

Analysis of the distribution of urban services in unplanned areas (Case Study: District 9, Herat city, Afghanistan)

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Abstract: Cities today, especially in developing countries, in view of continuous population growth and urbanization, need more than any graduation period to focus on the establishment of spatial justice in the satisfaction of the needs of various urban services. Urban services in cities, and particularly in neighborhoods, play a crucial role in urban systems. Today, problems arising from the inadequate distribution of urban services have made urban service distribution a key element in the establishment of spatial justice. Faced with the rapid growth of Afghan cities, residents spontaneously, without government intervention, develop unplanned neighborhoods. The city of Herat, like most Afghan cities, has grown under the influence of the unusual expansion of urbanization in a non-regional and self-organized manner, and the assets of spaces are incomparable in dealing with urban services; therefore, the purpose of this study is to Analysis the distribution process of urban services for district 9th. The study used a qualitative research approach, semi-structural interviews, and spatial analysis to Analysis of the distribution of urban services in unplanned areas in the ninth district, the city of Herat. The results of the present survey indicate that urban service users do not follow the patterns of dispersion and equal access in the existing situation and in different neighborhoods, and in terms of access to urban services, they also have a deep gap with the practice of municipal services.

Keywords: Herat City, Inequality, unplanned areas, urban services

INTRODUCTION

Urban growth is happening at an unprecedented rate worldwide (Zhou and Wang, 2011). It is estimated that around 2.5 billion people will increase worldwide, with 90 percent of the population growth concentrating in African and Asian cities alone (UN-Habitat, 2016; UNDESA, 2019; Bodo, 2019; John-Nsa, 2021). now facing a global housing problem. A report by UN Habitat, 2011 showed that the shortage of legal

residential units to supply the world's growing human population is acute in developing countries. Unplanned settlement is one of the major problems that many cities in the world face (Taylor, 2011; Mensah et al., 2013).

Unplanned settlements are defined as residential units that are built in planned and unplanned areas without official permission from the relevant organization (Beyene and Dessie, 2014; Alim, 2006). The rapid growth of Unplanned settlement is one of the biggest problems of cities in developing countries. Unplanned settlements are urban areas that are developing and growing without planning, mostly with limited initial facilities (Flack and Augustijn, 2011; Abbott, 2002). Recent policies and academic research to recognize more informalism as a means by which urban poor can deal with insecurity of resources and low affordable income (Roy, 2009) and these settlements are generally, to houses that do not provide security, face a shortage of primary services and infrastructure and are not built on the basis of urban planning (Graham Hansen et. al, 2003; UN-Habitat, 2019). As a result of widespread urbanization and the resulting increase in unplanned settlements, infrastructures such as transportation, public green spaces and access to water are under pressure and may even disappear (Pafi et al., 2016). Good access to water requires access to "a reliable water supply that supplies sufficient quantities and sufficient water quality in the right way (Kristof, 2005) but unplanned settlements residents are at higher risk of water poverty (Kristof, 2005).

Discrepancies and spatial imbalances in developing countries have been exacerbated by the extent of social-economic differences and inequalities and by the imbalance in urban services (Mubaraki et al., 2015). Today, problems arise from the inadequate distribution of urban services, such as density, environmental pollution, overpopulation, and... It has made the distribution of urban services one of the most important issues often posed by developed countries (Talkhabi and Faryab, 2013; Sarver et al., 2017). The unfair distribution of urban facilities has an unreasonable impact on the structure and nature of the city (Mostowfi ol-Mamalek, 2013). Given the rapid growth of the urban population and the rural migration that has caused the spread of the population, this has created an imbalance in the distribution of public services in such a way that the city administration has not been able to provide public services that are appropriate to the needs of the neighborhoods. Therefore, the space view of the city is a representative of the spatial imbalance of public services. Since facilities and services are in the form of localized units, while people who use them are spatially integrated, they inevitably lead to remote access within the city (Hewko, 2001).

