow for small pathways between buildings and have no open spaces at all (Ehebrecht, 2014, p.38). In the case of Ger districts of Ulaanbaatar, it appears to be distinct from other informal settlements in developing countries owing to less dense structure of the settlement. Mongolia is known as the world’s most sparsely populated nation, with a density of fewer than two people (1.9) per square kilometer (according to the 2017 census of World Bank). In Ulaanbaatar, the figure is nearly 250 people per hectare. The density of Ger area is comparatively very low owing to the generous land allocation policy (allowance of land plot up to 700 m² granted for each citizens) of the country that allowed the city to expand at a low-density (Kamata et al, 2010, p.15). Low-density settlement pattern of Ger districts poses not only a security threats to residents who pass along at night in the absence of street lighting but also raises the cost of urban service connections because any service connections to ger area need to be spread over greater distances. In this way, low-dense structure of ger area can be considered as an important source of social and physical problems.
Together, these characteristics position the Ger districts of Ulaanbaatar as a unique urban form that aligns with neither the informal settlements, which dominate cities of the developing world nor with the private formal ownership systems, which operate in market economies. Rather, Ger districts should be positioned as something in between, a delicate combination of nomadic and urban lifestyle having identity with ambiguity and lack of infrastructure (Byambadorj et al, 2011).

ADB, Ulaanbaatar Urban Services and Ger Areas Development Investment Program, Sector Assessment Summary

3.2.3. Formation of Ger-area

Development of typical plot has a several phases as follows:

*Phase 1* - The first step is placing a Ger on the plot after erecting khashaa (wooden fence) on land.

*Phase 2* - The next step includes constructing other buildings. Mostly these are sheds made of wood or metal and they are used as storage place for things like coal, firewood or wool.

*Phase 3* - Furthest developed plots often do not have a Ger. Instead, newly built houses replace the Ger and they often built close to the khashaa. The central space is usually kept open.

![Figure 9. Development phases of typical plot in ger district](Source: Nomad city Ger Settlements in Ulaanbaatar, Project Weltstadt)

Ger area consists of fairly uniform parcels/plots that are populated by Ger or detached houses. Plots are usually surrounded by khashaa; a fence appears mostly in a tallness of 2m limiting a direct view on the property (Reichhardt, 2016). The khashaas describes both the fence itself and the fenced in property, highlight the organic pattern of the informal urban fabric.
Figure 10. Aerial view of ger area depicting how organic the pattern is (Rural Urban Framework, an Incremental Urban Strategy for Ulaanbaatar, Mongolia, 2015)

3.2.3.1. Land

Traditionally, the land is a position of the state for the common use of their inhabitants. However, land ownership in Mongolia has gradually been privatized since the country’s transition to a market economy has brought changes in public land ownership. There has been a series of land laws or amendments of existing laws; the current land ownership in Mongolia is based on the 2002 “Law of Allocation of Land to Mongolian Citizens for Ownership” (Kamata et al, 2010, p.15). According to the law, each household is entitled to the following amount of land for family needs or residential purposes: up to 700 m² in Ulaanbaatar; up to 3,500 m² in aimag (province). Therefore, private ownership of land is generally high in Ger area especially in older and well established Ger areas, nearly 99 % of families own their lands. However, the ownership rate is lower (around 80 %) in newer fringe Ger areas where many new
immigrants rent their land or houses. The size of land plots is fairly uniform at around 470 m²–590 m² in all Ger areas of Ulaanbaatar (Kamata et al, 2010).

3.2.3.2. Housing

In the Ger area there are two prominent housing types: Gers and houses. Depending on physical and economic context, one or more Mongol Gers or detached houses take place within the hashaa (land plot). In UB Ger areas, some 61 percent live in houses and 38 percent reside Gers (Takuya et al, 2010, p.2). However, the proportion of households living in Ger keeps changing with the ongoing arrival of immigrants, many of whom were nomads and are vulnerable in economic terms have to dwell in traditional “Ger” if they have no other alternative (GUSIP, 2010). As the migrants settle down and save money, they upgrade or replace their Ger by detached houses made of more enduring materials(Takuya et al, 2010). This means majority of poorer households tend to live in Gers, not in detached houses. Apparently, in the center and fringe Ger areas, almost one half of households still live in Gers, while in the mid-tier Ger area, 70 percent live in detached houses. Regarding the ownership of the dwelling, almost all houses in the Ger areas are owner occupied (World Bank, 2009). Similarly, almost all of the households (93 percent) that live in a Ger own the Ger and about 5 percent rent their Ger and the remaining small number of households that live in Gers receive some type of assistance or are allowed to use the Ger for free (World Bank, 2009).

- **Mongol Ger:** In the Ger-area of Ulaanbaatar, migrants have invaded large amount of land and erected rural nomadic “Ger” (as they are called in the Mongolian language). Ger is a Mongolian national dwelling that used for thousands of years by nomadic herders of Mongolia roamed across the country-side from season to season.

![Figure 11. Structure of Ger](image)
The Ger was sustainable structures well adapted for a nomadic society as it is light enough to carry, flexible enough to fold-up, pack and assemble, sturdy enough for multiple dismantling and assembling as well as easy for regulating temperatures within (National Geographic Encyclopedia). It is a round structure of easily dismantle-able walls, polls and a round ceiling covered with canvas and felt, tightened with ropes (See Figure 11 above). The Ger has an inner space of 28 m² on average. As a rural dwelling, Ger are sustainable and impressively adaptable to the changing weather conditions and have been recognized as a very adequate dwelling, supporting the nomadic lifestyle (Caldieron, 2013). Even though Ger is an ideal living solution for nomads, when they are located in high-density, unplanned shantytowns, the impact can be very negative. A Ger assembled in any available urban plot built without plans or services, such as sewers and water supplies. This phenomenon of land invasion is unfortunately similar to the uncontrolled growth of urban slums in many developing countries (Caldieron, 2013, p.468).

*Figure 12. Traditional Ger in the outskirts of UB*
- **Detached house:** By 2014, some 60% of UB Ger area households live in some form of self-built housing which are not often regulated to ensure a required quality of individual residence construction despite the existence of commissions and standards on new housing constructions and their licensing (Ishdorj, 2017 & Raredon, 2014). Self-built houses in Ger areas emerge in a great variety in terms of size, quality and appearance. They are generally single-storey and made up of materials like wood and brick (Bolchover, 2015). The organization of the house replicates the Ger as an open-planned room with no separating walls between different functions (Bolchover, 2015). As income improves, some residents build big Ger two-storey houses with room divisions. An average house in the Ger area varies between 55 m² and 77 m² (Kamata et al, 2010).

*Figure 13. Detached houses in Ger area (Source: [http://www.noelsampson.net/](http://www.noelsampson.net/))*
3.3. DEVELOPMENT PATTERN OF ULAANBAATAR

Mongolia’s urbanisation process is comparatively young and inexperienced. Currently, Mongolia is dominated by one city, Ulaanbaatar, thus the discussion of urbanisation in Mongolia centres on this city (Tsogtsaikhan, 2008). For a better understanding of the emergence and growth of informal settlements in Ulaanbaatar, it is worth mentioning the urbanization process of Ulaanbaatar and its development pattern which largely reflects the political and macroeconomic turns of the country. The city’s development process can be divided into four phases as following:

1. **Huree / beginning of urbanization process**
2. **Soviet- Union/ Russian way of planning**
3. **Urban development after 1990 reform – political and economic transition of Mongolia**
4. **Urban development after 2000 – reconstructing urban planning**

3.3.1. **Khuree/beginning of urbanization process**

The formation of first permanent settlement in Mongolia has a trace from XVII century. Scholars who have studied urbanization in Mongolia refer to the 1700s or the times of the establishment of Ikh Khuree when discussing people shifting from nomadism to sedentary culture (Bayartsetseg, 2015). The introduction of Buddhism and the expansion of trade along caravan routes during that century provided the impetus for permanent settlement of Khuree (Diener and Hagen, 2016, p.140). A seasonal migratory spiritual leader of the Lamas in Mongolia has established a mobile Ger-based monastery settlement under the name of Orgoo (Urga-palace/temple/Ger) for expanding Buddhist faith in 1639. Orgoo was initially located near Shireet Tsagaan Nuur (lake) in Ovorkhangai aimag (province) but its location changed often (probably around 25 times) due to the changing availability of water and grazing lands¹. In this sense, it was more a nomadic temporary settlement, than a permanent urban colony (Janzen et al, 2005, p.10). Throughout such movement, the city was given some official and unofficial names, including Khuree (encampment) in 1706. As population of monastery grew and elites accumulated wealth, the Ikh Khuree gradually became less mobile. In 1778, Ikh Khuree settled down to near to the Selbe river, a present location of Ulaanbaatar. The new location provided several advantages to the city including reliable water supply from Tuul and Selbe rivers, proximity to the sacred mountain of Bogd Khan, and commercial benefits from being situated on the Russian-Chinese trade route (Diener and Hagen, 2016, p.140). City soon became an important trade center. Basically, the process of Ikh Khuree from nomadism to settlement finalized in 70 years between 1706-1778, and urbanization process is considered to be started from the very time. From the second half
of the 18th century, Ikh Khuree became not only a religious center but also a center of geopolitical forces. As known in history, a Manchurian-Chinese dynasty, which was on rise in the mid-17th century in the East of Mongolia, enabled Qing rulers to control over Mongolia for 200 years from 1691 to 1911. This phenomenon has resulted a growth of Chinese merchants in Khuree and a settlement called Mai-mai-cheng (place of trade) established in Khuree (Sabloff, 2013, p.39). Soon, the city became a seat of powers, including Qing imperial administrators, Mongolian Buddhist elite - *Jebtsundamba Khutugtu*, thousands of monks and Chinese merchants. This mixture of prominent religious and political functions are reflected on urban fabric as a ornate temples and palaces displaying the wealth of imperial and theocratic elites (Diener and Hagen, 2016, p.140). Henceforth, the urban landscape of Khuree settlement became to be heterogeneous reflecting not only indigenous elites, local cultures and wealth but also the transnational geopolitical impacts (Diener and Hagen, 2016). A Figure bellow shows us the urban structure of Khuree; the large circular compound in the middle is the Zuun Khuree temple-palace complex. The Gandan temple complex is to the left. The palaces of the Bogd are to the south of the river. To the far bottom right of the painting is the Maimaicheng district (Chinese settlement). To its left are the white buildings of the Russian consulate area. The Manjusri monastery can be seen on Mount Bogd Khan Uul at the bottom-right of the painting.

![Figure 14. Ikh Khuree, the Mongolian capital in 1913](http://www.ulaanbaatar.mn, Painting of Jugder)
3.3.1.1. Evolution of Ger settlement during Khuree urbanization

Since ancient times, Ger has been at the center-stage of human settlements and urbanization in Mongolia (Schellhase, 2015). Gers are tailored to the unique living conditions of nomadic Mongolians and ideally suited to their seasonal migration as it is light enough to carry, flexible enough to assemble and dismantle as well as easy for regulating temperatures within (National Geographic Encyclopedia). The settlement pattern of nomads were consisted of “Hot ails”- clusters of several Gers lie in plain sight, which is still viable among nomads in the rural area of today’s Mongolia. Nevertheless, with the establishment of Khuree settlement, a beginning of urbanisation, the Ger has come to represent the norm of urban dwelling for stationary urban residents, eventually a “tent town” emerged (Byambadorj et al, 2011). Soon, urban settlement pattern of Khuree became to thrived off the tension between stability and nomadism; between the house and the Ger. More permanent residential structures emerged in Khuree and it gradually evolved and became a urban center with the development of a numerous monasteries and temples with different architectural style\(^1\) (Janzen, 2005). Even though, more durable constructions and residential houses were built which are more suited to settled civilization, Ger has kept it presence as a classical urban development phenomenon, which has always existed since the foundation of the city. Ger started to reflect a mix of new urban lifestyle and nomadic identity.

3.3.2. Soviet-Union/ Russian way of planning

Mongolia became a socialist country under Soviet assistance right after the communist revolution in 1921 and declared itself a People’s Republic in 1924. Mongolia was tied both politically and economically with the Soviet Union and into the Council for Mutual Economic Assistance international planning system (Byambadorj, p.2). In fact, these ties were so strong that Mongolia was sometimes called the 16th unofficial republic of the Soviet Union (Bayantor, 2008, p.4). The Soviet Union came to dominate Mongolia and eventually asserted complete control over the political, economic and social life of the country, transforming Mongolia into a Soviet style communist republic. This political and economic shift brought dramatic alterations to Mongolia’s national landscapes, especially within capital. Initially, the the city of Orgoo/Khuree was renamed Ulaanbaatar (Red Hero) in honor of Sukhbaatar after his death in 1924\(^1\) (Diener and Hagen, 2016, p.142).

\(^1\)Sukhbaatar is a national hero whose successful operations against the Chinese and Baron UnGern-sternberg were integral to the victory of Mongolian Red Army in bringing the Mongolia independent country.
Until the 1950s, there was no rapid urban development in Ulaanbaatar but systematic efforts to create socialist Ulaanbaatar began with the introduction of Soviet-style urban planning system into Mongolia. Soviet planners were the main players in the history of urban development of Ulaanbaatar during the second half of the 20th century. The city’s structure and its outward appearance were transformed significantly referring to the ideals of socialist-styled urban planning (Janzen et al, 2005, p.10). City elements, such as big places and wide streets (e.g. Sukhbaatar Square and Peace Avenue), monuments(Zaisan Memorial), characteristically styled administrative buildings as well as typical socialist multi-storey residential quarters were constructed (Janzen et al, 2005, p.10). Presently, as seen in Figure 16, most of these elements still can be found in the capital city although many Russian style places were closed down after the Soviet withdrawal (Gilberg and Svantesson, 1996, p.20).

