

TYOLOGY AND OWNERSHIP OF RURAL OPEN SPACES IN SEMI-ARID REGIONS: A CASE OF KATSINA STATE, NIGERIA

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ABSTRACT

Open spaces are an important feature of any neighborhood since they serve as a hub for the community's socio-cultural activities. According to the National Population Commission, 64% of the population in northern Nigeria lives in rural areas and utilizes outdoor spaces for their socio-cultural lives. The typology and ownership of rural open spaces in north-western Nigeria have become major concerns for their impact on its management. This research explores the typology and ownership of open space in rural areas within north-western Nigeria to adduce the challenges facing its role in sustaining the communities' cultural values. Observation from five communities in the Batagarawa local government. The study discovered a subconscious classification of rural open spaces into the community and private open spaces, each with defined boundaries, and the study also identified relevant stakeholders. As a result, the study suggests that the government play a coordinating role in resolving any disagreements among stakeholders so that open spaces can be better identified and the cultural values of these open spaces can be preserved, and thus concludes that open space typology and ownership have become a critical concern in sustaining the roles of open spaces in northern Nigeria's semi-arid region.

1. INTRODUCTION

United State Environmental Protection Agency (EPA) described open space as any undeveloped piece of land that is open for public use (EPA, 2021), The New York Department of Environmental Conservation on the other hand defines it as 'land that has not been heavily developed for commercial, residential, institutional or industrial use' and did not restrict the ownership to either public or private (NYS, 2021). Open space is thus, any parcel of land available to the public; such spaces include green spaces such as parks and gardens, cemeteries, schoolyards and playgrounds, abandoned sites, graveyards, vacant lots, etc. Open spaces account for outdoor areas within neighborhoods and serve as an integral part of communities. Such outdoor areas are generally considered spaces for interaction as they offer social integrations and economic activities while ensuring the sustainability of the communities' cultural values

(Loboda Lichtenbaum & Rosen, 2018). Besides, it also enhances the involvement of low-income people in the residents' socio-economic activities, as opined by (Officha et al., 2017). Open spaces promote local agendas, such as economic developments, political awareness, and cultural manifestations (Travlou & Thompson, 2007).

Open space improves people's living standards (Fongar et al., 2019) as well as provides a place for physical and recreational activities (Van Hecke et al., 2018, Dempsey et al., 2014). People have a strong connection with their open spaces, and researchers are in charge of defining those spaces.

In Nigeria, rural open spaces are greatly influenced by environmental and climatic conditions such as desertification, erosion, flooding, etc. (Agboola et al., 2017) and cultural variations (Azare et al.,

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2018). In arid and semi-arid regions of Nigeria, a good open space's primary objective is to reduce the direct heat through solar radiation and other climatic and ecological hazards (Markus, 2016). Predominantly low-income earners lived in rural areas (UN Habitat, 2013). They utilize open spaces for almost all their domestic and socio-cultural activities (Markus, 2016). According to the National Population Commission (NPC Nigeria, 2009), approximately 64% of the population in northern Nigeria lives in rural areas (NPC Nigeria, 2009; Reed & Mberu, 2015). Open spaces reflect fundamental aspects of the communities and cultural settings in the semi-arid region, as a result of climatic circumstances, the patterns of living, and the peoples' phycology (Philokyprou et al., 2021). The typology and ownership of rural open spaces in north-western Nigeria have become major concerns because they have an impact on the spaces' functionality and management. Therefore, this paper highlights the need to establish an appropriate typology and define ownership of the open spaces in north-western Nigeria, which is significantly crucial for ensuring their roles in sustaining the communities' cultural values. The study will focus on community open spaces in north-western Nigeria, to establish the typology and ownership in semi-arid regions.

2. METHOD

The study was conducted in Batagarawa Local Government Area (LGA) of Katsina State Nigeria. The LGA covers 433km² (167 sq. mil), located on 12°54N 7°37E with an estimated population of 280,916 in 2020 (Iyela & Ikwuakam, 2015). The local area consists of ten (10) wards (communities) namely Ajiwa, Bakiyawa, Barawa, Batagarawa, Dandagoro, Jino, Kayauki, Tsanni, Dabaibayawa and 'Yar-Gamji. Five (5) wards were selected for this study, fifty percent as supported by (Forman et al., 2008). These wards are Ajiwa, Bakiyawa, Dabaibayawa, Jino, and Kayauki using a simple random sampling technique. A qualitative study utilizes first-hand information on the current status and usage of the rural open spaces within the five communities through on-site observations this method is supported by Sevenant and Antrop (2011). which was conducted for seven-month; this technique was adopted as it reveals and ensures unbiased results, as suggested by (Zhao et al., 2008). Due to the homogeneous nature of North-western Nigeria, Batagarawa is a good representation.