The challenge of unplanned settlements in Afghanistan covers a wide range of complex topics. The relevant government authorities do not officially recognize unplanned settlements as part of urban clothing. As a result of the discrepancies between the official position of the government and the realities on earth, unplanned settlements have not attracted sufficient attention. (Fazli, 2016). Herat is the second-

largest city in Afghanistan after the capital of Kabul. (Herat Strategic Masterplan, 2013). The city of Herat, like most of the Afghan cities, has grown under the influence of an unconventional urban expansion. As a result of rapid urbanization over the last 30 years, Herat has witnessed a lot of mental changes and growth in the city. As a result of the rapid increase in temperament and pressure of its colonization, most urban development is not in line with the existing master plans. Unregulated, unplanned, and irregular areas have grown into planned areas. (SMAP, 2018). no specific research has been conducted on the distribution of urban services in the unplanned settlement issue. In this study, the aim is to Analysis of the distribution of urban services in unplanned areas. Therefore, current research has focused on the unplanned settlement and its distribution of urban services in the city of Herat.

Methodology: Analysis of the distribution of urban services in unplanned areas in the ninth district of the city of Herat, the qualitative approach in this article was used and thus in the first step of the documentary studies to examine the theoretical foundations of this plan were used books and credible domestic and foreign resources, in the next step semi-structured interviews with urban management experts, employees, contributors, respondents and citizens were conducted. Semi-structured interviews are considered by some researchers to be the best way to gather data about values, beliefs, and deep motivation (Adams, 2015; Hanif et al., 2022).

Later, space analysis was conducted. Spatial analysis is an analytical technique used to study and relate geographical phenomena to spatial dimensions, as well as to evaluate, estimate, predict, interpret, and distribute geographic phenomena. In spatial analysis, the interaction of the four human elements—place, time, and activity—is analyzed. In order to analyze and elaborate maps, the Arc GIS normalizer is used, and on this ground, social service user maps such as health centers, educational centers, commercial centers... It was completed in 1399. To collect information using Herat City 2019 satellite image and to determine access to urban services using Urban Detailed Plan Guideline, 2018.

Study Area: Herat province is located in the western part of Afghanistan, and the province shares borders with the Islamic Republic of Iran (the border of Islam Qala) and with Turkmenistan (the border of Torghundi). Herat city is located in the middle of Herat province, and it covers 184 square kilometers (UN-Habitat, 2018). The city of Herat covers an area equivalent to 120 square kilometers (SoAC, 2015). It is the third-largest city and second-most populated city in Afghanistan, with 679,000 inhabitants in 2017 (GolRA, 2020). The city of Herat is an ancient city and has most of the traditional structures, while many nationalities have now immigrated to the city. It has been established that this could affect the level of security in the city and prevent the city from becoming more insecure. On some of the main streets, user confusion is widely seen, and this increases security in many countries.

District 9th is located at west part of part of the city. This district surrounded by district 5 at the east, district 3 at the east, district 12 at the north, district 7 at the west and Engjil district and district 13 are west of this district. There is 10 standard Gozars in this district and around 41,190 people live in 410 hectares' area of this district. 50% of this district is located in planned area but due to automotive development and lack of supervision from construction process about 60% of this district is irregular and according the UN-Habitat surveys about 99% of plot have local and 0% legal documentation (SMAP, 2019).