*Figure 15. Ulaanbaatar view from 1970s (Source: http://www.bataar.mn/10044000)*
During the socialist period, Mongolia was centrally controlled and managed by communist government therefore, government policies, legislations, regulatory frameworks, institutional arrangements and functions were oriented towards a top-down approach (Byambadorj, p.4). The national goals of Mongolia were established by Soviet planners as requested by the political party of Mongolia, the Mongolian People’s Revolutionary Party (MPRP), which was the only party in Mongolia ((Byambadorj, p.4). As experienced in the Soviet Union, the economy of Mongolia was governed by five-year national economic plans. Although five-year plans were not spatial plans, they directly influenced the spatial organization and distribution of state resources at all levels.

3.3.2.1. Master planning of Ulaanbaatar

From 1920s until 1950s the city was developing unplanned. From the 1950s, in response to the rapid urbanisation of Ulaanbaatar, a systematic urban urban planning process of Ulaanbaatar was established and a series of master plan documents have been produced by a variety government and non-government organisations. Ulaanbaatar has developed 4 master plans in the years of 1954, 1963, 1975, and 1986. At a time of centrally planned economy, the development of the master plan represented not only the urban construction and physical architectural plan, but also a sufficient proof that it was based on the city investment planning and constituted a document of the legal power to plan and control the urban internal land utilization (Gantulga, 2010). The land utilization rules and orders were established by the state, and the tenure had been controlled and inspected by the society via state organs (Jamts, 1981). The plans were always easily implemented and controlled because entire land of the country was state-owned and belonged to the government (Chinbat et al, 2006).
1954 – Modernization process of Ulaanbaatar started with the first Master Plan in 1954 approved by the Mongolian government (Yanjin, 2014). The first Master plan was designed by “Giprogor” Institute in Moscow in 1954 which covered a twenty-year period from 1954 to 1974 and the location of Ulaanbaatar and its construction layouts were initiated and the current city central area was constructed. The city’s layout radically altered, the web of streets and squares was defined, and the residential and industrial districts and recreation areas were clearly delineated (Maidar, 1971). The capital was planned to host a maximum capacity of 125,000 inhabitants, but population reached 180,000 and exceeded the carrying capacity by by 1960 (Byambadorj et al, 2011).

![First master plan of Ulaanbaatar-1954](source:Ulaanbaatar National Archives)

**Figure 17. First master plan of Ulaanbaatar-1954 (Source:Ulaanbaatar National Archives)**

1963 - The second Master plan was designed for the period between 1964 and 1984, which established the present city design. Residential blocks and districts were built in the inner city area, then Ger districts were converted to apartment complexes. The city was designed to host a maximum capacity of 250,000 inhabitants but it failed to accurately forecast the population growth.
**Figure 18.** Second master plan of Ulaanbaatar-1963 (Source:Ulaanbaatar National Archives)

1975 - **The third Master plan** was produced in 1975 for 25 years and many residential districts were built in the Ger districts land until 1989. The plan was drawn up, among other things, industrial construction to create employment and to ensure a stable level for the city’s population. Although plan purposed to limit the expansion of urban population, newly created employment opportunities caused the urban population to grow quickly (Byambadorj et al, 2011) and population reached 492200 by 1986. Indeed, the third general development plan was formulated for a city with a population of 400,000 for the year 2000 (Yanjin, 2014).

**Figure 19.** Third master plan of Ulaanbaatar-1975 (Source:Ulaanbaatar National Archives)
The fourth master plan was produced for period between 1986 and 2010. Plan was mainly focused on the policies of decentralization and support for small towns near the city (Byambadorj et al, 2011). The city government implemented it until 1990, and then Mongolia’s transition to market-based economy challenged the spatial planning and did not allow the further implementation of the master plan. (Byambadorj, p.4-5).

Figure 20. Fourth master plan of Ulaanbaatar-1986 (Source:Ulaanbaatar National Archives)

3.3.2.2. Evolution of Ger area during Soviet planning period

The implementation of socialist planning schemes significantly changed the urban landscape of Ulaanbaatar and incidentally produced dualistic urban development; modernized core city and peripheral Ger settlement. In the shadow of soviet urban development, Ger districts has been transformed into a different kind of place than had previously existed during the period of Khuree settlement. As it was deemed acceptable within the modernizing ideology, the primary goal of Soviet planners was to replace Gers settlement with Russian-style apartment district through introducing industrially manufactured apartment houses, modern infrastructure and urban services (BottGer and Fitz, 2014). So, they removed Ger area from the urban center and located them in suburban areas and built kindergartens, schools, trade and service buildings as a decentral complex (Diener and Hagen, 2016 & Yanjin, 2014). Around 300–700 m² of plot size were given to the Ger area residents for constructing homes, for support of farming and growing vegetables and fruits (Yanjin, 2014). Inherently mobile Ger allowed their owners to move out of the city center to settle down at the edges of the newly designated urban core. As a result, Ger districts became peripheralized for the first time and city was soon surrounded by a belt of Ger settlements.
(BottGer and Fitz, 2014). Since then, the spatial separation between nucleus city/apartment area and peripheral Ger settlements has became more recognizable (Miller, 2013, p.56). With their peripheralization under the Socialist scheme and the contradiction with governments’s narrative of modernization, Ger settlement no lonGer functioned as effectively at an agenda of urbanism as did the new housing blocks, so little investment was directed toward Ger settlements (Miller 2013; Diener and Hagen 2016). This has led to socio-economical disparities between residents of apartment area and Ger settlements but it was very small compared to present day dimensions.

3.3.3. Urban development after 1990’s - political and economic reform

In conjunction with the socio-political changes and transition to the free market economy, urban development process of Ulaanbaatar took a different direction. In early 1990s, Mongolia emerged from a socialist regime and became a democratic country (Byambadorj, p.1). Also, the country began its transformation from a centrally planned economy to a market-based economy (Cheng, 2003, p.3). Eventually, flow of Soviet Union assistance stopped and Mongolia started to loss its balance (ADB, 2008, p.10). The period of transition together with the loss of Soviet subsidies and technical assistance has initiated bitter socio-economic turbulences such as dramatic a drop in gross domestic product, a rise in unemployment, hyperinflation, and inequality of wealth distribution, increases in the level of poverty in Mongolia (Byambadorj, p.1). Living standards declined as the guaranteed services of the communist system deteriorated. Therefore, during the first decade of transition to market economy, Mongolian government had to mainly focus on macroeconomic stabilization policies and structural adjustment reforms, leaving little room to the formulation and implementation of urban planning and development strategy.

Therefore, the problems related to urban planning have been accumulated during these transition period. At the same time, the new social and economic transition led to severe urban challenges, including massive rural to urban migration, uncontrolled expansion of Ger districts/informal settlement, failure in provision of infrastructure and basic services, housing and land privatization and growing socio-spatial segregation in Ulaanbaatar. These problems expanded unmanageable manner due to the lack of necessary resources, institutional arrangements and legal environment for the provision of urban development policy and planning. As such, between 1990 and 2002 there was, in essence, no regulation of urban planning at all and as a result, many ‘illegal’ buildings were built, which did not align with the spatial vision set out for Ulaanbaatar (Byambadorj et al, 2011). Being dependent on Russian planning experts (previous four master plans were produced by Russian scholars) during the communist
era became a weak point of Mongolian new constitution. There was a serious lack of urban planners and lack of experiences in free market urban planning system (Byambadorj, p.1). Besides, after 1990 power of public institutions to control urban development was reduced significantly due to the emergence of new privatization laws (livestock, housing, real estate, urban land etc.) formulated by a New Constitution. Instead, urban development became under multi-parties government, not just public authorities, but also private owners, builders, developers, citizens, non government organizations and other interest groups. Also, national economic planning (earlier system) terminated and planning powers were transferred to provincial or local institutions and this resulted in institutional decentralization. Giving planning powers to local institutions resulted in Master plan being a rather low priority and thus it was lagged behind. These factors explained why urban planning has been weak after the transitional period (Byambadorj, p.1).

3.3.3.1. Evolution of Ger area after country’s transition to Democratic system

As a side effect of Mongolia’s political, economic and social transformation in the early 1990s, the urban landscape of Ulaanbaatar started to reflect the social and spatial separation of the population into a few “winner” and “many losers” (Kleinschroth, 2014). On one side, the prosperous wealthy riches display live in the numerous newly-built, restricted and guarded residential compounds, so called “gated communities”. On the other side, majority of the those poor, unemployed and marginalized live and work in “informal quarters” that are both socially and infrastructurally underserv. Since then, informal settlement/Ger areas have grown dramatically, especially in the outskirts of the Ulaanbaatar (Janzen et al, 2005, p.11). It is possible to highlight several factors that were responsible for the remarkable Ger area expansion during the transition period. That the new Mongolian constitution granted a freedom of movement within the country to the people enabled the legal basis for internal migration process. This has smoothed the migration procedure and stimulated many move to the cities. Also, the enormous social-spatial disparities between urban and rural areas, loss of livestock and thus, the loss of livelihood of numerous people in rural areas, particularly as a consequence of natural disasters have reinforced rural-urban migration flows (Janzen et al, 2005, p.45). The extraordinary in-migration flows to the capital during transition period and their settling down informally/illegally around the outskirt of capital were responsible for uncontrolled spatial intensification of informal living quarters/Ger areas (Janzen et al, 2005). Furthermore, the provision of public infrastructure in Ger area could not keep up with the changes in the population patterns due to the weakening of centralized authority and following drop in service supply (Janzen et al, 2005, p.14). This has resulted further deterioration in the level of life quality in Ger
areas and consequently Ger districts became an secluded urban stand suffering from a lack of basic infrastructural and social services.

1 Mongolia’s National Report on “Managing the transition from the Millennium Development Goals to the sustainable development goals” 2015

### 3.3.4. Urban development after 2000’s – reconstructing urban planning

After 2000, urban planning partially re-established itself and there has been some positive developments regarding urban planning sector (Byambadorj, p.6). Recent positive developments include the establishment of proper legal and institutional frameworks for the urban sector, increased public involvement in the planning process by donor organizations, emergence of several new forms of planning including strategic and land use planning (ADB Evaluation study, 2008, p.3). In 2002, Mongolian authorities produced master plan for Ulaanbaatar after series of master plans done by Russian scholars (Byambadorj et al, 2011). This was the first time that Mongolians had developed their own plan for Ulaanbaatar. Nevertheless, the plan has been criticised for its lack of authority in directing and monitoring of the planning process; its limited capacity to address rapid population growth and Ger district expansion and the loose association between the urban planning and land reform policy toward Ger district (Byambadorj et al, 2011). Ideally, the urban plans and land use plans should be well coordinated and the urban planning should be produced strictly based on the land use planning (Chinzorig, 2007). However, they are not really coordinated in reality and often there are situations that the urban plan does not follow the land use plans. While land reform seeks to grant Ger areas a formal and permanent legal status, urban plan has sought to oppose the legitimacy and permanency of these areas because they are considered to represent temporary land use (Kamata et al., 2010). Thus, new urban plan for Ulaanbaatar does not address the issue of urban expansion in the city adequately.

In reconstructing urban planning sector, donor organizations played crucial roles in terms of expertise and resource provision. For instance, International Cooperation Agency (JICA) funded team implemented several project to manage urban development by improving the policy and legal framework for urban development in Mongolia. They worked with Ministry of Roads, Transportation, Construction and Urban Development (MRTCUD) on Urban Redevelopment Law draft since 2010, Mongolia has never had such a law. Also, as requested by the Mongolian government, JICA has conducted a study on the fifth Master plan 2020. Additionally, United Nations Settlement Program (UN HABITAT), Asian Development Bank (ADB), World Bank, US government Millennium Challenge Corporation (MCC) had developed many projects and programs with respect to the urban development of Ulaanbaatar, particularly improvement of living conditions in Ger area, land readjustment, public participation and mobilization in urban planning
That the Mongolian government largely relies on support and assistance of foreign actors - international organizations, non-governmental organizations - shows us that Mongolia did lack of national urban planners and experiences in urban planning field. Up to present, the Mongolian universities have never trained any urban planners, however since 2009 National University of Mongolia and Mongolian University of Science and Technology, the biggest universities in Mongolia, started to prepare some of their students as urban planners. Even though there has been profound improvements regarding urban planning and management, the reality was uncontrolled spatial expansion and urban development inconsistent with the urban development policy and legal framework.

