

IMPLEMENTATION OF LAND READJUSTMENT PROCESS IN KABUL, AFGHANISTAN

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Abstract— Kabul, the capital city of Afghanistan is the fifth fastest growing city in the world, whose population has increased fourfold since 2001 from 1.2 million to 4.8 million people. The main reason of this increment is identified as the return of Afghans migrated during the civil war. In addition to the return of immigrants, a steep economic growth due to the foreign assistance in the last decade creating lots of job opportunities in Kabul resulted in attraction of individuals from the neighboring provinces as well. However, the development of urban facilities such as water supply system, housing transportation and waste management systems has not yet to catch up to this rapid increase in population. Kabul city has developed traditionally and municipal governance had very limited capacity to implement municipal bylaws. As an unwanted consequence of this growth 70% of Kabul citizens contributed to developing informal settlement. Around three million people living in informal settled areas, lacking the very vital social and physical infrastructures of livelihood.

This research focuses on a region with 24 ha area and 4436 residents in the center of Kabul city. A comprehensive land readjustment concept plan has been formulated for this area. Through this concept plan physical and social infrastructure has been demonstrated and analyzed.

Findings of this paper propose a solution for the problems of this unplanned area in Kabul which is readjusting of unplanned area by a self-supporting process. This process does not need governmental budget and can be applied by government, private sectors and landowner associations. Furthermore, by implementing the Land Readjustment process, conceptual plans can be built for unplanned areas, maximum facilities can be brought to the residents' urban life, improving the environment for the users' benefit, the transport system and economic status (the value of land increases due to infrastructure availability and land legalization). In addition to all these benefits for the public, we can raise the revenue of government by collecting the taxes from land owners. This process is implemented in most of countries of the world, it was implemented for the first time in Germany and after that in most cities of Japan as well, and is known as one of the effective process for infrastructural development.

To sum up, the notable characteristic of the Land readjustment process is that it works on the concept of mutual

interest in which both land owners and government takes advantage. Though in this process, the engagement of community is very important and without public cooperation this process can face the failure.

Index Terms— Land Readjustment, Informal settlement, Kabul, Afghanistan

I. INTRODUCTION

Kabul is the capital of the Islamic Republic of Afghanistan as well as the largest city of Afghanistan, located in the eastern section of Afghanistan. According to a 2012 estimate, the population of the city was around 4.8 million, which includes all the major ethnic groups [1]. It is the 64th largest [2] and the 5th fastest growing city in the world [3].

Kabul city is characterized by a rapid growth of urban population on an unprecedented scale. Therefore, the construction and urban real estate business are major sectors to drive the current economic growth of Afghanistan. The Afghan Government, however, cannot take effective measures to control illegal land transactions and land grabbing, proliferation of informal settlements on steep hills, and other undesirable activities resulting from the rapid urbanization. Informal settlements shelter almost 80% of residents in the Kabul city, covering some 70% of the urbanized area. The Kabul city has experienced massive inflow of people especially after 1990s, and the majority of migrants have been informally housed.

Informal settlements are classified into four categories, depending on the ways of land acquisition 1) settlements where most houses are built on privately owned land, 2) squatter settlements on public land, 3) settlements where most houses are built on grabbed land or land bought from land grabbers, and 4) settlements where there are ambiguous legal situations. Each type is described as follows

(1) *Settlements on private land* Informal houses built on private land having customary deeds constitute a significant portion of dwellings in Kabul. They are not legal owners in a

strict sense, but regarded as de facto owners. They have acquired their ownership for their land through purchase from customary or traditional landowners. Their customary land deeds are usually counter-signed by the Wakil or community chief of the Gozar or sub-district concerned.

(2) *Squatter settlements on public land* Many internally displaced people have encroached on public lands and built their houses to form squatter settlements. Some of them are built on steep slopes of hills running throughout the city. In case where the houses are considered dangerous due to landslides and other risks, eviction and transfer of settlers may be directed. In most other cases, the legal status of such squatter settlements is examined, and the original situations of the land before the occupation investigated. Pursuant to Article 1992 of the Civil Code, "dead land" that has no owner shall be deemed as the property of those who had acquired it. The person who makes use of the land shall be considered the landowner once the government permission is obtained.

(3) *Land grabbing* Land grabbing by powerful persons took place after the fall of the communist regime in 1992. Land grabbers expropriated the lands not only to build their houses but also to distribute or sell the lands. A series of laws have been enacted already to prohibit land grabbing such as Article 24 of Chapter III of the Decree on Distribution and Sale of Land, and the Decree of Housing Affairs (OG No.794 of 25/6/1421-2000). Land grabbing activities in many cases are politically motivated. Improvement of security and disarmament of militia are considered necessary to effectively control land grabbing.