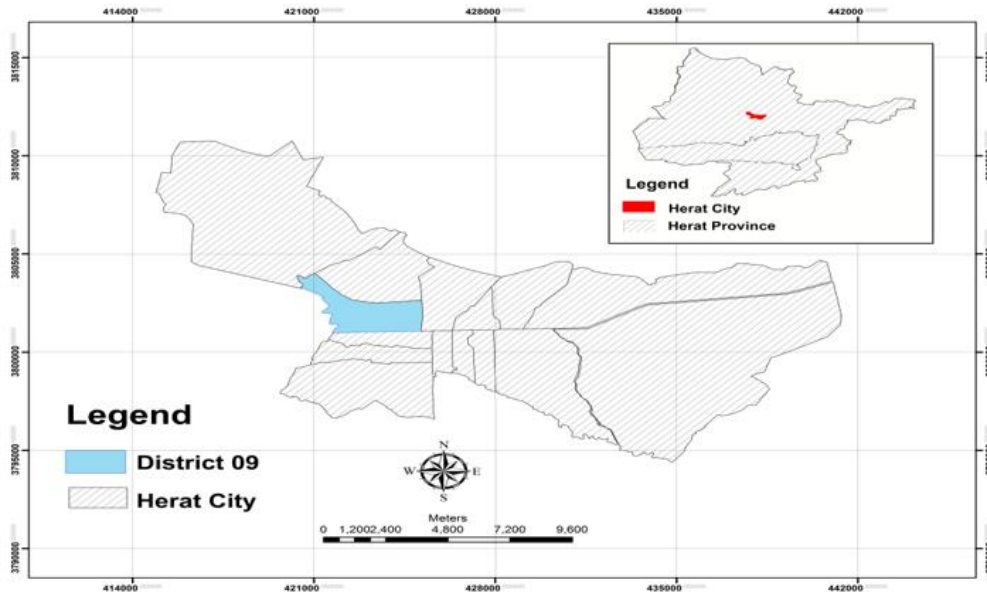


Figure 1. Study area location, produced. by authors in GIS. 2023

Results: Since 50% of this district is located in planned area but due to automotive development and lack of supervision from construction process about 60% of this district is irregular and according the UN-Habitat surveys about 99% of plot have local and 0% legal documentation. (SMAP, 2019). It can be said that except for unplanned area are considered and most of the sites that have been planned but built in an unplanned form. According to this analysis of space and semi-structured interviews carried out, the growth of unplanned area in the area has caused residents to have less access to urban services, as outlined in the findings of this research.

Educational services: This area contains buildings used for education, including universities, professional training centers, kindergartens, elementary schools, high schools, religious schools, institutes, and other educational facilities (including those used for developing intricate urban curriculum).

Semi-structured interviews show that out-of-the-ground sites have led to a lack of access to educational services in a fair manner in the area. The location is not based on local needs. Respondents stated that their children spend a lot of time on a daily basis in order to access educational services, they claimed that there is no state lease in the center of this area, and one interviewee from Herat stated that: *"I have two children,*

they travel a long distance every day for public school and I cannot afford to pay for private school and transportation."

However, according to the analysis of the space made by the images of Herat city in 2019, access to educational services is fairly distributed in this district, and there is Shahid Safiullah Afzali High School and two private schools and a number of educational courses in the district (Fig. 2).

Continuing to analyze the spaces that you see on the map 4, access to educational services is shown in the district 9 of the city of Herat, where the number of educational centers is large but the numbers of public schools are small and according to the procedure of preparation of urban detailed plans for kindergarten 300-500 meters, for the primary range 500-800 meters, for medium range 1000-2000 meters and for the lyceum 2000 meters are considered. Also, according to the spatial analysis that you can see in map 4, the access to educational services in the ninth district of Herat city shows that the number of educational centers is high, but the number of public schools is low, and according to the procedure for preparing detailed urban plans, the radius of access for kindergartens is 300 500 meters, 500 to 800 meters for elementary school, 1000 to 2000 meters for middle school and 2000 meters for high school. Therefore, the findings of this research show that in this district, educational centers that include public schools are less accessible to people, but there are enough private courses.



Figure 2. Educational centers and access radius in district 9, Herat City, produced by authors in GIS. 2023

Health services: Health services today are one of the following buildings in the direction of urban development, and its main objective is to raise the level of health and increase the activity force of people and prolong life and ultimately prevent the onset and spread of diseases and treat them on site. The findings show that there are

not enough public health centers in the area, but there are enough private centers. Respondents stated that there are no health centers in the area that have equal access for everyone. They stated that there are a number of dental clinics and private clinics in the main streets. as one of the respondents stated "...I was a witness to a traffic accident in one of the districts of the area, and because there were no health centers inside the area, a lot of blood flowed until it reached the port."

According to the analysis of the space that has been done in this district, the people of the 9th district have enough access to health services (Fig. 3). However, these health centers include hospitals, clinics, and pharmacies, and it is shown in the next map that people have sufficient access according to the radius of access determined by the urban planning guidelines.

The findings of this research are different from interviews and spatial analysis. According to the interviews that the respondents stated that the whole population does not have access to health centers, but the spatial analysis shows that according to the standard access radius, all the people have full access.