3.3.4.1. Evolution of Ger area after 2000’s

After 2000, the increasing social-economical differences among civil society continued to express themselves in Ulaanbaatar’s urban structures and urban features; majority of the social middle and upper classes is living in the apartment areas whereas the majority of the urban poor is living in Ger-areas (Janzen et al, 2005, p.45). The urban poor stop by Ger area as they provide the lowcost and only affordable housing that will enable them to save for their eventual absorption into urban society. The Ger area has expanded remarkably. It is possible to highlight several factors that were responsible for the remarkable Ger area expansion after 2000. Firstly, the Mongolia’s transition to a market economy has brought radical changes in land ownership, the state-owned land has gradually been privatized. The private land ownership laws enacted in 2002 and under this land reform, herders were permitted to privatize livestock in the countryside; tenants were granted to privatize their apartments in urban areas, and Ger district residents were allowed to continue to privatize their land in cities. This land privatization law and its proactive implementation has provided incentives for many to own land in Ger areas in the capital city resulting in expansion of numerous new plots in Ger areas (Kamata et al, 2010, p.2). Secondly, since 2000 Mongolian government has focused on a national development strategy which is almost entirely relied on the development of the mining sector as the country’s large territory comprises of some of the most promising reserves of coal, copper, gold and uranium in the world (Mayer, p.4). Driven by the mining sector, Mongolia has experienced an economic flourish with a significant GDP growth reaching 17.5% in 2011 and 12.3% in 2012. (IOM, 2016). Yet, this economic boom has only benefited a small minority of educated urbanites, with further increasing socioeconomic inequalities (Mayer, p.4) Following the development of mining sector, internal labour migration especially rural-to-urban (Ulaanbaatar) and to mining areas has grown significantly. Rural poverty trigGered by a combination of unemployment, low incomes and natural disasters has led to many people to leave their traditional way of life for urban centers (IOM, 2016). This
migration flow has brought profound consequences for the urban fabric of the Ulaanbaatar with an array of challenges; notably overpopulation of the capital, further expansion of informal quarters, imbalanced social development, limited access to social services for migrants.

3.4. CHARACTERISTICS OF UB GER-AREA

Although over 60% of the Ulaanbaatar population resides in Ger areas, these traditional settlements have never been recognised as a formal part of the city (ADB, 2016). They were viewed only as temporary settlements and therefore never been formally integrated to the urban development policies and regulations and infrastructure programming for the improvement of Ger areas (GUSIP, 2010). This lack of long-term planning and land use regulation in Ger areas has resulted in uncontrolled development and haphazard expansion of Ger area which is characterized by limited availability of basic infrastructure facilities, poor access to socioeconomic services, reduced livelihood opportunities, and insecure neighborhoods (Narumasa et al, 2015, p.3). Currently, around 55% of Ulaanbaatar’s residents do not have access to basic infrastructure services such as central heating, sewage or running water (Mongolia’s Infrastructure System, 2013). Ger areas are expanding rapidly, they have become a source of air, soil and water pollution of Ulaanbaatar city leading to poor quality of life for Ger area residents (Amarbayasgalan, n.d. p.2).

3.4.1. Absence of centrally supplied water system

Although municipalities in Ulaanbaatar have central water supply for residents, the peri-urban Ger areas are completely disconnected from central water supply system (Uddin et al., 2014a,b). Residents of the Ger areas collect water from public water kiosks during both favorable and unfavorable weather conditions, while apartment residents enjoy reliable access to household water supply through centralized distribution networks (Kamata et al, 2010). In Ger area, there exist around 550 water kiosks managed by USUG (Ulaanbaatar Water Supply and Sewage Authority), of which about half (those in central Ger area) are connected to the main water system of Ulaanbaatar by pipe, the other half (those in peripheral Ger area) being supplied by water tank trucks (Engel, 2015, p.11). Central Ger areas tend to have a high density of kiosks, while middle and peripheral Ger areas have a lower density of kiosks (GUSIP, 2010, p.16). The distance to the kiosks varies up to 3 km depending on the density of kiosks. Besides the long distance to kiosks, the absence of paved roads makes it complicated and dangerous for those to transport water, especially in the winter (Patinet and Delmaire, 2014, p.11). These are the factors account for low water consumption in the Ger areas, in addition to short period of daily distribution, low frequency
of bathing, irregular cloth washing, and reuse of water without treatment (Uddin et al, 2016, p.407). Consumption by Ger area residents averages only about 8 or 10 litres/person/day (Uddin et al, 2014), which is below the minimum requirement of 25-50 litres/person/day for drinking, cooking, and cleaning purposes, suggested by the World Health Organisation, whereas apartment residents consume between 240 and 450 litres/person/day (Dore and Nagpal, 2006; CUCSY, 2012). Water costs 0.48 tugrug per liter for apartment dwellers, 1tugrug per liter in Ger districts (MAD, 2015, p.26). Even though Ger area residents pay more than those in apartment area, the water supplied to them contains high chemical and biological contaminants, notably due to inappropriate storage and transportation process of water (Patinet and Delmaire, 2014, p.11).

Water contamination might not only depend on the types of water supply (either piped or tank water supply), but also the maintenance of the pipes and tanks. Also, the use of plastic containers, previously contained harmful substances (reuse of containers from the petrochemical industries), decreases the water quality too (Uddin et al, 2014). A scoping study on WASH (water, sanitation, and hygiene) situation in peri-urban Ger areas in Ulaanbaatar reveals that plastic containers are almost exclusively used by Ger area residents for both the transportation (94.3%) and storage (92.4%) of water (Uddin et al, 2016, p.406). These unsafe water supply, transportation, and storage practices increase the health hazards of the Ger residents (Uddin et al, 2016, p.407).
3.4.2. Absence of sanitation system

A majority of the population living in the Ger areas employ unimproved and unhygienic sanitation technologies to solve sanitary problems, most notably unimproved “pit latrines” which is a large hole in the ground used as a toilet (Uddin et al, 2016; Engel, 2015). Pit latrines are dug up by residents themselves in each hashaa and often built without adequate knowledge on the technical features and requirements on how to build the latrines properly, which make the pit latrines unsustainable\(^1\). The pits are used only once a 4 to 5 years period and closed once the pits are filled up and not reused (GUSIP, 2010). An estimated 74,971 pit latrines are in use in the Ger areas of Ulaanbaatar city (GUSIP, 2010), such a sanitation system contaminates the ground most, and on the other hand pits are the major source of unhealthy situation leading various health problems and infectious diseases in the Ger areas. Pits are often unhygienic because they lack proper sanitary platforms. In common practice they made up of wooden planks which only partly cover the pit as shown in the Figure 24. Partly covered pits causes odour and proliferation of flies, especially during the summer months. Unhygienic practices in Ger areas seriously danger the public health\(^2\).

![Figure 23](image)

**Figure 23.** Pit latrine presence in a household plot (Source: Rural Urban Framework, an Incremental Urban Strate for Ulaanbaatar, Mongolia, 2015)

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Also, pit latrines together with the grey water disposal are the major contributor to the contamination of ground and surface water. Since the majority of Ger areas are not equipped with sewage systems, households end up disposing their grey water into unlined grey water holes that are dug up by residents themselves (Engel, 2015, p.10). However, in several Ger areas do not have grey water holes due to lack of space or rocky soil structure. This results in residents disposing their grey water in public spaces, such as streets and vacant lands or drainage channels and steep slopes (GUSIP, 2010, p.18). According to the study on WASH² situation in peri-urban Ger areas, 51.4% of households have soak-pits in their plots to discharge greywater, while 40% of households pour greywater into their pit latrines, the rest of the households discharge greywater onto the public spaces (Uddin et al., 2016, p.407). Frequently discharged greywater into pit latrines, soak-pits, yards, or on open streets causes immediate environmental pollution and health hazards due to high concentration of chemical agents in the greywater (Uddin et al., 2016, p.407).

The question of responsibility for sanitation in the Ger areas is always debated between the different actors, notably between the USUG and the municipality (Patinet and Delmaire, 2014, p.11). Such an administrative confusion deteriorates the delivery of sanitation system in Ger areas. Also, due to lack of financial and human resources as well as technical capability, the implementation of sanitation is spearheaded by international agencies and community based organizations³. Further, these initiatives are generally dependent on external funding and limited on a project basis. So, this is a challenge to the government to develop a responsive institutional mechanism that will ensure the sustained efforts on hygiene and sanitation.
3.4.3. Absence of central heating system

Ulaanbaatar is one of the coldest capitals in the world, making reliable and affordable heating vital for sustainable livelihood and development. The heating season lasts around eight months, from mid-September until mid-May. In Ger areas of Ulaanbaatar, heating system is very limited or even nonexistent. Nearly 85 percent of dwellings in Ger area rely on inefficient and unclean stoves boilers for heating (see Figure 25), in contrast to apartment buildings, which are connected to the central heating system (Kamata et al, 2010). The fuel for all the heating options in Mongolia is based on indigenous coal or wood (Kamata et al, 2010, p.59). Per year, the average Ger requires 5 tonnes of coal and 3 m³ of wood to be heated, which costs between 4.4% and 10.6% of household expenses, while the heating expenditure of apartment residents is only 1.9% of their household expenses (GUSIP, 2010, p.7).

![Figure 25. Common used household stove](image1)
![Figure 26. Fuel options; raw coal and wood](image2)

This means that Ger area residents pay 5 times more than that spent by apartment dwellers. In harsh winter, when temperatures can drop to -40°C, raw coal, rubber and even plastics are thrown onto the stove. These toxic emissions from household stoves are the main sources of Ulaanbaatar’s air pollution, which is estimated at 90% (GUSIP, 2010, p.8). Taken along with other pollutant and emission sources; thermal power plants (6%), vehicular emissions (3%) and heat-only boilers (1%), it is estimated that the city of Ulaanbaatar emits annually 62,000 tons of PM 2.5\(^1\), six or seven times higher than the levels recommended in Europe and North America, and 10 to 20 times higher than standards recommended by World Health Organization (Takuya et al, 2010, p.59).

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\(^1\) Particulate matter (PM 2.5) is a critical pollutant responsible for negative health outcomes, such as respiratory illnesses, premature death, and restricted activity days. This factor implies a severe effect on both human health costs and economic costs to the society. See more on [http://www.health.ny.gov/environmental/indoors/air/pmq_a.htm](http://www.health.ny.gov/environmental/indoors/air/pmq_a.htm)
Figure 27. Typical scene of pollution in winter months

Figure 28. Smoggy morning of Ulaanbaatar
Also, dumping ash of the burned coal and wood directly to outside (yards, streets) exaggerate the air and soil pollution in Ulaanbaatar (Batjargal et al., 2010). In addition, the natural constraints in the layout of the city, as a linear city surrounded by mountains limits the dispersion of pollutants and enhancing their concentrations in city. As seen in the Figure 27 above, it is common to not be able to see more than ten meters in front of you early in the morning and in the evening, coldest hours of the day.

3.4.4. Electricity problem

Electricity supply in Ger areas is subject to several major problems, including voltage drops due to capacity shortages, insufficient capacity of transformers and substations, and a small number of households without electricity. Most households in Ger areas have access to electricity, except some newly migrated households from rural areas. Ger area residents who have connections use, on average, about 100–110 kWh of electricity per month and pay about 4–5 percent of their monthly income for it, which is within the internationally recognized affordability limit. Faulty electrical wiring in Ger area sets the primary cause of fire risks which is exacerbated because of poor roads and traffic conditions that restrict access by fire fighters to the sites (GUSIP, 2010, p.6). As seen in the Figure 29, most part of the Ger areas in the north of city have the higher risk of fire which is depicted in red colour compared to city center and other other built up areas.

Figure 29. Fire risk areas in Ulaanbaatar (Source: World Bank, Land Administration and Management in Ulaanbaatar)
3.4.5. Poor solid waste management system

Ger area in Ulaanbaatar has been facing serious problems associated with solid waste output due to the increasing number of migrants moving to the capital and their increasingly consumptive lifestyles (Uddin et al, 2016, p.408). The major problems associated with solid waste management are irregular collections in Ger areas, poor solid waste management at household level and fly-tipping (illegal dumping). Average solid waste generation in Ger area is 0.9-1.0 kg/capita/day (during summer it grows to 0.2–0.3 kg/capita/day), which is over four times that of the main city (Kamata et al, 2010; Uddin et al, 2016, p.407). Annually, average of 260-280 thousand tons of solid waste are generated and 40-50% of this waste goes to a dumpsite, while the rest is accumulated in the environment, such as in river basins and illegal dumpsites in Ger area as seen in the Figures below (Uddin et al, 2016, p.408).

![Figure 30. Waste accumulation in open spaces in Ger area](image)

Illegal dumping has out of control and left without any charges in Ulaanbaatar, particularly in the Ger areas, due to the infrequent waste collection, lack of central collection points, poor tenor of the inhabitants, and very few landfills in peri-urban settings (Altantuya, Zhang, & Li, 2012). Solid waste is collected solely by trucks, the service is unreliable, and collections are infrequent: once each month or even once every three months (Kamata et al, 2010). Operational efficiency of current waste collection practices in Ger area seems to be very low, with each vehicle collecting from an average of only 100 households per day in summer and even fewer during the winter (Kamata et al, 2010).

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1 Green Development Strategic Action Plan for Ulaanbaatar 2020
Besides, waste is collected on cash payment, monthly 2,500 MNT, which is an amount based on the market mechanism without any subsidies. This collection fee is considered to be “very high” for Ger area residents and does not take into account the difference in waste generated by households of different family size and different income. This results in the lower fee collection rate, which in turn affects the frequency of waste collection (GUSIP, 2010, p.21). Irregular management causes waste to accumulate in the streets and open roads Ger area, which originates unsanitary and unhealthy conditions affecting public and environmental health systems (Uddin et al, 2016).