(4) *Ambiguous legal situations* Many Afghan people perceive a customary deed sufficient to prove landownership, especially when the original owner holds a formal document. Legally, however, de facto landowners would have to fulfill legal formalities to regularize their ownership. Legal ownership remains ambiguous even if the land transaction was legal. Traditional landowners inherited their land from their ancestors and have occupied the lands for more than 50 years. Most of their lands were previously located in villages, which had been incorporated in the city as a result of urbanization. Through the process of urbanization and the development of land market, the lands were informally sold, sub-divided and transformed into urban settlements. Many of the purchasers of these lands hold customary deeds, but they are not legal landowners [4].

II. METHODES OF URBAN DEVELOPMENT

(1) *Land Expropriation and Acquisition* The urban land development method, which is implemented by Kabul Municipality, is land expropriation or compulsory land acquisition. In the context of Afghanistan's law, land expropriation refers to the state compulsory nationalized land that is in the position AMANO Page 1 2015/03/26 landowner for public interest. Its legal features are: (a) land expropriation is an act of obligatory acquiring of land ownership, which is a special case of property rights changes. Government, as the

propose of expropriation, gets land ownership from landowners by way of administrative instructions, and has no other choice but to yield; (b) land expropriation is done Based on Afghanistan's laws and regulations. Acquisition process should be followed by legal procedures, which are only targeted at the development of public interest, and are kept away from any commercial purpose. The government should pay fair and reasonable compensation to the landowners whose land is expropriated. For the first time in 1935 Afghanistan enacted a law to expropriated landownership for the public interest. All the regulations and articles of the mentioned law were added to the constitution of 1964, 1977, 1987 and 1999 according to the constitution of 2002 article 40. No person's property shall be confiscated except within the provisions of law and the order of an authorized court. Expropriation of personal property is permitted only for securing public interest, in return for prior and just compensation according to law. Under the expropriation law of 2002 land is expropriated for public interests with the approval of the Council of Ministers in exchange for fair compensations. Based on the law, if part of a land parcel is expropriated and the landowner cannot use the remaining non-expropriated part efficiently then the whole parcel should be expropriated.

Current law was enacted in 2002, which deals with the practice of expropriation. This act could not satisfied people because of compensation process, which did not realize the equity in the process. In addition, some other factors of this method, such as social resistance, financial loads on municipalities (for compensating cost, costs of providing infrastructure and urban services), have made it a difficult process. The method also creates management problems (delay in the implementation of the projects), and administrative requirements. Additionally; the law of expropriation does not have any article concerning about the relocating people to their previous community. [4]

Due to the problems mentioned above land readjustment has been proposed recently which implemented in many countries to perform urban development.

(2) *Land readjustment* Also known as land consolidation or land pooling, land readjustment has become an important tool for urban development in Japan, South Korea, Taiwan, West Germany, and the state of Western Australia [5]. Basically, it works as follows

After an area is selected for a land readjustment project a development plan is prepared, based on current and projected market conditions and taking into consideration the environmental and aesthetic factors. However, the plan disregards existing lot ownership. An area's parcels of land are pooled into a single entity, and the parcels will be re-plotted to fit the development plan as shown in Fig. 1. The re-plotting process is carried out according to designated standards for valuating land and determining the owners' percentage of shares in the re planned development in relation to their shares in the original parcel. These determinations are subject to review and comment. The development plan can be

This method can be applied for the purpose of providing infrastructure and improving residential environment.

implemented by an individual, a private corporation, a landowners' association, a public corporation, an administrative agency, or another public entity. Land for public facilities and land that will be sold to help cover some project start-up costs-the latter referred to as "cost equivalent" land or "financial resource" land-is captured through a technique called "land reduction." The planners estimate the land area required for road rights-of-way and public facilities, as well as the land that will be sold to cover designated project costs, and use this estimate to calculate a percentage reduction of ownership interest for each original landowner as shown in Fig. 2. The land reduction ratio for each landowner is based on land values both before and after the project. Landowners are willing to give up a portion of their interest in the site through land reduction, because the value of their remaining interest increases substantially. After roads and other infrastructure have been constructed, title to the old lots is legally transferred to the newly designed lots. The owners' original lots have been exchanged for lots that are now fully serviced and ready for building. Even if they do not wish to build on these lots the owners can sell them at substantial profits [1].

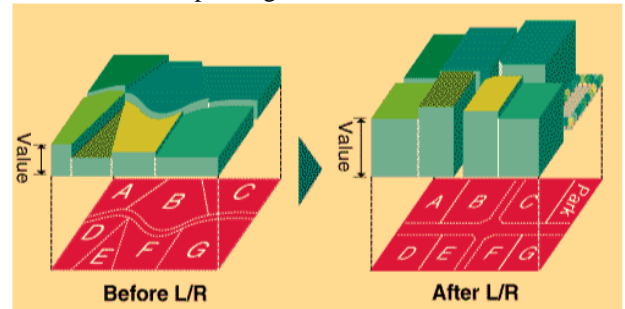


Fig. 3 Land value before and after implementation of land readjustment [6]

As 70% of Kabul city people are living in unplanned area and they don't have any basic infrastructure, government also don't have sufficient budget to build for them social and physical infrastructure that's why land readjustment is a good method for bringing basic infrastructure to the peoples are living in these unplanned area without any needs to government budget and also people don't have to pay for.