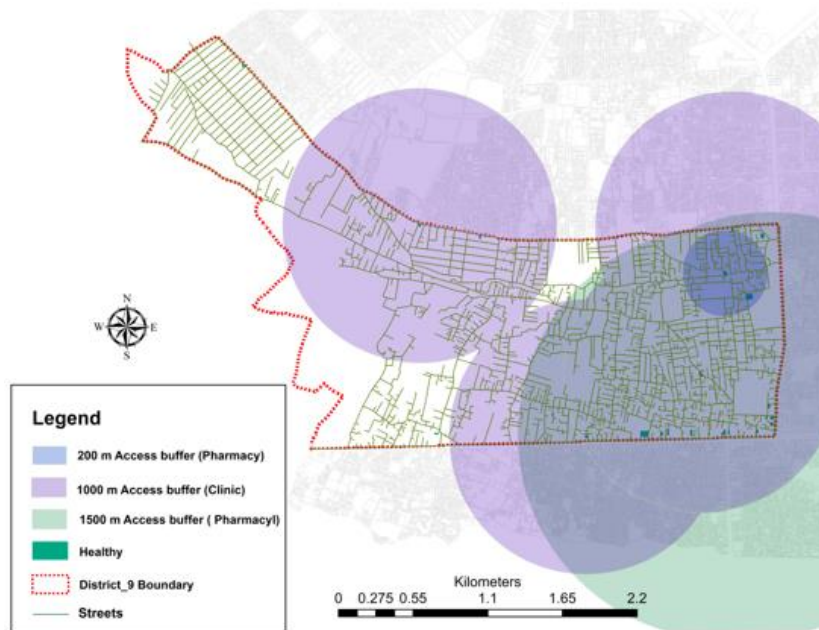


Figure 3. Health centers and access radius in district 9, Herat City, produced. by authors in GIS. 2023

Religious services: Places of worship are considered to be located in quiet (uncircumcised) parts of the residential area according to the radius of access and in some cases together with the residential areas. The findings of this research show that in this district, all people have full access to religious services, including five-time mosques and comprehensive mosques, and the respondents stated that there is one five-time mosque in every neighborhood, which people have completely access to the mosques.

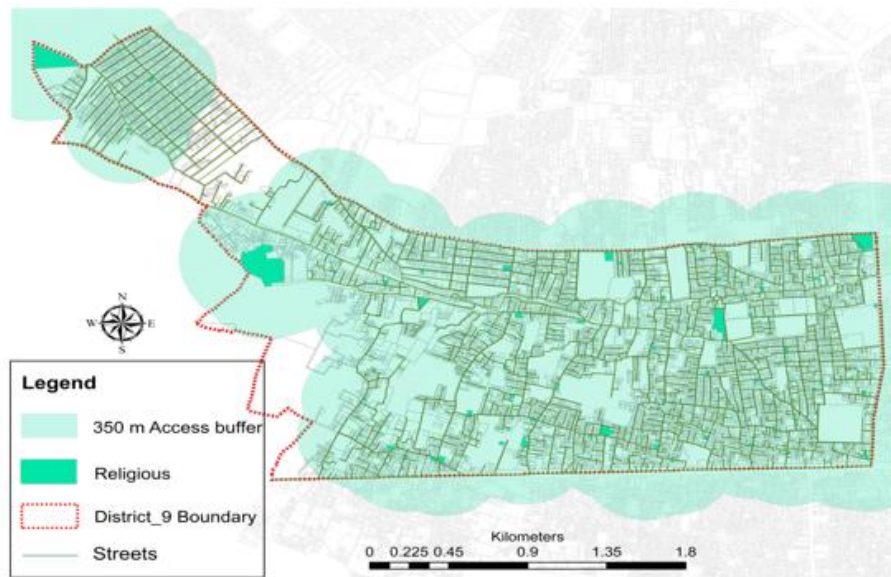


Figure 4. Religious centers and access radius in district 9, Herat City, produced. by authors in GIS. 2023

The spatial analysis of Herat City 2019 satellite image is similar to semi-structured interviews, which show that in this district, all religious services are fully accessible (Fig. 4).

Administrative services: The main function of these sites was the provision of administrative services, which includes government agencies and administrative departments of various bodies. The distances between the offices and the workplaces of the employees shall be as close as possible to the streets and transportation systems, and the workplaces shall be located at a reasonable distance from the other areas of work in order to communicate with them at a minimum of time and cost. The location of the work centers must be naturally and environmentally suitable and protected from hazards arising from natural barriers. (Urban Detailed Plan Guideline, 2018). The findings of this research show that people have access to administrative services and most of the respondents stated that they do not deal with social services much, only sometimes we deal with guidance offices and lawyers' offices, as one of the respondents stated “...I have been living in this district for six years, and I have never visited the administrative centers in this district.”