3.4.6. Poor roads and accessibility issue

The poor condition of unplanned and unstructured roads in Ger areas is one of the most serious concerns of when it comes to Ger areas. The city of Ulaanbaatar sets in a hollow between four mountains and as most of the relatively flat land in the city is already developed, Ger areas stretched over mountainous areas with relatively steep slopes, less preferable and costly areas for any infrastructural development (Radnaabazar et al, 2004). Therefore, accessibility is weak and roads are underdeveloped (Geoghegan, 2014). Only 10 percent of the road network in Gers areas is paved- those large arterial roads that border the Ger area and the rest of it remains earthen (Kamata et al, 2010, p.34). Most of the roads apparent in Ger areas began as informal tracks to private land in response to residents’ demands for better access to social and public infrastructure (Narumasa et al, 2015, p.18). Subsequently, these tracks evolved in a haphazard manner to become earthen roads which have little connectivity or integration with the formal municipal road network (Kamata et al, 2010, p.33). Earthen roads in Ger area are completely devoid of supporting facilities including drainage systems, sidewalks for pedestrians and space for parking. Except raining season, these unpaved roads are the main source of a substantial amount of dust in the air. Though, they get muddy when it rains, icy when it snows which can pose inconvenient as well as unsafe conditions for walking and driving. Also, owing to the inadequate drainage system alongside the roadway, Ger areas often experience seasonal flooding. The problem is exacerbated by the fact that Ger area residents often dispose of garbage into the street, which blocks the drainage holes available. Besides, street-lighting in Ger areas tend to follow major roads, with much less coverage along the inner streets of ger areas which poses a security risk and increased vulnerability to petty crime and theft after dark (World Bank2015 & GUSIP, 2010, p.6).
Ger area residents tend to rely heavily on public transportation (bus, microbus) because majority of them cannot afford private vehicles. Due to the poor road network predominantly narrow earthen roads, public transportations operators cannot provide comprehensive public transportation services to all Ger area. In fact, they serve upon only main corridors-large arterial roads that are paved as shown in Figure 33 below (Kamata et al, 2010, p.36). Due to the serious lack of service coverage, many residents have to walk about 500m to 1km, up to 30 minutes through fairly complicated unpaved roads in order to reach the closest bus stops available upon main roads (Bayartsetseg, 2015). In addition to the difficulty accessing the bus station, the low frequency of public transport (up to 50-60 minute interval between buses) put the residents, who are dependent primarily on public transportation, at disadvantage because of their long commuting times (Bayartsetseg, 2015). A majority of gers area residents likely to commute from their home to work longer than hour, by contrast apartment residents commute 40 minutes or less (World Bank, 2015).
3.4.7. Limited provision of social services

Traditionally, the Mongolian government is responsible for providing basic health and education services to the public (Kamata et al, 2010, p.77). However, investment in the educational and medical sector has not matched the explosive growth of urban population in Ulaanbaatar. For that reason, current status of social services provision regarding education and health is poor in Ger areas where the majority of urban population accommodates. This means inhabitants of Ger-settlements have poorer access to education compared to the rest of Ulaanbaatar’s population (Janzen, 2005). As shown in the graph below, educational attainment in Ger areas is apparently lower than that in apartment areas. In Ger areas, about 37 percent of residents have completed secondary school, 14 percent of children recently have finished primary school, and another 14.5 percent have dropped out of secondary school (Kamata et al, 2010, 75). By contrast, almost half of students in apartment areas have advanced past secondary school to vocational
training or college education. The reason behind this gap is that the residents of Ger areas, especially new migrants face difficulties of access to the education services. Owing to overcrowded pupils in Ger area, residents cannot enrol their children in schools in their respective districts and Khorooos. Even succeeded to enroll, schools have had to organise classes in three shifts to cope which is out of standard (GUSIP, 2010, p.5). This is why some peri-urban school-aged migrant children are three times more likely to be out of school than children of settled citizens.

![Graph of Education Level Obtained in Ger and Apartment Areas (%) (Source: HIES 2007)](image)

Further, long distances to schools pose difficulties, especially for children in primary schools. It has been surveyed that one third of children from Ger area households have to travel more than two kilometres to get to their schools (GUSIP, 2010, p.5). Also, some Ger area schools suffer from a lack of qualified teachers, many of whom prefer to work in urban areas with access to a much wider range of services (Guenness, 2012). When it comes to the provision of health services, present health system cannot meet the diagnostic and treatment requirements of Ger area residents. Due to the growing population of Ger area, the current health clinics are outnumbered, and resources are stretched. The family clinics are located at a distance from Ger areas, which makes difficult for the residents to get the benefit of the medical services, especially family hospital services (GUSIP, 2010, p. 6). In addition, the high workload of family doctors in Ger areas adversely affects the residents access to medical services. Doctors usually do not make house-visits, and it is difficult to get emergency services on time owing to the poor accessibility. In addition, the coverage of health insurance is lower among Ger area residents, people with lower standards
of living, those working in the informal sector and in-migrants (GUSIP, 2010, p. 6), which in return raises difficulties and limits the residents access to health services.

3.4.8. Weak community empowerment and social exclusion

People in Ger districts, predominantly migrants from rural provinces, often face social exclusion from services as well as social relationships at some level (Bayartsetseg, 2015). It is estimated that about 50% of Ger area residents are inactive in terms of social and political community mobilization and organization (MAD, 2015, p.26). The activeness is even lower for immigrants, households with fewer members and households not registered with their Khoroo (administrative unit-subdistrict) (GUSIP, 2010, p.1). This is mainly due to the fact that social and governmental services are equally undersupplied in Ger area. Therefore, new migrants from rural area often experience dislocation and find it hard to adopt to urban environment as they arrive. It is common to see that Ger area residents often lack access to information on day-to-day decision-making at local government level which affects their daily lives (GUSIP, 2010, p.2). Also, due to the passiveness in participation, Ger area residents often remain out of the decision-making related to development projects and programmes and maintenance of community assets which they could benefit (GUSIP, 2010, p.7). As a result, their development concerns remain under-addressed or un-addressed. This is why Ger areas is considered to have relatively higher poverty of empowerment and social exclusion issues.

3.4.9. Limited economic opportunities and poverty

Economic situation of Ger areas differs significantly from that of the apartment areas, with lower income, higher poverty and unemployment rate (MAD, 2015, p.26). Incomes in the Ger areas are estimated to be 40% less than those living in the apartment area. Government benefits and allowances, as well as informal income contribute as a supplement to income (MAD, 2015). Indeed, the Ger areas host large variety of economic activities that are adapted to their unique features. Proximity based retail and services exist throughout the Ger areas. These are often household goods and service providers that cannot be located in the city center. However, the economic activities in Ger areas that are heavily reliant on construction and manufacturing, leave residents vulnerable to economic downturns and seasonality (MAD, 2015, p.26). Also, under investment in urban infrastructure services and insufficient management in operation and maintenance raise the cost of doing business for small enterprises in Ger areas, and restrict access for Ger area residents to jobs and services (ADB, 2016).
In-migrants to Ulaanbaatar who usually make the move due to rural poverty may encounter many difficulties from unemployment to degraded treatment by the city people and authorities (Benwell, p.114). There is a high possibility that new migrants are likely to not have jobs and to be in poor living condition in line with insufficient work places for total population of Ulaanbaatar city (Chilkhaasuren & Baasankhuu, 2012, p.9). According the Ger-area Upgrading Strategy and Investment Plan (GUSIP), poverty level is estimated higher among Ger area residents in Ulaanbaatar, with 47% of Ger residents being poor in terms of consumption expenditure, social inclusion or capability of accessing to services against 15% of apartment residents1. Poverty is mainly due mainly to lack of sufficient employment and stable income among Ger area residents (ADB, 2002). This is related to lower education levels of the population and one worker supporting many family members (GUSIP, 2010, p.4). According to the Urban Poverty and Immigration survey, there is a striking difference in the unemployment rate between Ger and apartment residents; the unemployment rate in Ger areas is 16% higher than that in apartment areas (JICA).

Although many unskilled people seek jobs, there are limited or no employment opportunities for them. Economy of the city, labor market, is insufficient to all citizens of the city. Main reason of this matter is that number of work places created in a year is not sufficient to the number of new migrants towards Ulaanbaatar city (GUSIP, 2010, p.4). Consequently, poverty keeps getting entrenched to the Ger area. However, poverty level is not homogeneously spread over all Ger Ger areas. Newly settled peripheral Ger areas tend to have higher levels of urban poverty as the majority of the residents are new migrants who tend to be limited means (GUSIP, 2010, p.5). In contrast, older Ger areas close to urban core have lower levels of urban poverty because residents have been living in the city long and have settled with income earning opportunities means (GUSIP, 2010, p.5).

1 Municipality of Ulaanbaatar and UN-HABITAT (2010) Citywide Pro-poor “Ger-area Upgrading Strategy and Investment Plan” (GUSIP) of Ulaanbaatar City
3.5. **FORCING FACTORS SHAPING GER-AREA**

Informal settlements, so called Ger areas, in Ulaanbaatar trace their existence to several factors including:
(i) rapid urbanization process (ii) in-migration from the countryside to the capital city (iii) the national policy on land privatisation and its proactive implementation (iii) lack of planning/policy focus for Ger areas.

3.5.1. **Urbanization**

From a historical pre-dominance of nomadic and rural habitats, Mongolia is now overwhelmingly urban with 68 percent of the total population living in cities and towns, much higher than the Asian regional average. Since the 1950s, when only about 20 percent of people resided in urban areas, Mongolia has experienced rapid urbanization. It has been considered that there were two periods of rapid urban agglomeration in Mongolia; the first was during the Soviet era and the second was after the country’s political and economic transition during 1990s (Caldieron, 2013). During the 70 years of Socialist Rule, Mongolia consolidated its urbanisation process through redevelopment of existing cities (as in case of Ulaanbaatar) and the establishment of new cities and towns (e.g. Darkhan and Erdenet) (GUSIP, 2010). Following the establishment of factories, urban industrial areas, construction of residential apartment blocks, commercial and industrial plants, the proportion of the population living in urban areas increased significantly (Caldieron, 2013, p.466). From 1956 to 1969, the urban population fold threetimes, while the rural population grew by only 10%. In the mid-1970s, Mongolia became more urban than rural, with the focus of growth on the capital city Ulaanbaatar and the newly established urban-industrial centres of Darkhan and Erdenet (Guennes, 2012). In that time, internal migration was controlled by the government and associated with employment opportunities, as practiced in other centrally planned countries. Therefore, urbanization process was considerably balanced and well managed. However, following the fall of Soviet Union with its withdrawal of subsidies and the Mongolia’s transition to a market economy, the country started to undergo unprecedented changes in early 1990s. Part of the industrial sector and the agricultural collectives in the rural disappeared. Smaller towns and cities started to lose population to larger cities as their socialist economies deteriorated, a trend that continues. Following the New Constitution of 1992’s decision on the free movement of population within the country, an increased number of households started to migrate to Ulaanbaatar from various Aimags often bypassing the secondary cities that lay in-between. In early 2004, the in-migration rate to Ulaanbaatar city was estimated at one household per hour. Its population has increased by some 70 percent in the past 20
years and now accounts for 40 percent of the total population of Mongolia (Takuya et al, 2010). Urbanization has been rapid and substantial in Ulaanbaatar and this has made it extremely difficult to establish an appropriate regulatory framework of planning and building standards, regulations, and administrative procedures for accessing, developing land and property (World Bank, 2015). Meanwhile, majority of this migrated population from the countryside has found land at the city’s outskirts, and housed itself in Ger areas since there is not adequate housing available which is affordable in terms of expense. As a result, the urban area of Ulaanbaatar city which was 6,470 hectares in early 1990s, expanded to 11,894 hectares in 2001; by 2014 it has has expanded to 20,051 hectares in other words, in 14 years time the urban area more than tripled (Atlas of urban expansion). This rapid spatial growth during the last two decades of (suburban) Ger-settlements, especially in the northern fringe of the capital city, as well as the expansion of the nucleus city itself can be observed in Figure 35. It is obvious that Ger areas continue to expand with the urbanization unless there is effective government policy to catch the pace of urbanization and respond to the challenges on going (Takuya et al, 2010).

Figure 35. Urban expansion between 1990-2014 (Source: Atlas of urban expansion 2016)
3.5.2. Rural to urban migration

In 30 years, population of the country’s capital, Ulaanbaatar, grew from 400,000 inhabitants to more than 1.2 million. This phenomenon of population growth can be explained by the major socio-economic changes, which are the results of the shift of a democratic political system to a free market economy in the early 1990s (Janzen et al, 2005, p. 12). Population distribution over country had seriously changed right after the collapse of socialist regime in 1989 and the ensuing deterioration of social and public infrastructure and economic hardship. Many people, especially among rural population lost their jobs due to the privatization of the former collective livestock production cooperatives (negdel) and the state-owned farms and companies (Janzen et al, 2005, p. 12). Since there is a lack of alternative income sources and employment possibilities in rural areas of the country, big parts of the rural population started to migrate to the urban centers (aimag, sum) with the majority settling down in Ulaanbaatar (Janzen et al, 2015, p. 12). The attractive lifestyle and opportunities in the city has provoked the massive influx of people to the capital city, causing the growth of new informal residential areas in the city (Radnaabazar et al, 2004). At the same time, political liberalization in Mongolia has guaranteed the people the freedom of movement within the country which enabled the legal basis for internal migration process in the country. This means migration became to led by individuals’ and families’ choices, not by the state’s plans. The removal of strict control on citizen movements and the right to choose freely the place of one’s residence have encouraged rural to urban migration flows, particularly to Ulaanbaatar (Algaa, 2007). Beside this fact, a significant amount of people move from rural to urban areas in search of better living conditions, affordable jobs, higher incomes and better educational and medical services which are comparatively limited in countryside (Janzen et al, 2015, p. 12). According to the “Ger area development” survey done by Asia Foundation, the rate of immigration accelerated through the late 1990’s and kept its pace also during 2000’s (2006, p. 17). Figure below clearly demonstrates the population growth of Ulaanbaatar. The population of Ulaanbaatar in 1990 was only 426,960 and since then it has increased at an average annual rate of 3.6% and reached 633,616 by 2001 (Atlas of urban expansion). Thereafter, population of Ulaanbaatar has grown at an average annual rate of 4.1% and reached 1,070,573 inhabitants by 2015.
Most of the new comers to Ulaanbaatar tend to settle down in the Ger-settlements in the city’s outskirts as it is the cheapest among dwelling alternatives (Janzen, 2005, p. 13). This has resulted hasty spatial expansion of Ger-settlements. The expansion of Ger area, especially in the northern fringe of the capital city as well as the expansion of the nucleus city itself can be observed in Figure 37.