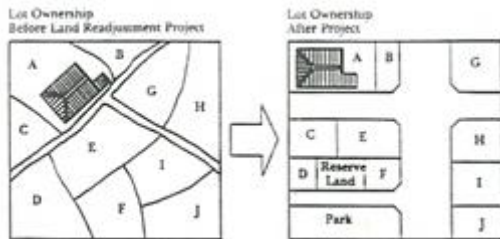


Fig. 1 Land adjustment method [5]

III. APPLICATION OF LAND READJUSTMENT TO KABUL CITY

The selected study area for this research is Bagh Ali Mardan, a portion of land adjacent to the Kabul city Central business district with an overall area of 247159 sq-m which has a positive effect on development of Kabul city was considered (see Fig. 4). There are a total number of 503 land plots located in this area in which 393 families live. The population of this area is 4436 people with a float population of 2000 individuals per day. The area is mostly dominated by residential buildings, but some parts of it are having commercial building as well. The percentage of land use type is shown in Table I.



Fig.2 Example of land readjustment method [6]

Land adjustment is a method to change and improve disorderly developed lands into orderly conditions. The improvement and upgrading will be undertaken as the shape of land plots and their locations are changed (Fig. 2). The area of each land plot will be reduced to provide lands for road-widening and infrastructure provision. The land value, however, will increase even if the land plot areas may decrease as shown in Fig. 3. Landowners are willing to give up a portion of their interest in the site through land reduction, because the value of their remaining interest increases substantially. After roads and other infrastructure have been constructed, titles to the old lots are legally transferred to the newly designed lots.

Table I: Percentage of land use type

Land use type	Area (sq.m)	Area %
Stores/Commercial	11619	4.7
Residential	186155	75.3
Mosque	3187	1.3
Roads	46198	18.7
Grove land/Open space	0	0
Total	247159	100

Most of the residences are made of mud, brick, and wood having a poor livelihood condition. Majority of the population in the area are government officials, shopkeepers, street vendors, security personnel and ironsmiths.

The area lacks basic infrastructures such as transportation system, water supply system, sewerage system, storm water drainage, solid waste management, street furniture and electrical lines. The residents experience not only lack of physical infrastructure but also social infrastructure as well.

From the prospect of urban planning the residents live in a bad condition since they do not have the economic ability to rehabilitate the area themselves. Land readjustment method is proposed for solving the problems of this area in which basic infrastructure can be built through this process to enhance the peoples' urban life.

First of all a base map of the area was prepared is shown in Fig. 5. As it can be seen from the figure, the roads are too narrow, the structures are not uniform, and some plots don't have access to the road network.



Fig. 4 Area of Bagh Ali Mardan
North: Kabul River, East: Sulh Road, South: Maiwand Road

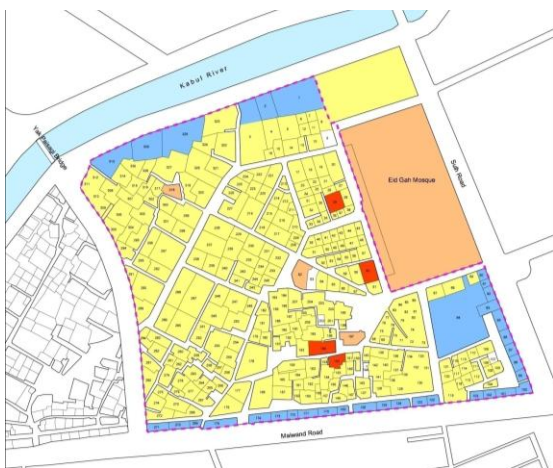


Fig. 5 Base Map of Bagh Ali Mardan

After preparing of base map a deduction policy was introduced for taking land from the people for public facilities

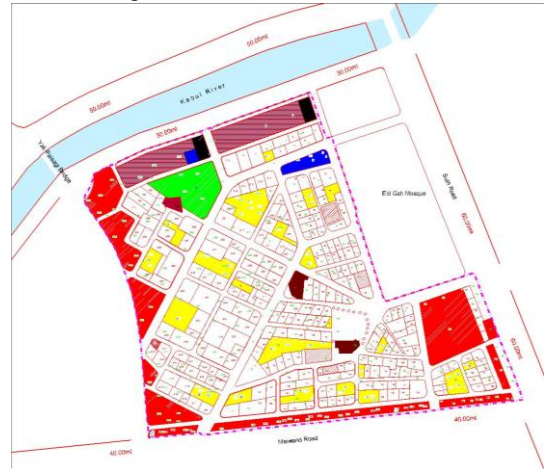


Fig.6 Bagh Ali Mardan after land deduction

The total existing road area is 46198 sq-m (square meters) which is the 18.6% of the total land area. An additional 19472 sq-m land is required for upgrading the road infrastructure that can be obtained from the deducted land.