The findings show that there are sufficient administrative services in the district. Urban services in this district have been replaced in different situations and not all people have equal access (Fig. 5)., in this district there are transaction guidance offices and several offices for local councils and their access is distributed. Based on the spatial analysis we did from this district with the interviews, this study is different in that in the space analysis of this study people were not all equally distributed, but respondents stated that they did not feel disadvantaged.

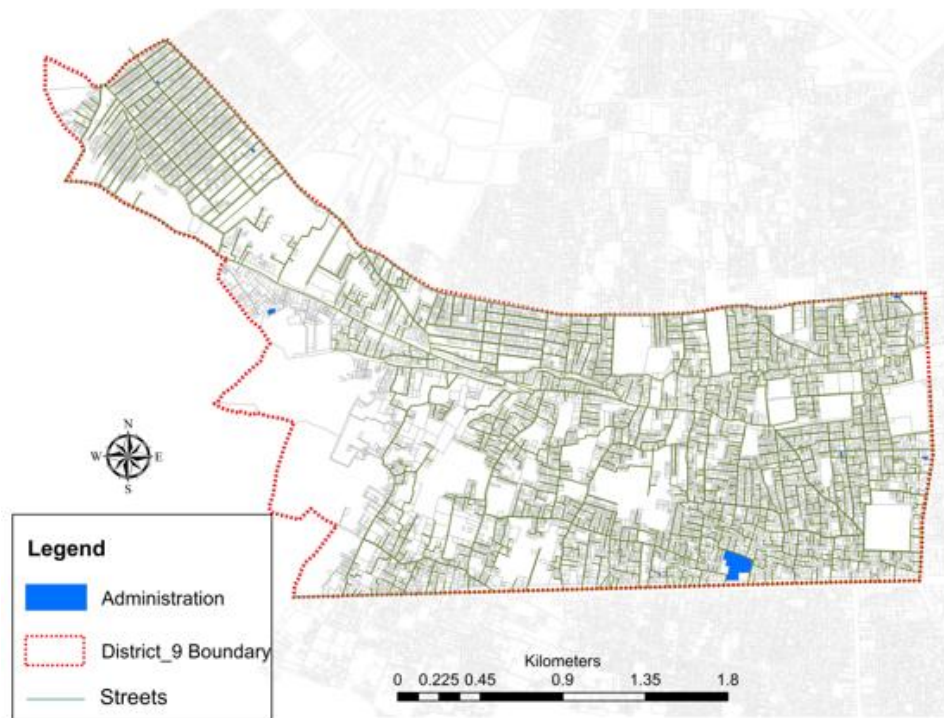


Figure 5. Administrative centers in district 9, Herat City, produced. by authors in GIS. 2023

Green Space Services: Today, green spaces in cities are part of the urban structure and one of its main elements. In the past, the predominant role of green spaces was limited to the embellishment and subsequent appearance of artificial environments, but today the function of these spaces at the level of cities has taken on a much wider and more basic scale. There are different types of green spaces, and as a whole, we can use the following distribution to define green space (Urban Detailed Plan Guideline, 2018).

The findings show that there is no green space in the district. Respondents stated that in terms of green spaces in this district we are facing a severe shortage. One of the respondents stated, “... *There is no green space for our children in this district and we are forced to take them to the Taraqi park that is away from our district every week*”.

The respondents said that in the past few years, the female garden where the Gawhar Shad tomb is located was only open to women, but in recent years, the garden has also been closed to the public, and there is no green space for spending time in the district. As one of the respondents said, I have to spend time with my family on holiday, especially on Fridays, going to the green space that is far from our home.

According to the space analysis that took place in the district, there is no green space in this area, only there is a female garden in that area that is not currently used (Fig. 6). there is only a female garden in this district in terms of green space, and there is no other area for green space in the district, and this female park is just public space.