The largest influx of immigrants arrived in the Ger districts also coincides with the concurrent natural disaster “gan” and “zud”, a summer drought and harsh winter, affecting herders in rural areas. Zud consist of extremely cold temperatures accompanied by a lack of snow resulting in a drought, or by heavy snow or rain which freezes over the grass (Caldieron, 2013). These situations affect a large percentage of the
animals with some dying of starvation. In 2010, a zud affected an estimated 769,106 people (28% of total population) and has resulted in loss of 8.4 million livestock, which is the backbone of economy in the Mongolian nomadic countryside. (Geoghegan, 2014). About 9,000 herders lost their entire livestocks (Caldieron, 2013, p.467). Extreme weather condition has forced many rural families to abandon the steppe and pulled into the city of Ulaanbaatar by the promise of a new life where the prospects for education and employment were purportedly greater. An estimated 40,000 people arrive every year (Geoghegan, 2014). Besides the migration triggered by environmental factors, the discovery and exploitation of vast mineral resources after 2000 was the major factor that was effective in pulling rural population into the capital. The heydays of mining sector has intensely transformed the economy with the average annual GDP growth in 2000-2005 stood at 5.6 percent, in 2005-2010 it increased to 6.7 percent and further accelerated to 10.7 percent in 2010-2014. (National report on MDG, 2015). This mining boom has resulted diminish in the importance of pastoral livestock, thus job opportunities in the rural has narrowed down. In this way, the development of mining sector was one of the deriving forces that intensified labour migration from rural to city of Ulaanbaatar. (Caldieron, 2013, p.468) Despite this inflow of people, the city core was expanded only marginally to accommodate the new migrants. The reason is that Mongolian government has not been able to build cheap dwellings affordable for the new migrants coming to the capital (Caldieron, 2013). In addition to that, according to the market rules focuses more on making profits, privately built apartments are sold at a price that is far beyond the capacities of general people (Ishdorj, 2017 & Honda&Shams, 2004). Only a small segment of middle and upper income migrants can afford the expensive formal houses. Indeed, most of the rural to urban migrants arriving to Ulaanbaatar have limited capabilities in terms of money and possessions. As they lack the finances to rent or buy unit from the formal housing sector, ultimately most migrants seek shelter in peri-urban Ger area as a cheap and practical housing alternative (Takuya et al, 2010). This is the routine of how Ger districts are expanding in an unmanageable manner as a result of migration to Ulaanbaatar.

### 3.5.3. Land reform

Before 1990, all land were used to belong to the state but the country’s transition to a market economy has brought radical changes in public land ownership and there has become no overall regulation of land transaction (Byambadorj, 2011). In 2002, law on Allocation of Land to Mongolian Citizens for Ownership enacted as well as the subsequent land ownership registration procedures were introduced and the land ownership in Mongolia has gradually been privatized. This land reform provided incentives for households to occupy land in Ulaanbaatar (Kamata et al, 2010, p.2). People tend to obtain as large a parcel of land as
possible. This was mainly due to the fact that “Law of Allocation of Land to Mongolian Citizens for Ownership-2002” stated every household to own land up to 700 m² (Kamata et al, 2010, p.15), almost doubled the limit of free land allowance which were up to 300 and 400 m² during late-1980s and early-1990s (GUSIP, 2010). This land privatization law and its proactive implementation has attracted many to own land in Ger areas in the capital city. The Land privatization law and free high land allowance have encouraged in-migrants and apartment residents to take the opportunity of getting land, resulting in numerous requests for plots in Ger areas. Also, due to the insufficient development control, the residents who initially fence more than the officially allowed up to 700 m² of land continue to occupy the additional area upon official registration (Dahiya, 2007). During the pre-election period in 2008, the private land ownership laws were revised to expand residents’ land holding entitlements by 400 percent to 500 percent on average, resulting in a land-seizing frenzy around Ulaanbaatar. This has led to low density expansive spatial growth of the Ger area/informal settlements and added to the cost of infrastructure development, and provision of social and basic urban services together with many issues regarding the land resources for future settlements (GUSIP, 2010, p.9).

3.5.4. Lack of Planning/Policy focus for Ger Areas

Informal settlements are not just a manifestation of a population explosion and demographic change, or even of the vast impersonal forces of urbanization. They are the result of a failure of policies, laws and delivery systems of national urban policies (UN Habitat, 2003). In case of Ger settlements in Ulaanbaatar, it was the inadequate planning and regulatory framework, lack of long-term planning, insufficient infrastructure investment, and contradiction between land use regulation and urban planning that has resulted in uncontrollable sprawl of Ger area with limited availability of space for public facilities, poor access to socioeconomic services, poor livelihood opportunities, and unsafe neighborhoods (MAD, 2015). Ger areas consisting traditional tent dwelling have never been recognised as a formal part of the city since the socialist planning period (ADB, 2016). They have been considered as merely temporary settlements and therefore never been formally integrated to the urban development policies and regulations and infrastructure programming for the improvement of Ger areas (GUSIP, 2010). This was one of the major factor shaping unplanned and haphazard expansion of Ger areas. Even in 2010, there were no proper laws or regulations that support planning for the development of Ger areas. As a result, city master plan pays little attention to Ger areas, thus follow up little development action or investments. Meanwhile the continuing Ger area sprawl is putting tremendous pressure in the urban environment of Ulaanbaatar (ADB). For last several years, international organizations (World Bank, UN habitat, ADB, JICAetc..) have
been providing technical and financial assistance for the improvement of basic infrastructure and services in the Ger areas for resulting in important improvements (Norovsambuu and Theunissen, 2013). But the vast size of the areas makes it difficult to have a decisive impact, especially without long-term state development plan and well coordinated responses from different city agencies. The state is hardly engage in long-term development planning for the reason that the habitual “party-control” approach of governance disrupts the continuity in plan/policy implementation and personnel arrangement (Reeves, 2014). Since the 1990’s transition to democracy, Mongolia’s government has experienced constant turnover in party control of the state’s government, between the Mongolian People’s Revolutionary Party (MPRP) and the Democratic Party (DP) (Polity IV Country Report, 2010). With each change in power, the new majority party would seek to undo the previous government’s policies and impose their own policies, and replace personnel with their own party-member staff (Reeves, 2014). Just as the party in power seemed to solidify its control, its dedicated 4 years term came to end and a new election would change the political landscape and turn over all progress. As a result of a such turnover of different parties, there exists high liability to ad hoc behavior that gives priority to short-term private gains over long-term value creation in public goods (Kamata et al, 2010, p.2). Also, the state is hardly achieve a coordination in action between various ministries (of Urban development, of Education, of Health, of Environment etc.). It is a common practice that ministries launch their own development plan and define their activities independently, which results inconsistent actions that both overlapped and contradicted with one another’s plans (Reeves, 2014). For instance, in order to control spatial expansion in UB, the “2008 UB City Urban Development Master Plan,” advocated a “Compact City” concept to promote high density development through the more efficient use of land (Kamata et al, 2010, p.2). Although policy directions have become clearer, the government’s practices concerning the spatial development of Ger areas have been inconsistent. The government’s attempts to control migration to UB by imposing punitive settlement fees were dismissed by the country’s highest court as unconstitutional. Also, the adoption of private land ownership laws in 2002 and the subsequent land ownership registration procedures in 2005 provided incentives for households to occupy as large a parcel of land as possible. These actions accelerated the less-dense urban expansion of Ulaanbaatar further, and were totally inconsistent with development policy concept of “Compact City”. In brief, the current setting of planning and development of Ger area does not really catch up and manage its rapid expansion (Chinzorig, p.3) due to the lack of laws or regulations that support planning for the development of informal settlements. Also, the cycle of power change over different parties in governancy, together with less collaborative behavior among ministries reduces the effectiveness of any plan/policy, for this reason Ger area is still expanding in uncontrolled way.
4.1. ATTEMPTS TO UPGRADE THE GER AREA

Since 1990s, end of socialist planning period, Ger areas in Ulaanbaatar have been neglected and rarely integrated to the urban development policies and regulations. Such ignorance turned back as a serious urbanization of informality; unplanned and haphazard expansion of Ger areas, which puts tremendous pressure in the urban environment of Ulaanbaatar. This required serious response from government. Lately, a series of international and national efforts exerted to upgrade Ger areas of Ulaanbaatar and improve the living conditions of its inhabitants. Some of most prominent upgrading efforts will be discussed in the following sections.

4.1.1. Government Policies And Projects

The Government of Mongolia has an important role in urban development sector and does so in the development of Ger areas primarily through it’s Ministry of Construction and Urban Development. Its influence mostly derives from the legal framework that it promulgates, but it also implements a number of policies aimed to support the market, as well as implementing housing projects directly through specialised government agencies. The most important policies and projects that are developed for upgrading Ger areas are as follows.

4.1.1.1. Ulaanbaatar Master Plan 2030 - Ger area redevelopment policy

In recent years, the state has ceased to ignore the presence of the Ger settlements and has begun to plan towards systematic infrastructural improvement. The new Master Plan 2030 for Ulaanbaatar, approved in February 2013, does propose a strategy for the Ger settlements and does mark a significant shift in policy by integrating Ger areas into the city development strategy and infrastructure program for the first time. To control the spatial expansion of the city and to promote high-density development, clearer policy directions, “Compact City” concept of the Ulaanbaatar Master Plan 2030, have emerged.

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1 Interim Country Partnership Strategy: Mongolia, 2014–2016, Sectoral assessment summary, Water and other urban infrastructure and services
2 Ministry of Construction Urban Development, City Governor’s Administrative Office, UB city development Master Plan 2030 (English volume IV final), 2013
According to the master plan, Ger areas have defined and classified into three parts; central, middle and fringe Ger area in terms of it’s characteristics such as built-up density, status of connection to mains, socio-economic service, environment, and income level of residents by locations (see Figure 38). For each of these types, future development scenarios are foreseen (Patinet and Delmaire, 2014, p.16).

Figure 38. Ger district sections defined by Master Plan 2030 for Ulaanbaatar (Source: Ulaanbaatar City Development Strategy-2020 and Development Trend till 2030)

**Central Ger Areas – Incremental Upgrading:** Central Ger areas are those located closer to city’s urban core and they have potentially high access the standard level of services. They are under an initial assessment for gradual conversion into tall and medium tall apartment buildings (Bayartsetseg, 2015).

**Middle Ger Areas – Comprehensive Upgrading:** Middle Ger areas are those located around “central” Ger areas and bordered on all sides by other Ger areas. Mid-tier areas depend on tankers for water, stoves/boilers for heating, older pit latrines; have difficult access and high risks of flooding in some areas due to lack of drainage facilities and steep slopes (GUSIP, 2010, p.5). Even though residents in this Ger area receive limited level of services they intend to stay in their plots in the long run, making gradual
improvements in their housing and expecting improved urban services (Takuya et al, 2010, p.3). According to the Ulaanbaatar city development strategy-2020, area is considered to have self-sustaining utilities or partially connected to the city utility grid in addition to the development of mid-to-low rise apartments (UB-2020 Master Plan Summary, 2014).

**Peripheral Ger Areas – Redevelopment policy:** Peripheral Ger areas are those located around Middle Ger Areas that are expanding at an accelerating rate but lack any subdivision guidance or layouts. Residents are still claiming land and often reside on/ along hazardous sites (high-tension power lines, natural drainage channels, steep slopes, etc); and are a threat to natural resources (GUSIP, 2010, p.5). Households, mainly the new migrants, lack the standard level of services due to being located farthest from the primary infrastructure and services (Bayartsetseg, 2015). Redevelopment in this area is proposing to build low rise development, including private houses with self-sustaining utilities by 2020 (UB-2020 Master Plan Summary, 2014).

**4.1.1.3. TOSK – Housing program**

In recent years, Government of Mongolia has made several substantial attempts to meet the ever-increasing housing needs in urban areas, particularly in Ulaanbaatar, so that urban middle-low-classes living in Ger areas are able to get residential units in apartment areas at affordable prices. One of them is a housing program developed by TOSK. The State Housing Corporation known as TOSK (Mongolian acronym), established in 2006, is a government implementing agency designed to provide population with safe, sound and affordable housing through the implementation of the comprehensive set of policies on investment and financing on behalf of the Municipality, the Ministry of Finance, and the Ministry of Construction. The TOSK has successfully commenced several housing projects and programs within Ulaanbaatar; “Buyant-Ukhaa I” housing project district, a 1,700 unit development located by the airport which was completed in 2014; “Buyant Ukhaa II” project, a 2,600 unit development that is split into two phases, the first of which is near completion - and a block within the large-scale redevelopment of the 7th district, located just north of the city centre (MAD, 2015). Further housing projects are planned in the Yarmag area, although these remain at the early stages of the development cycle.