Water consumption in Kabul city is 150 lpcd (litters per capita per day); the total population of this area is shown in Table II, and the required land for the sewerage system is calculated as follow

Table II: Population of the area

population	4436
Floating population (people/day)	2000

The total water necessity for this colony can be obtained by multiplying the population to water consumption per day per capita which is equal to 665400 liters per day. On the other hand water required for floating population can be calculated by multiplying the floating population to 25. Consequently, the total water necessity for floating population is 50000 liters per day, and the total water necessity for this colony can be found as follows

Total water necessity = water necessity for residence + water necessity for floating population

Total water necessity = 665400 + 50000 = 715400 liters per day = 715400/1000000 MLD = 0.7154 MLD

80% of total water necessity is going to the sewerage which is 0.572 MLD, equal to 572 cubic meters (IML = 1000 cubic meters). According to Kabul municipality standards, for each cubic meter, three sq-m land is required, so the land required for sewerage system is (572*3) that is 1716 sq-m, for which in

Land readjustment has profit not only to government, but also have numerous advantages for landowners as well, land value is at least doubled in price after implementation of land readjustment, lifestyle standards changes for better, they can

use efficiently their lands and last but not the least land readjustment process guaranties the landowners' rights through the clarification of land rights. After the implementation of the project the results would be a better landscape, clean environment, sustainable development and easy access to every part of the area. Judging from the above-mentioned utilities, this method is adoptable and practical urban development method especially in developing countries where cities are growing up rapidly in spite of land rights still being in waiting line for clarification.

REFERENCES

[1] T. Gouttierre, "2003 National Geographic Population Map". Center for Afghanistan Studies, University of Nebraska at Omaha; Matthew S. Baker, Stratfor.National Geographic Society. November 2003.
 [2] "Largest cities in the world and their mayors - 1 to 150". <http://www.citymayors.com/statistics/largest-cities-mayors-1.html>
 [3] "The world's fastest growing cities and urban areas from 2006 to 2020", http://www.citymayors.com/statistics/urban_growth1.html
 [4] The Study for the Development of the Master Plan for the Kabul Metropolitan Area in the Islamic Republic of Afghanistan: Final Report : Master Plan for Kabul New City Development, RECS International, 2009.
 [5] F. Schnidman, "Land Readjustment". Urban Land, vol. 2, pp. 2-6, 1988.
 [6] W. Seele, "Land Readjustment in the Republic of Germany", In Doebele, W.A., ed., Land Readjustment: A Different Approach To Financing Urbanization", Lexington Books, USA, 1982.

this research, 2000 (sq-m) land is embarked and the area for open space of this colony is assumed 6000 (sq-m).

The total infrastructure cost for sewerage, road development, storm water network and developing of recreational area are calculated and summarized in Table III.

A 40639 sq-m financial land was obtained after the deduction and re-plotting process for social and physical infrastructure cost of the area. From this area 27472 sq-m is needed for the roads infrastructure, sewerage, and recreational area. The rest of the land which is 13167 sq-m is the land from which the project cost will be supported and will be in possession of the

Table III: Land Readjustment finances

No.	Name of work	Amount (Afn)	Length (m)	Area (sq-m)	Unit Rate (Afn/sq-m)
1	Development cost for road network upgrading	114922500		65670	1750
2	Development cost for sewerage network	23976040	5994.01		4000
3	Development cost for storm water drainage network	20979035	5994.01		3500
4	Development cost for recreational area	3000000		6000	500
5	Cost of compensation to land owners(some structures gets damaged during re-plotting)	52531588			
TOTAL		215409163			

government. According to calculation the total infrastructure cost and compensation to those land owners whose structures has got any damage or being demolished during re-plotting was 215409163 Afghanis. After the implementation of land readjustment in this area the land value is increasing due to availability of social and physical infrastructure from 250\$/ (sq-m) to 400\$/ (sq-m).

The total deducted land value is (13167*400\$= 5266800\$) which is equivalent to 305474400 Afghanis, after subtraction of total infrastructure cost from this amount 90065237 Afghanis is going to the government budget

IV. CONCLUSION

Urban development through the land readjustment has been recognized as one of the mutual benefiting process for both landowner and government globally. Since this process is a self-financing process, it does not need any budget for government during the implementation of the process. Through implementation of land readjustment social and physical infrastructure can be brought for the residence. Not only this