Considering the research objective to examine the existing open spaces in a semi-arid region to establish their typologies and ownership. The observation was conducted from June 16th to June 20th, 2021, and from July 7th to July 11th, 2021, including weekdays and weekends. Observations were conducted between the hours of 9:00 a.m. and 3:00 p.m. in various open places around rural communities. Three persons recorded what they observed using the observation checklist as a guide, and data was collected on the typology, location, size, and ownership of the open spaces. The communities' leaders were asked questions regarding ownership

of different open spaces to corroborate the observed data. Using content analysis, the data was analyzed and presented using tables.

The typology and hierarchy of the community open spaces were studied with a particular interest in their roles in the host communities' economy and cultural settings. The study also considers the ownership of the open spaces to establish their roles in ensuring the sustainability of communities' cultural values.

3. RESULTS AND DISCUSSION

3.1 Ecological and Environmental Challenges to Open Spaces in North-Western Nigeria

The studied area is characterized by high sun intensity, high evapotranspiration, low precipitation, and over-exploration of natural resources with desert encroachment, resulting in the following environmental and ecological problems, which are wind erosion, dunes, and sand accumulation, as presented in Table 1 below:

Table 1: Environmental and environmental issues as it affects open spaces in North-Western Nigeria

	Explanation	Effect
Wind Erosion	Winds roll soil particles along the surface, then a strong wind lifts a significant volume of soil particles into the air, causing dust storms and stranding the ground surface.	*Washing away the topsoil * Reduction of soil ability to retain water *Increased runoff * loss of newly planted trees * Silt deposits in low-lying areas
Sand Dunes	Sand grains accumulate when the wind drives sand from the desert into a sheltered location behind an obstruction, forming a dune.	*Difficult to move around it *Disrupts recreational activities *Host sand snakes and lizards that are dangerous to people
Excessive Heat	Excessive heat is caused by high temperatures combined with high humidity.	Cause several heat stress and disorders.

3.2 Typology of Open Spaces in North-Western Nigeria

The study reveals the existence of ten (10) open spaces as indicated in figure 1 below, which are Market place; *Yara* or *Dandali* (daily market); *Kangiwa* or *Kofar Fada* (palace square); *Kofar Gida* (house frontage); *Makabarta* (burial ground); *Masara Kasa* (excavation site); *Masusuka* (winnowing sites); *Filin Makaranta* (school playground); *Filin eid* (*eid* ground) and *Majalisa*. Palace Square and house frontage are the most prominent and well patronized; they host all socio-cultural activities while creating and supporting a sense of togetherness, as submitted by (Francis et al., 2012; Lane et al., 2020). Due to settlement expansion, the daily market and market serve the same purpose and could be found anywhere within the community. Winnowing sites face extinction as farmers thresh their produce immediately after harvest for consumption or market demands. Eid grounds and school playgrounds are becoming multi-functional. Majalisa is a new emerging open space among rural communities for a willing-away time due to the redundancy of the youth in rural areas (ILO, 2020).

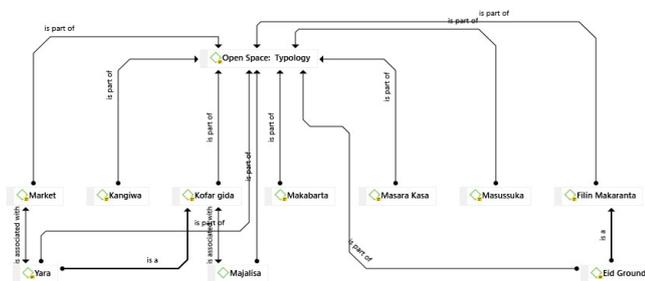


Figure 1: Typology of open space

3.3 Characteristics of Open Spaces in North-Western Nigeria

The community's open spaces are relatively large (about the size of the community); they are all around the community as they host almost all socio-cultural and economic activities such as recreation, buying and selling, and religious activities. Individual members of the community that owns a house usually use the space in front of their properties for their socio-cultural activities such as naming and wedding ceremonies, and the house owners also use such spaces to entertain their visitors; such spaces are relatively small and therefore, referred to as private open space by this study. The presence of government institutions such as school and hospital grounds portrayed as large open spaces also patronized by the rural communities. Such open spaces within the institutions are called government open spaces; the heads of such institutions that the government normally appoints are in charge of the open spaces.