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4.1.1.2. 8% Mortgage Program

One of the important policies implemented by the Government of Mongolia to modernize the Ger areas is the “Housing Mortgage Program” which is designated to meet the housing need in Ulaanbaatar where more than half of the city residents live in unplanned neighborhoods called “Ger districts”. The new mortgage program was intended to support the urban middle-class and ‘Ger’ district dwellers in moving into on-grid, modern residential spaces at affordable prices so that Ger districts soon disappear (Real Estate Report, 2016). In 2013, Government of Mongolia launched the program, more popularly known as the “8% mortgage programme” due to its annual interest rate, targeted at first time buyers to purchase a home of less than 80 square metres with just a 30% deposit, over a period of up to 20 years, at an annual interest rate of just 8% (MAD, 2015, p.34). Following the introduction of the 8% mortgage scheme, the total loans outstanding grew by 20.1% month on month and 44.9% year on year directly. Reporting from December 2015 indicates that around 77,100 people had a mortgage loan (Real Estate Report, 2016). This shows that mortgage policy has succeeded to encourage citizens to occupy apartments. Although growth in number of borrowers and the volume of outstanding loans are positive factors, the program tends to favour middle class or wealthier buyers, which are most able to access the loans and fail to benefit low-income segments living in Ger areas (MAD, 2015, p.36). Many loans go to middle-income households refinancing a previous mortgage or purchasing a second home (AHI, 2014). Also, government housing mortgage program drove up the prices for homes; housing prices rose 30% between 2012 and 2013 (Raredon, 2014).

4.1.1.4. Discussion on Government upgrading attempts

To able to best understand upgrading methodologies and discuss the upgrading efforts driven by Government, each project, described above, has been evaluated according to five criterias that are considered to be critical (i) whether it is top down or bottom up implemented, (ii) whether it is integrated to the city-wide urban development plan (iii) whether it gives room for community participation (iv) whether it considers specific needs and issues of ger area, (v) what interventions have been made or are foreseen in the future. Following table summarizes the evaluation of each project driven by government.
### Figure 39. Table of evaluation on Upgrading project/policies driven by Government

<table>
<thead>
<tr>
<th>Government Upgrading Project/policies</th>
<th>Top down/Bottom up</th>
<th>Integration into city-wide development plan</th>
<th>Public participation</th>
<th>Sensitivity to Ger-area problems</th>
<th>Upgrading interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOSK Housing Program</td>
<td>Top down</td>
<td>Integrated</td>
<td>No</td>
<td>Less sensitive</td>
<td>Provision of public housing</td>
</tr>
<tr>
<td>8% Mortgage Program</td>
<td>Top down</td>
<td>Integrated</td>
<td>Yes</td>
<td>Less sensitive</td>
<td>Public housing finance</td>
</tr>
<tr>
<td>Ger area redevelopment policy</td>
<td>Top down</td>
<td>Integrated</td>
<td>Yes</td>
<td>High sensitive</td>
<td>Holistic interventions</td>
</tr>
</tbody>
</table>

The brief evaluation of policies and programs that are developed by Mongolian Government for upgrading Ger areas in Ulaanbaatar indicates that Government intensely promotes top-down approach which gives little consideration to the community involvement in decision-making process. Therefore, government upgrading attempts have been less sensitive to the specific needs and confronting issues of ger area residents. In terms of upgrading intervention, Government prioritizes “housing provision” as a means to improving the condition of Ger area. However, it appears that the government’s policy of housing provision has not been able to effectively and efficiently heal the condition of Ger area in Ulaanbaatar. This was mainly due to the fact that majority of Ger area residents do not have enough means (savings), therefore are not able to pay in advance any of the apartment buildings that the government proposes to build. Being acknowledged this fact, government offered reasonable payment possibility, 8% mortgage programme, to encourage residents in getting apartments. However, in practice low income households are often excluded from housing program because they do not meet the eligibility criteria established by commercial banks that requires 30 percent of the total cost as upfront payment (Ishdorj, 2017). Such thoughtless implementation requirements and criteria defeat the purpose of “affordability” stated in the title and mission of the policy and leave the majority of the low income and Ger district residents out of sphere. This is probably why Ger area residents give up and prefer to stay in Ger area and improve their house on their own on even if their quality does not fit the urban minimum standards. This largely explains why government’s policy on housing provision is being inefficient and unresponsive to the housing demand of Ger residents. Given this affordability issue, government should consider and further examine
other upgrading approaches such as low-cost housing or self-help housing options taking account of particular characteristics of Ger area and the resident’s preference.

4.1.2. Municipality of Ulaanbaatar (MUB) Policies And Projects

The Municipality of Ulaanbaatar has proved to be one of the most enthusiastic stakeholders in urban development and has played a central role in shaping Ger area of Ulaanbaatar through implementation of projects both independently and in cooperation with international partners. Followings are the most important policies and projects that are developed by MUB for upgrading Ger areas.

4.1.2.1. Affordable Housing Strategy

In 2013, Municipality of Ulaanbaatar has adopted an affordable housing strategy developed in cooperation with the Affordable Housing Institute and World Bank (AHI, 2015). The strategy elaborates a long-term policy for affordable housing in Ulaanbaatar and aims to reshape the housing landscape, by creating new tenure options, improving living conditions city-wide and enhancing the participatory mechanisms available to citizens with regards to urban development and planning (MAD, 2015, p.39). In addition to improving the living standards of citizens, providing affordable housing for middle income, low income and vulnerable households is expected to contribute to the alleviation of air and soil pollution in the city (Mendbayar, 2015). Such strategy was utterly needed in Ulaanbaatar, a city undergoing rapid urbanization, rising sprawl of informal Ger settlements, and worsening air pollution due to coal-burning stoves and a lack of formal infrastructure networks (AHI, 2015).

4.1.2.2. City Housing Program

Following the adoption of Affordable Housing Strategy, number of complementariness housing related activities and interventions are taking place in Ulaanbaatar. Taken together, these interventions form the City Housing Programme, which integrates all housing related activities under housing policy framework - as shown in Figure 39. If fully implemented, these activities will reshape the housing landscape in Ulaanbaatar, by bringing new units online, creating new tenure options, improving living conditions city-wide, and enhancing the participatory mechanisms available to citizens with regards to urban development and planning.
4.1.2.3. Ger Area Redevelopment Project

In 2013, Municipality of Ulaanbaatar started to implement “Ger Area Redevelopment” project, which is one of the main activities taking under the guidance of the City housing program (MAD, 2015, p.39). At the same time, redevelopment of Ger area was described as a central element of the Master Plan 2030 for Ulaanbaatar. The project is designating Ger areas for redevelopment and providing legal mechanisms and infrastructure systems that aim to improve overall living conditions in informal living quarters of Ulaanbaatar (MAD, 2015, p.41). The newly established Ger Area Development Agency, a part of the Muncipality, is in charge of its implementation. For the Ger area redevelopment, 24 sites from different location in Ger areas across eight districts have been selected by city authorities\(^1\), as shown in Figure 40. The sites will be developed privately, with the Municipality providing investments in trunk infrastructure so as to make the projects more attractive to private developers and facilitate capital inflow. The redevelopments are subject to an open tender process, with development companies bid on land by submitting a project programme, financial estimates, and a project timeline. However, it must be noted that there have been considerable problems with implementation process, relating primarily to land acquisition and the quality of the developments (use of non-durable materials) (MAD, 2015, p.41). Private ownership of land is generally high in Ger area and when it comes to land purchasing process, some landlords require high amount or refuse to sell their lands.

\(^1\) Ger Area Development Agency Report
This is a result of the underdeveloped nature of the compulsory land acquisition in Mongolia (MAD, 2015). Disagreement regarding land acquisition results in slow down in the pace of redevelopment process. Also, this slow pace is partially related to the overall economic condition in Mongolia, which means that
developers are having difficulty in raising capital to move forward with these projects (MAD, 2015, p.41). Moreover, construction processes usually take long time due to the harsh climate which brings seasonal impact on construction work. For these reasons, converting Ger areas into apartment complexes has not progressed as fast as the government expected. It seems that on site redevelopment may not be a right choice of upgrading as it takes vast amount of time.

4.1.2.4. Ger Area Housing Programme (GAHP)

In contrast to the Ger-area Redevelopment project which can be seen as a top-down implementation, Ger Area Housing Programme is much more participatory and community-based approach to redevelopment (MAD, 2015, p.41). GAHP provides information and trainings to residents so as to help them readjust and develop their land. Until 2015, it has provided 966 trainings to over 65,000 residents. As a result of these trainings, some 986 community groups have been created and eight groups have gone sufficiently far to have their neighbourhoods designated as land readjustment project sites. In each of the eight sites, GAHP has worked with local residents to develop detailed local development plans, which will see the construction of various housing modalities - including apartments, townhouses, and detached houses. While these plans reflect residents wishes and desires, relatively little attention has been given to their to financing arrangements and financial sustainability (MAD, 2015, p.41).

4.1.2.5. Discussion on Municipal upgrading attempts

To able to best understand upgrading methodologies and discuss the upgrading efforts driven by the Municipality of Ulaanbaatar, each municipal efforts, presented above, has been evaluated according to five criterias that are considered to be critical (i) whether it is top down or bottom up implemented, (ii) whether it is integrated to the city-wide urban development plan (iii) whether it gives room for community participation (iv) whether it considers specific needs and issues of ger area, (v) what interventions have been made or are foreseen in the future. Following table summarizes the evaluation of each project driven by MUB.
<table>
<thead>
<tr>
<th>Municipality Upgrading Project/policies</th>
<th>Top down/Bottom up</th>
<th>Integration into city-wide development plan</th>
<th>Public participation</th>
<th>Sensitivity to Ger-area problems</th>
<th>Upgrading interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable Housing Strategy</td>
<td>Top down</td>
<td>Integrated</td>
<td>No</td>
<td>Less sensitive</td>
<td>Provision of affordable housing</td>
</tr>
<tr>
<td>City Housing Program</td>
<td>Top down</td>
<td>Integrated</td>
<td>No</td>
<td>Less sensitive</td>
<td>Housing provision</td>
</tr>
<tr>
<td>Ger area Redevelopment Project</td>
<td>Top down</td>
<td>Integrated</td>
<td>Yes</td>
<td>Less sensitive</td>
<td>Onsite redevelopment</td>
</tr>
<tr>
<td>GAHP Ger-area housing Program</td>
<td>Bottom up</td>
<td>Integrated</td>
<td>Yes</td>
<td>High sensitive</td>
<td>Housing improvement</td>
</tr>
</tbody>
</table>

**Figure 43. Table of evaluation on Upgrading project/policies driven by MUB**

The brief evaluation table of policies and programs that are conducted by Municipality for upgrading Ger areas clearly shows us that Municipality of Ulaanbaatar largely promotes top-down approach as a manner in their project development. Indeed, Municipality tries to obtain extensive community involvement in their upgrading projects, however, surprisingly upgrading interventions appear to be less responsive to the specific needs and confronting issues of ger area residents. Insights from upgrading practices driven by MUB confirm that Municipality emphasizes *affordable housing policy* as a way to contribute to the relief of affordable housing needs and to improve living conditions in informal living quarters in Ulaanbaatar. MUB housing policy translates into a reality through projects such as “Redevelopment project of Ger-area” and “Ger-area housing program”. Indeed, the implementation of redevelopment Ger area persists to be a difficult task because it tends to be limited by several practical, regulatory and institutional constraints. A possible lack of certain skills and resource and a lack of commitment on land acquisition on the local authority’s side led to a slow progress in project implementation and hence to frustration among the Ger area residents. The pace of on site redevelopment of Ger areas is too slow to catch the pace of Ger settlement growth in Ulaanbaatar. In addition, the unclear determination of which groups should be eligible or prioritised for affordable housing challenges the allocation of apartment units brought online through the Ger area redevelopment programme (MAD, 2015). At present, even foreigners can purchase affordable housing units produced through Ger area redevelopment. This means that MUB’s
project of affordable housing does not effectively benefit the target group; Ger area residents. MUB projects proceed with little or no research, and the affordable housing problem is treated as one of quantity, and little thought is given to incorporating social and economic stratification. For these reasons, the potential to transform the Ger districts into better living space for the majority of its residents does not necessarily lay in the housing provision through demolition and replacement of apartment units. Investment by the municipality in infrastructural improvements and services is much needed for these areas.

4.1.3. International & Non Governmental Organisation Projects
Since early 1990s, a host of international organisations started to actively engaged in shaping its urban spaces in Mongolia, especially Ulaanbaatar. The most significant actors are undoubtedly the Japan International Cooperation Agency (JICA), the Asian Development Bank (ADB), and the World Bank, also NGOs like the Asia Foundation are involved in develop effective policies and programs to address the urban development issues (MAD, 2015). Since early 2000’s, a wide range of international projects have been carried out in Mongolian yurt quarters, particularly in the capital city. The most significant policies and projects that are developed for upgrading Ger areas are as follows.

4.1.3.1. Improving the Living Environment of the Poor in Ger Areas of Mongolia’s Cities (2002-2005)
In 2002, as requested by Mongolian Government and Asian Development Bank developed an innovative poverty reduction project to pilot sustainable approaches for addressing housing-related poverty in selected Ger areas of Mongolia’s cities (ADB, 2002). The project has been prepared through intensive consultation with local and central government agencies, non-government organizations, the poor, and other aid agencies (ADB, 2002). In addition to urban poor in UB Ger area, the project targeted the poor and low-income groups in selected Ger areas of other ten participating cities and province centers as shown in the Figure 41.1

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1 ADB. Improving the Living Environment of the Poor in Ger Areas of Mongolia’s Cities Project
The project was designed to have four components:
- Piloting sustainable opportunities for housing finance for the poor
- Demonstrating viable and sustainable approaches for operating public bathhouses
- Using community assets to reduce the costs of housing for the poor in Ger areas and improving the housing environment through briquette making and greenhouses
- Project management and poverty impact assessment (ADB, 2002)

**4.1.3.2. GUSIP- Ger area Upgrading Strategy and Implementation Plan (2005-2010)**

In 2005, with technical assistance from UN Habitat and financial assistance from Cities Alliance, the MUB adopted a grant proposal, *Ger-area Upgrading Strategy and Investment Plan* (GUSIP) for Ulaanbaatar, focused on Ger area upgrading and development in a consultative and coordinated manner (Cities Alliance). Meanwhile, it has provided a strong vision into preparations for Ger area redevelopment policy of the 2020 Master Plan¹. GUSIP set out a framework to develop the Ger areas through a structured consultative process which systematically assesses the development issues in the Ger areas of Ulaanbaatar city.