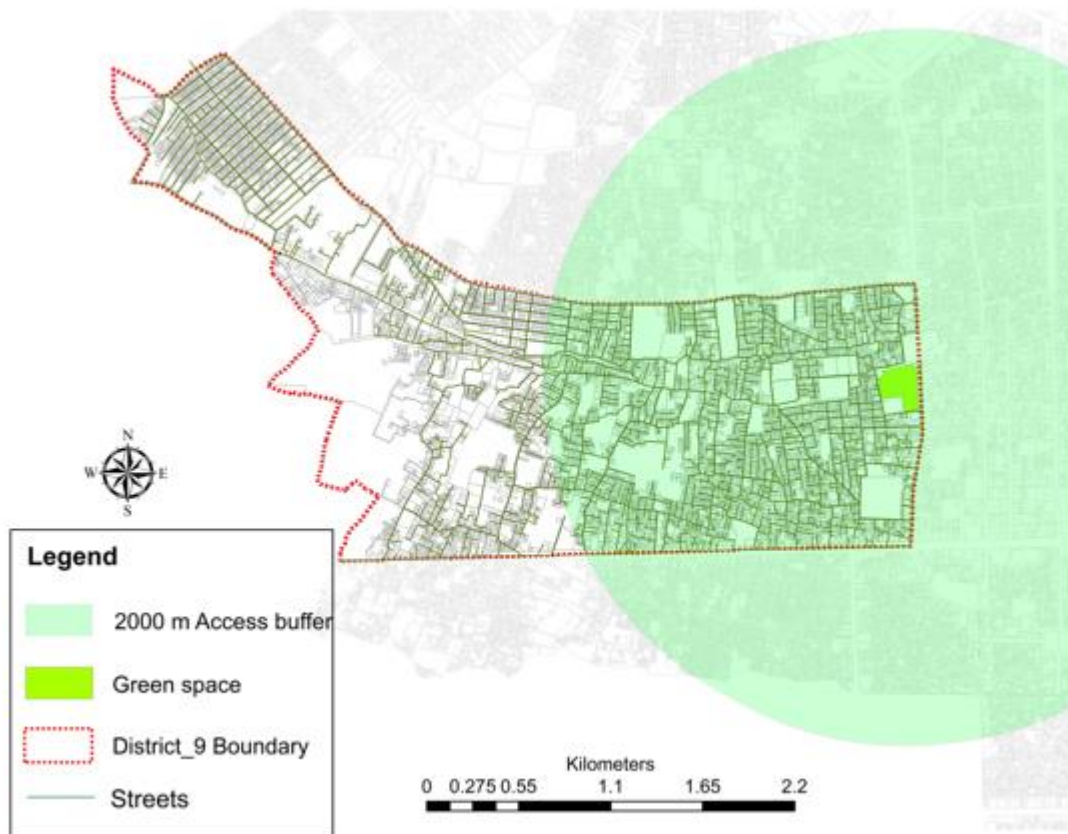


Figure 6. Green Space and access radius in district 9, Herat City, produced. by authors in GIS. 2023

Sports Services: Sports and recreation sites refers to the regular performance of physical exercises in order to supplement and repair the physical and mental strength that this type of activity requires its own specific spaces, which are generally considered in the urban phase (Urban Detailed Plan Guideline, 2018).

The findings of the study indicate that the sports fields in the district are not fairly distributed, and respondents also stated that in terms of sports centers, several fields are needed to be open in order for the people of the district to use it for sports. Most respondents stated that there are only a few gems in the district. As one of the respondents stated, “we don’t have any open space in our premises for exercise in the morning or in the evening and we’re forced not to exercise or go to Takhet –e- Safar park or Taraqi park”. Sports fields are a vital element of community health at all levels of the city, especially in urban neighborhoods and neighborhoods. Sports fields should provide a safe environment for all ages, especially children, adolescents and residents, so that they can use these spaces in these remote spaces without physical or mental barriers (Urban Detailed Plan Guideline, 2018).

According to the space analysis carried out in this district and shown on the map, it is similar to the interviews of this semi-structure. Sports services in the district include several gymnasiums and several gyms, but there are no open fields in this district for sports and people do not have enough access (Fig. 7).