The results show distinct characteristics of open space typology as well as the type of ownership in North-Western Nigeria, as displayed below:

- i. *Kofar Fadal/Kangiwa* (Palace frontage): communities in north-western Nigeria reserve great respect for the traditional leadership as concurred by (Salihu & Yakubu, 2020); at the community level ward head (*Mai Unguwa*) is the leader, and the representative of the emir (*Sarki*) who oversees all social, economic and cultural activities within the community. The palace frontage's size depends on the community's political position and its population size. Such open spaces are in the custody of the community head, who reserves the right to manage activities in such areas. The Palace frontage usually serves as a meeting place between the leader and the followers; for instance, this space host the central mosque (*Jumaat mosque*) and the court.
- ii. *Kofar Gida* (House frontage): Every building within the community has open space as the entry point that reflects the house owner's economic and political status. The socio-cultural activities such as child naming ceremonies and wedding ceremonies occur at the house frontage. The house owner and the household members receive their guests here. Interestingly, the house's damsels will attain

to their visitors in the evening there. The House owner solely owns this space and determines the use, usually providing the community's cultural values.

- iii. *Dandali/Yara* (daily market): This community-owned traditional open space is located at the center of the and community serves as a public meeting space; in some areas, house frontage is used as space for daily markets, social space for teenagers, conducive discussion space for adults, space for women and children selling some consumables, a place where some local musicians and comedians entertain the community. Such open spaces are owned by the local communities, and they appointed a committee responsible for managing these spaces.
- iv. Market place: Buying and selling that involves various communities together require a relatively small space; these open spaces serve a general assembly, markets operate on specific days, either weekly or twice a week, it brings opportunities to the community. The community head appoints a committee to manage the marketplace on behalf of the community. Although the communities in the marketplace, the government intervenes in the collection and management of the generated revenue by the market sellers, this government intervention often causes an unpalatable relationship between the government and the communities.
- v. *Filin idi* (Eid ground) the communities are predominantly Muslims; they use open spaces for their Eid prayers, Jumaat prayers, funeral prayer; and public enlightenments; these open spaces are relatively large and serve the above mention roles, often private or public land will be devoted for such activities. Religious grounds are owned by the community, represented by religious group leaders who act as the managers.
- vi. *Makabarta* (burial ground /graveyard): This space is designated explicitly as a burial ground owned by the community in north-western Nigeria. Cemeteries take a lawn cemetery settings, with facilities such as water source and store, they are usually on the outskirts of town, burial grounds in north-western Nigeria can be termed as "eco-cemetery" (Zume, 2011), with natural burials that allow the corpse decomposition to become part of the natural environment.
- vii. *Masara Kasa* (Excavation site): The communities use soil (sand) for construction. Therefore, they identify a suitable site for digging off the soil, which is usually not good for agricultural activities; the excavation sites may belong to individuals or the community. These open spaces (borrow pits) are mostly on the outskirt and relatively small in size.

- viii. *Masussuka* (Winnowing site): in North-western Nigeria, natural air is used for winnowing; the space used for that is called *Masussuka*. Winnowing sites belong to individuals and are normally done by women on commission.
- ix. *Majalisa* (small open space): This space is owned by individuals. *Majlis* is an Arabic word that means where people meet for a particular reason. Communities in north-western Nigeria are mostly farmers; they engage in farmlands from early morning till afternoon, by afternoon or early evening they come together to gist and sometimes play some passive games for relaxation, recently they introduce tea of different sort to this *majalisa*. At times this open space is in front of someone's shop among the community members.
- x. The presence of government is reflected in government institutions such as schools, hospitals/and dispensaries. These institutions are characterized by a larger open space that adds to the existing open spaces within the communities. Children's playgrounds and football pitches in these institutions become play spaces for the communities, especially in the evenings. The head of such institutions takes charge of managing such open spaces.

3.4 Ownership of Open Spaces in North-Western Nigeria

The study also reveals the existence of three categories of open spaces in the rural communities of north-western Nigeria, those that are owned by the community; those owned by private individuals, and 'government-owned, all having their defined boundaries, see Table 2 below, the owner defines the users of such open spaces and they have the power to grant access and determine the type of activities organized in these spaces.

Table 2: Ownership of Rural Open Spaces in North-Western Nigeria.