¹ UN-HABITAT. Upgrading Strategy and Investment Plan for Ulaanbaatar
Based on detailed analysis of characteristics and development issues, the project conceptualized three types of Ger areas: Central, Middle and Peri-urban (2007). According to the type of Ger areas, various urban upgrading approaches were analysed and area-specific strategic options and guidelines were formulated for each of the three types of Ger areas. Overall, the project helped identify possible solutions to sustainably improve the quality of life in Ger areas.

The main activities include:

- Development of a Citywide Pro-poor Ger-area Upgrading Strategy of Ulaanbaatar City
- Urban Development Guidelines focusing on three types of Ger areas
- An "Investment Programme" for the upgrading of three types of Ger areas in Ulaanbaatar
- Preparation and implementation of "Ger-area Improvement Action Plans"
- Project will also develop and implement an "Institutional Strengthening Strategy" with the involvement of Mongolian institutes and universities
- Formulate and implement "Knowledge-sharing and Policy Learning" mechanisms for national replication.

Extensive research and data-gathering initiatives under the GUSIP programme have yielded a lot of previously undocumented information on Ulaanbaatar. Also, by inviting Ger area residents to participate in community planning and development, GUSIP has helped policy makers and implementers to better recognize the condition of people living in Ger areas (Cities Alliance).

### 4.1.3.3. Urban Services and Ger Areas Development Investment Program (2012-2013)

Asian Development Bank (ADB) worked with the Municipality to implement the Urban Services and Ger Areas Development Investment programme (MAD, 2015, p.41) which supports the Ulaanbaatar City master plan in upgrading core infrastructure service and economic hubs (subcenters) in Ger areas. The project aims to promote inclusive peri-urban development and facilitate densification in Ulaanbaatar’s Ger areas by combining spatial and sector approaches as follows (ADB, 2016).

The main approaches supported by the program are:

- **Development of Subcenters;** which will provide Ger area residents with basic socioeconomic facilities and support local economic development; allow residents and businesses to take advantage of the dynamics of an urban economies to diversify, innovate, and help create a more vibrant, more competitive, and more inclusive city. At the same time, establishing a network of well-developed subcenters is deemed to transform the highly centralized city structure into a
decentralized, well-balanced and efficient city structure\(^1\). In this way, it will contribute in redressing the traffic congestion and pollution issues\(^1\).

**Figure 45.** Subcenter development proposal (Source: Ulaanbaatar 2020 Master Plan and Development Approach 2030 - Public Summary)

- **Redevelopment of core basic infrastructure and services**; which will improve infrastructure within the Ger area subcenters and connectivity with the city core center. Provision of infrastructure is critical for inclusiveness and important to facilitating the movement of people and goods\(^2\). Thus, better planned network of infrastructure and services will improve residents access to basic urban services, public space, and socioeconomic facilities; allow residents and businesses to take advantage of urban economies\(^3\).

This proposal of establishing of city subcenters as points for supporting public and private investment is laudable and can be a way to balance the population density and diversity of land uses in light of the urban expansion trend in Ulaanbaatar.

\(^1\) Master Planning Agency of the Capital City. Ulaanbaatar 2020 Master Plan and Development Approach for 2030. (General Summary for Public, 2014)

\(^2\) Asian Development Bank, Ulaanbaatar Urban Services and Ger Areas Development Investment Program-Tranche 1

\(^3\) Asian Development Bank, Ulaanbaatar Urban Services and Ger Areas Development Investment Program: Sector Assessment Summary
4.1.3.4. Community Led Ger Area Upgrading in Ulaanbaatar (2009-2013)

Since 2006, UN Habitat has been working in Mongolia for addressing the larger issues of human settlements and urbanization particularly focusing on Ger area development through integrated and community-led approaches with close cooperation of national and local governments (UN Agencies in Mongolia). In 2009, UN-Habitat implemented the Community-Led Ger Area Upgrading in Ulaanbaatar City Project with cooperation of Municipality of Ulaanbaatar (MUB) and Ministry of Road, Transport, Construction and Urban Development (MRTCUD) through the financial support of the Government of Japan\(^1\). The project had a following priorities:

- To empower the Ger area communities through social mobilisation and organisation
- To support community-based assessment and prioritisation of local needs for Ger area upgrading
- To improve the quality of life of selected Ger area communities by improving infrastructure and services by using community-led processes
- To document and monitor project implementation progress and improvements in urban governance

The expected result was to improve the quality of life of approximately 50,000 Ger area residents in Ulaanbaatar city through community-led Ger area upgrading in selected project sites (UN Habitat Mongolia). Community-Led Development approach helped citizens on being able to decide themselves which projects have greater priority in their quarters (Kleinschroth, 2014). Ger area residents participated in seminars and trainings and identified their needs. They initiated implementation of small-scale improvement projects like footpath, playground and contributed to the development of their khoroo, district and city.

4.1.3.5. Discussion on international upgrading attempts

To able to best understand and discuss the upgrading efforts driven by international donor organizations, each project, presented above, has been evaluated according to five criterias that are considered to be critical (i) whether it is top down or bottom up implemented, (ii) whether it is integrated to the city-wide urban development plan (iii) whether it gives room for community participation (iv) whether it considers specific needs and issues of ger area, (v) what interventions have been made or are foreseen in the future. Following table represents the evaluation of each project driven by international donor organizations.

\(^1\)Community-Led Ger Area Upgrading in Ulaanbaatar City. [http://www.fukuoka.unhabitat.org/](http://www.fukuoka.unhabitat.org/)
<table>
<thead>
<tr>
<th>International Upgrading Project/policies</th>
<th>Top down/ bottom up</th>
<th>Integration into city-wide development plan</th>
<th>Public participation</th>
<th>Sensitivity to Ger-area problems</th>
<th>Upgrading interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving Living Environment of the Poor in Ger Areas</td>
<td>Top down</td>
<td>Not integrated</td>
<td>Yes</td>
<td>High sensitive</td>
<td>Housing finance and Onsite development</td>
</tr>
<tr>
<td>GUSIP</td>
<td>Top down</td>
<td>Integrated</td>
<td>Yes</td>
<td>High sensitive</td>
<td>Holistic interventions</td>
</tr>
<tr>
<td>Urban Services and Ger Areas Development Investment Program</td>
<td>Top down</td>
<td>Integrated</td>
<td>No</td>
<td>Less sensitive</td>
<td>Holistic interventions</td>
</tr>
<tr>
<td>Community-Led Ger Area Upgrading</td>
<td>Bottom up</td>
<td>Not integrated</td>
<td>Yes</td>
<td>High sensitive</td>
<td>Physical improvement</td>
</tr>
</tbody>
</table>

*Figure 46. Table of evaluation on Upgrading project/policies driven by international agencies*

The brief evaluation table of upgrading policies and programs conducted by international agencies devoted to Ger areas indicates that, in contrast to the upgrading efforts handled by national and local authority, upgrading practices driven by international organizations are not fully integrated into the city-wide development. While international projects are dominantly held with top-down approach as a manner in their project implementation, they are highly sensitive and well responsive to the specific needs and confronting issues of Ger area residents owing to the extensive public participation in their upgrading projects. Insights of international upgrading interventions reveals that as way to improve living conditions of Ger area, holistic interventions including physical and infrastructural improvements, social and economic development are rather promoted over housing provision. In brief, it seems that upgrading attempts driven by international agencies are way more effective in addressing Ger area problems and improving living conditions than that of national and local authority only. In this regard, national and local authority can draw a lessons from these practices and better modify their upgrading approaches.
So far, beyond these major projects mentioned above there are numbers of small scale projects have been introduced by international donor organizations and NGOs for the improvement of living condition in Ger area. For example; the World Bank conducted a study on urban service delivery within Ulaanbaatar and provided piped water to water stations, giving thousands of people better access to clean water. The World Bank also introduced more efficient stoves that burn much less coal and is now developing a clean air project. The International Finance Corporation (IFC) developed into micro-housing finance (Lawrence, 2009). Korea’s cooperation agency – KOICA has implemented projects in urban infrastructure and on land data (MAD, 2015). As for NGOs the Asia Foundation collaborate with the Municipality on community mapping, aerial mapping and urban services (MAD, 2015). The cumulative effect of this international involvement is enormous in bringing more resources and expertise on upgrading and it gives planners and policymakers an invaluable opportunity to learn from international practices so that they improve future ones. While all of these organisations have good intentions and expertise on upgrading, coordination between these various organisations and is limited and with many holding different preconceptions relating to upgrading, competing conceptions and visions for Ulaanbaatar’s urban development risk undermining the coherence of the city as it grows (MAD, 2015, p.43).
4.2. CHALLENGES AND LIMITATIONS IN UPGRADING

The Mongolian government agencies, in association with a series of international organisations, initiated ambitious programmes and projects to deal with Ger districts of Ulaanbaatar and complexities associated. Indeed, when it comes to implementation, some physical constraints particular to Ger area together with regulatory and institutional burdens raise difficulties and challenge the implementation of Ger area upgrading practices. The below list is by no means comprehensive, but covers those which are most prominent.

4.2.1. Physical constraints

4.2.1.1. Harsh climate

Ulaanbaatar is characterised by extreme climatic conditions and is one of the coldest capitals in the world; winters are bitterly cold and dry temperatures in winter drops to −36 to −40 °C. (World Atlas, 2016). Under such extreme weather conditions, dealing with the ramifications of large informal settlements in unplanned locations and effectively delivering services to all the city’s residents is a massive challenge (Norovsambuu et al, 2013). Aimed at upgrading Ulaanbaatar’s sprawling informal residential neighbourhoods, government established series of residential development projects which significantly response to shortfalls of affordable housing stock. Accordingly, construction activities started to be intensified in Ulaanbaatar. However, Mongolia’s harsh climate brings seasonal impact on construction work; from October to April temperatures drop as low as -40°C, putting construction activity almost completely on hold for about seven months (NAMEM, 2015 & Real State Report, 2016). Most local construction firms carry out their business only during the short summer period (Real State Report, 2016) and this seasonality negatively impacts all the facets of construction industry; instability in materials prices, distraction in labour contracts and delay in delivery schedules of development projects (MAD, 2015 & Real State Report, 2016). Most importantly, this increases significantly the cost of development, as well as makes it harder to attract investment. For this reason, new residential units are often assigned to a price that the majority of residents living in the Ger area never afford immediately. This explains why government policy on affordable housing have been inefficient and why the Ger areas have continued to grow.
4.2.1.2. **Topography**

That the city of Ulaanbaatar is located in a valley along the Tuul river and is surrounded by four sacred mountains which are Bogd khan (natural protection area), Songino Khairkhan, Chingeltei and Bayanzurkh is the reason why the city struggles for space as urban population grows (Saizen et al, p.1). Today, most of the relatively flat land in Ulaanbaatar is already built up and developed. For these reasons, Ger areas has been enchroaching over the hillside of valley toward the north and northwest fringe of the city, mainly over mountainous and steep areas (Radnaabazar et al, 2004). It is common experience that people dug lands on the steep slope, fence and place the gers. JICA (2005) reported that ger areas mostly correspond with the areas topographically on steep slopes are prone to flash-floods. Therefore, most of Ger area land in the fringe, where slope is greater, is risky and not suitable for permanent development. For this reason, topographical features poses big concern for upgrading Ger areas.

4.2.1.3. **Density**

The challenges in upgrading Ger area exacerbated by the low-density settlement pattern of Ger districts which means any service connections need to be spread over greater distances significantly increase the cost of delivering essential urban services such as water, electricity, waste management, and transportation (Norovsambuu et al, 2013). Although various development organizations have been providing technical and financial assistance for the improvement of basic infrastructure and services in the Ger areas for years, the vast size of the low density areas makes it difficult to have a decisive impact (Norovsambuu et al, 2013).

4.2.2. **Legal and institutional limitations**

4.2.2.1. **Lack of coordination**

Currently, Ulaanbaatar relies on several dozens of national government bodies, municipal departments, private sector agencies and local non-profits for delivery of land use, land allocation, and housing policies (Lee, 2015). Involvement of international donor organization broadens the sphere even further. Cooperation among these organisations in charge of urban planning and land administration, greater interaction among them over challenging issues and the identification of joint objectives, strategies and policy implementation is vital in successful upgrading (Byambadorj et al, 2011). However, apparently there is serious bureaucratic maze and lack of coordination mechanism among multiple organizations and agencies (Raredon, 2014). Each organisation having its own preconceptions, biases, and preferences, different visions and development schemes are being pushed and promoted accordingly, the result is
overlapping and competing interests between government agencies and disconnect between Master Plan and actual allocation of land, which leads to fragmentation and adds substantially to costs for both the public and private sectors (Raredon, 2014 & MAD, 2015). Indeed, all of these actors and projects should have coherence and conform to single strategy for development planning. Otherwise, Ulaanbaatar runs the risk of becoming a confused city caught between competing priorities in which no single vision is achieved.