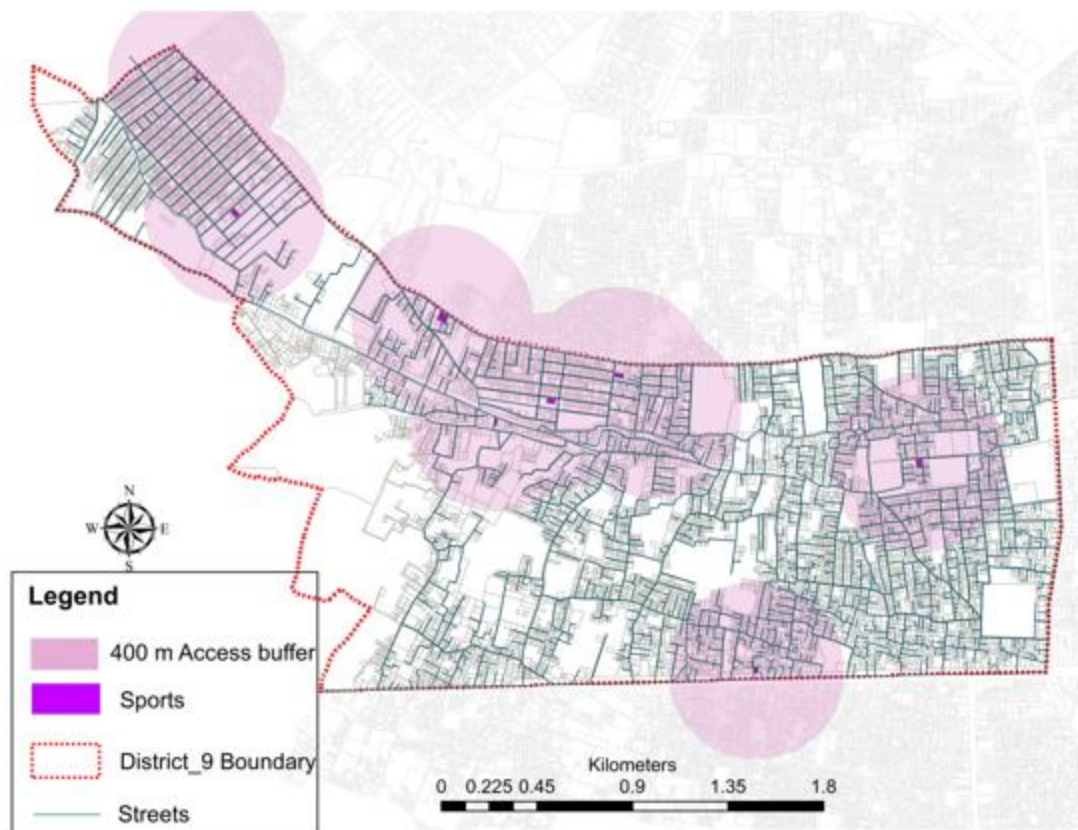


Figure 7. Sports centers and access radius in district 9, Herat City, produced. by authors in GIS. 2023

Conclusion

Urban services play a crucial role in the development and well-being of unplanned areas. The analysis of urban services distribution in unplanned areas reveals a stark reality of inequality. Despite being home to a significant portion of the population, these areas often lack access to basic services such as clean water, sanitation, healthcare, and education. The disparities in service provision highlight the urgent need for targeted interventions and policies that address the needs of residents living in unplanned settlements. The challenges of informal settlements in Afghanistan encompass a wide range of complex issues. The relevant government authorities do not officially recognize informal settlements as part of the urban fabric. The city of Herat, like most cities in Afghanistan, has been affected by the rapid and unplanned growth of urbanization. Due to rapid urbanization in the past 30 years, Herat has witnessed significant changes in terms of population and urban growth. As a result of the rapid population increase and the resulting pressure, most of the city's development does not conform to existing master plans. Unplanned, informal, and irregular areas have replaced the planned growth of the city (SMAP, 2018). This has led to a lack of equitable access to urban services for citizens. This study uses qualitative data and semi-structured interviews, as well as spatial analysis using GIS software, to examine the distribution of urban services in informal settlements in District 9 of Herat City. Based on the case study of Herat City, the distribution of urban services in this district

reveals that there is inequality. As the findings of this study indicate, the ninth district of Herat has an unpopular urban structure and has a different type of urban fabric. The structural shape of these tissues is influential in the accessibility of residents to urban areas as well as in the spread of their space in the city. Taking into account the structure and structure of the ninth city of Herat in the research, in the field of justice distribution analyses were carried out, the results of these analyses show that the rate of distribution of urban services also spread the level of access to green spaces, educational services, therapeutic services and sports services in the district, which is a sign of greater disparity among these services and the achievement of better religious cultural services in better conditions. A total survey of urban services in the ninth district also shows that there is uncertainty throughout the city. The findings indicate that the worst situation associated with non-residential housing and urban organs was that the rate of access to all urban services in which – with the exception of religious services – is less than the city average.

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