S/ No	Typology	Ownership	Issues
1	Kangiwa (Palace)	As the name suggests, Kangiwa belongs to the Emir, District heads, village heads, and ward heads as the case may be, in rural areas, the village head or ward head is in charge of <i>Kangiwa</i> open space. The whole community identifies itself with this open space.	The need for security made Kangiwa an open space to host all cultural activities, causing competition and some restrictions on the use of the open space.
2	Kofar Gida (House Frontage)	<i>Kofar gida</i> is part of the house. Therefore, its ownership is with the house owner; in rural communities, this open space explains the status of the house owner.	Sometimes, this space is along a road, making it difficult to identify a boundary between the space and road reservations. There is a need for a clear distinction between these spaces.

S/ No	Typology	Ownership	Issues
3	Yara (Daily Market)	Naturally, the community picks a space at the centre of the village, then the buyers and sellers come in; at times, one uses his house frontage to display commodities.	The corner shops are challenging these daily markets.
4	<i>Kasuwa</i> (Village Market) (Scott, 1972)	The district head office owns and controls the space, taking charge of the market space.	The need for internally generated revenue makes the government enforce strict regulations on this market; the nature of the open space is gradually missing as more structures are coming up.
5	<i>Filin Idi</i> (Eid Ground)	<i>Filin Idi</i> is a community of open spaces in northern Nigeria; such spaces belong to different religious groups that manage and own these open spaces.	Getting space in some communities becomes difficult (open spaces such as schools) is used instead, and most communities use <i>filin Idi</i> for only such special prayers, thereby underusing the space.
6	Makabarta (Burial Ground)	Burial grounds are secured and managed by the community through social organisations; in northern Nigeria, some people are selected by the community head to coordinate and manage the burial ground.	With the increase in population and demand for space, the existing burial ground is engulfed within the building. Therefore, new sites need to be considered in most communities.
7	<i>Masara Kasa</i> (Excavation Site)	Communities dedicate land for excavation, thereby giving the community space ownership. Some communities allow individuals to set up their sites for excavation; then, they become the site's owners.	With the trend of urbanisation, people are changing from cultural building materials to concrete and more technically advanced materials; this slows down the excavation sites and renders some sites abandoned.
8	<i>Masussuka</i> (Winnowing site)	Winnowing sites belong to individuals and are normally done by women on commission to the owner; some farmers contract those that winnow to do it on their farmland.	The need for the modern way of farming will make these spaces disappear.
9	Majalisa	Normally organised by a certain group, the group control and manage the space.	There is no control over the users or site of this open space; with the problem of unemployment and insecurity in northern Nigeria, such open spaces pose threats to the wellbeing of the communities.
10	Filin Makaranta (School)	These institutions belong to the government; therefore, these spaces are government-owned, with the government representative as the head of such institutions.	These open spaces host almost all activities in rural areas, contributing to the demise of other open spaces.

It could be inferred those open spaces in rural communities are part and parcel of the landscape and serve as hosts to social, cultural, religious, and economic activities. The study also confirmed that rural communities in north-western Nigeria utilize outdoor (open spaces) for their socio-cultural life. The study also revealed that the name of the open spaces in north-western Nigeria suggests the function of the spaces. In addition, all the community open spaces are large relative to the community size, as shown in Table 3. It is recommended, therefore, that the government coordinate and mediate the ownership and activities of these open spaces by negotiating any disagreement among the community members; through this action, the open spaces could be better sustained and help promote both economic activities and support the cultural values of the communities.

Table 3: Location and Size of Open Spaces in North-Western Nigeria

	Type	Location	Area (Space)
1	Kangiwa (palace Square)	Front of traditional palaces	large
2	Kofar Gida	House frontage	small
3	Majalisa	Front of shops or House	small
4	Dandali/Yara (daily markets)	Within the neighborhood	small
5	Markets	Within the neighborhood	large
6	Filin Idi	Within the neighborhood	large
7	Makabarta (Grave yards)	Within the neighborhood	large
8	Masussuka	Within the neighborhood	Small
9	Masara Kasa	Within the neighborhood	Small
10	Filin Makaranta	Within a government institution	large

The small size means less than 20 square meters, while the large means more than 20 square meters.

4. CONCLUSION

Rural communities of northern Nigeria are culturally environmentally homogeneous. Therefore, the results from the samples will be valid for all communities of northern Nigeria for their homogeneity (Malterud et al., 2015). Typology and ownership of open spaces have become an issue in northern Nigeria's semi-arid region. The open spaces face ecological and environmental challenges, such as desertification and land degradation. This research explores the typology and ownership of these open spaces in rural areas of Northern Nigeria and recommends how the local government and community can sustain their functionality and management.

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