4.2.2.2. Political interference
The transition to post-socialism has resulted in a government system that is highly politicized and institutionally weak (Batbileg, 2007). Since early 1990s, Mongolia’s government has experienced constant turnover in party control of the state’s government and Parliament in every 4 year and it becomes regularity that ruling political party determines the main policies in all sectors, including land reform and urban planning (Reeves, 2014 & Byambadorj et al, 2011). With each change in power following a parliamentary election, policy directions and institutional structures are often significantly changed responding to the new ruling party (Byambadorj et al, 2011). The new majority party would seek to drop the previous government’s policies and apply their own policies and replace former personnel with their own party-affiliated staff (Reeves, 2014). Just as the party in power seemed to solidify its control and progress its development policies, a new election would end all progress and reset the political landscape (Reeves, 2014). Such turnover results in state’s inability to engage in any long-term planning and discontinuity in policy enforcement. For this reason, many development projects often get stagnated right after the election cycles. In brief, political conflicts play a significant role in hampering implementation of upgrading projects in Mongolia. So, ensuring political stability is vital condition in achieving effective upgrading practices.

4.2.2.3. Private land and lack of compulsory acquisition
As mentioned before, the land of Ger districts is privately owned by their residents and their landownership rights are protected by the land law, so do the most properties/dwellings in Ger areas. The Mongolian government and private development firms lacks the capacity to forcibly acquire land in an effort to meet the objectives of urban planning and associated construction purposes (Byambadorj et al, 2011). To date, the only regulation associated with the compulsory acquisition of land is an article 32 of Law on Allocation of Land to Mongolian Citizens for Ownership (2002) where the state has the right to acquire privately owned land with compensation on the grounds of “special public needs”; (i) to provide
national security infrastructure; (ii) to establish a science experiment field; or, (iii) to build a state road and infrastructure (Byambadorj et al, 2011). However, to build an apartment area is not a sufficient reason to allow state acquisition of land under article 32, which directly challenge the redevelopment of the Ger districts. For instance; the “Ger Area Redevelopment” project, one of the upgrading attempt seeking for on site conversion of Ger area into apartment complexes, is struggling with the issue of land acquisition. The government try to expropriate the land through compensation. Indeed, negotiations between developers and landowners often get exhaustive and time consuming as some landlords refuse to sell their lands or they request high amount as compensation. Due to the underdeveloped nature of the land valuation industry in Mongolia, there are considerable difficulties in valuing land of Ger areas. Therefore, with no established land valuing methodologies, it is inevitable that landlords value their land as much as they want. In this way, lack of effective policy for compulsory acquisition and land valuing system are considered as major challenges.
CHAPTER V

This chapter will try to make recommendations based on the insights from a study of Ger district in Ulaanbaatar and ongoing policy implications and projects for it’s upgrading. There are several key aspects, not only physical but also of social and organizational, to consider in the future formulation of upgrading policies for ger area by means of improvement and formalization.

5.1. Key considerations and recommendations

5.1.1. Local context

Although the current living conditions and bearing problem of Ger area seem to be identical to that of informal settlements in other developing countries, the nature of ger districts in Ulaanbaatar are highly differentiated from those informal settlements in other developing countries. Ger (felt tents) - a symbol of a housing type that is unique to Mongolia, private land ownership – a root of secure tenure in ger area, among others position the Ger districts of Ulaanbaatar as a unique residential quarters that aligns with neither the informal settlements, which dominate cities of the developing world nor with the private formal ownership systems, which operate in market economies (Byambadorj et al, 2011). Therefore, ger districts of Ulaanbaatar should not be necessarily treated in the same way that other developing countries follow in their upgrading practices. Rather, upgrading policies regarding Ger districts should be inherent in to the local context and the peculiarities of national and urban settings. Ger area analysis carried out in Chapter III clearly showed that tenure security and individual housing are not seen as a priority area. What came out as crucial was the need of improvements in the supply of basic infrastructure and social services. According to the survey on resident’s preference, both those living in urban and ger areas do like to continue to live in ger areas if infrastructure services are decently improved (David, 2015). Nevertheless, instead of focusing on service provision, national(policy developers) and local(policy implementers) authority has deeply encouraged affordable housing policy and programs as a upgrading instrument which are not sensitive enough to the means of vulnerable low-income ger residents. This largely explains why some of ongoing improvement projects/policies discussed in the chapter IV were insufficient and inefficient in tackling ger districts. Therefore, it is essential to have a good understanding of the characteristics of Ger area and community and its specific needs and interests not only in terms physical but also social and economical aspects. This implicates that there is a need of extensive community surveys to gather relevant quantitative and qualitative information, including: social, demographic and economic facts, livelihood strategies, social networks and level of community organisation, power relations, possible conflicts within the particular area, physical characteristics of the settlement.
5.1.2. Public participation

Participation is an important aspect in informal settlement upgrading as the operation and maintenance of upgrading projects depend to a great extent on the active participation of community and common understanding between various actors (Shams, 2004). While in the case of Mongolia, much of the policy development and its implementation follows a top-down process leaving little opportunity for public consultation and engagement in decision-making and planning matters (Byambadorj et al, 2011). In fact, Ger area resident’s involvement is highly important in delivering effective solutions to the urbanization of informality in Ulaanbaatar. The reason is that Ger area and their residents have a unique feature which is related to the 2002-land privatization law according to which every citizen is eligible one time to acquire for free a land. By now, over 90% of Ger areas’ residents have privatized the plots of land (Ishdorj, 2017). Once the land is privatized and owned by ger residents, the government’s any policy regulation regarding ger area cannot be enforced regardless of considering the land owners and their rights. Land owners are better aware of the potentials of living in ger area and the specific needs and concerns that need a response. This awareness is essential in fostering implementation of policies on improvement of ger areas. This is why the participation of those who live in Ger areas is critically important in decision-making process. In this regard, government should leave larger room for public engagement to motivate and educate people in Ger area so that ger area community can be able to organize themselves, identify their needs and have their voice in any development decision concerning Ger area. Being literate Residence of Ger district in Ulaanbaatar have better advantage and possibility to be empowered.

5.1.3. Political and institutional environment

Upgrading is a complex undertaking and it takes a lot of skills and patience and requires a very powerful as well as stable political environment and institutional setting to carry it out successfully (Ehebrecht, 2014). However, such preconditions are often unmet in the upgrading experience of Mongolia and this leads to interruptions in policy implementation in the first place and end with project suspension or failure. As discussed before, current political system of Mongolia and the corresponding institutional arrangements tend to be weaker and unstable as its structure changes in every 4 years due to the habitual turnover of party control. With each change, policy directions and institutional structures are significantly changed responding to the new controlling party (Byambadorj et al, 2011). For this reason, state hardly engage in any long-term planning and policy enforcement. Besides, there is a deeply rooted corruption
among Mongolia’s politicians and business; politicians tend to advance their own interest over those of society and businessmen habitually bribe politicians to act on their behalf. This often leads misallocation of state funds for political gain and most importantly, undermines development planning and projects. In brief, political conflicts play a significant role in hampering implementation of upgrading projects in Mongolia. This means that there is a urge to deal with these issues. Policy enforcement and it’s application can be strengthened if the new majority party continue to implement the previous government’s policies instead of dropping and applying their own policies. Similarly, institutional settings can be improved if new party can avoid of replacement of former personnel with their own party staffs. The scope of corruption can be reduced through establishing more transparent, accountable system for planning and implementation. Strict legislation aimed at limiting the conflict of interests between politicians and businessmen and the relations can be also developed.

Besides, interdepartmental cooperation is also important in upgrading project management as it can secure coordination of state planning, budgeting and accountability processes to create the possibility of more integrated support to informal settlements. Indeed, the state of Mongolia hardly achieves efficient coordination between various ministries and departments, so does in their actions. It is a common practice that ministries launch their own development schemes and define their activities independently, which results inconsistent actions that both overlapped and contradicted with one another’s plans (Reeves, 2014). The result is a disharmony of narrowly defined activities that increasing misallocation of resource. Above all, now it appears that government should promote institutional cooperation which will secure a unification in actions between the various ministries.

5.1.4. Density of Ger area

Another key aspect to consider in the future formulation of upgrading policies for ger area is much related to the physical structure of the settlement, particularly the density of ger districts. Due to allocation of large residential plots or each individual, not household, issued by “2002 - Law of Allocation of Land to Mongolian Citizens for Ownership”, expansion of low-density ger district has occurred along the urban fringes, which imposes heavy costs on public transportation and the provision of basic utilities for ger residents. Exemptions and discounts to land fees and taxes have reduced possible source of revenue for financing basic services provision and maintainance (World Bank, 2015, p.3). On the account of long distance and high unit costs of infrastructure provision, the ger residents have been unable to afford individual connections to the basic services. Likewise, the city authority has been unable deliver comprehensive public services in many ger areas due to the limited resources and capability (World Bank,
Indeed, the development challenges associated with the Ger areas can be reduced to a certain extent if issues of decent infrastructural services delivery, such as sanitation and sewage facilities, drainage system as well as granting access to central heating system, are duly addressed. Presumably, densifying the Ger area, grouping residents together, would make it easier to provide better urban services with higher efficiency and could reduce the cost of service connection (Kamata et al, 2010). But, the question lies in how to implement such efforts. To some extent, density reflects the city’s land allocation system and management practices, therefore the potential way to encourage densification in ger area could be the development of land regulation system that promotes high-density development through efficient use of land and stricts control over expansion of less-dense urban form. However, such mechanism has not yet been properly developed.

5.1.5. Land regulation system

The role of land ownership and land regulation system in upgrading process is grand because it is possible to guardian and manage urban development though the land system. To be able to upgrade informal settlements in the first place, the type of land on which the informal settlement is located must be suitable for permanent settlement or be made suitable through rehabilitation (Ehebrecht, 2014). If the land is suitable for development, then the land ownership; preferably state-owned land would facilitate the upgrading process. If it is privately-owned or designated for other uses such as transportation and industrial use or prone to flooding and other hazards, then upgrading would be very difficult to realize (Ehebrecht, 2014). This assumption has been proved as in the upgrading process of Ger area in Ulaanbaatar. Poor land management practices in Ulaanbaatar have allowed land allocation to occur in hazardous areas subject to flood, fire, and chemical exposure risks (World Bank, 2015, p.13). Poor residents who are not able to move from these places complicate the upgrading process. Besides, the combination of high rate of private land ownership among ger area, inadequate mechanisms of land acquisition and land valuation pose a many difficulties during the implementation process of upgrading projects of Ger area. Therefore, to facilitate the development in Ger area, government should strengthen the legal settings regarding land management system through establishing a common methodology for valuing and acquiring land. This will require significant reforms in current land laws but once they are coherently revised, they would simplify the negotiation process between landlords and developers, smooth the land acquisition problems that have been commonly experienced in current Ger area upgrading practices (MAD, 2015).
In addition to that, preventive actions against the spatial growth of Ger area should be considered seriously as a means to contribute to effective formalization of ger settlement. In this regard, counter-growth urban land policy, precise land-use regulation and their effective application on the city’s territory appears to be essential in restricting encroachment around the city (Narumasa, et al, 2015). Land-use regulations should be used as a means to encourage density levels that make the provision of infrastructure more affordable through the efficient use of urban land, rather than supporting development through allocating vacant land in peripheral areas (World Bank, 2015). However, the reality is that country’s land allocation law (guaranteeing a plot of land for urban residential use) has contributed to urban expansion of Ulaanbaatar, predominantly in the form of ger area toward the edge of the city, since the country’s transition to a democratic government and market economy. It seems that current land law and allocation policies sustain inefficient land consumption, particularly an expansion of informal market where land and property values are misrepresented or not reported (World Bank, 2015). Also, the current practice of allocating “no-cost/low cost” urban land for residential use does not allow city to obtain adequate revenue from privatized land and property, although it is responsible for granting land permissions and providing infrastructure to the city (World Bank, 2015). The revenues are proving inadequate to meet the needs of urban management. Based on these grounds, it appears to be that city should consider substantial changes in the legal and administrative settings regarding land management to not only prevent the ger area expansion but also contribute ger area upgrading.

Furthermore, the situation of ger area could be improved through efficient and different use of land that gives economic dynamism, improves mobility, and supports social integration. So far, land use regulations in Ulaanbaatar have been rigid and encouraged segmented land uses. The city center holds the concentration of important government offices, along with employment and commercial centers, while ger areas are predominantly residential and absent of sufficient commercial and public services. Due to such segmented land use system, ger area residents, who are comparatively poorer than residents who live near the city center, are imposed to comparably higher costs and longer travel time to reach the commercial and administrative services in the city center (World Bank, 2015). Most importantly, being not flexible enough to respond market demands and social needs, current land use system of UB becomes the biggest contributor to the growth of social, economic and spatial inequalities between ger area and city center. For this reason, the city needs to incorporate an alternative set of land use regulations that support more efficient land-use system encouraging mixed land uses - a concentration of residential, commercial, and public services within close proximity to one another. In order to allow more flexibility in accommodating demands for different land uses and to increase the areas that allow for mixed land
uses, policies like zoning and development standards can be introduced in ger area. Doing so may help ger districts improve spontaneously.
ABBREVIATIONS

ADO = Asian Development Bank
AGC = Asian Games Committee
ARP = Asian Regional Planning
ASPAC = Asia Pacific
ASRI = Asian Solid Waste Research Institute
EIA = Environmental Impact Assessment
EUR = European
mil = million

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