

## **ABUJA SUSTAINABLE SPATIAL HOUSING DESIGN: A SPATIAL DIALECTICS (VOLUMETRIC AND UNVOLUMETRIC SETTLEMENTS)**

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### **Abstract**

Successive metropolitan governments in Abuja have failed in several ways to implement the provisions of the Abuja Federal Capital Territory (FCT) Master Plan. This has resulted in pervasive distortions in the city development programme. At its inception, Abuja came under serious pressure from the premature relocation of federal workers from the old capital city, Lagos. This phenomenon coupled with the influx of new migrants and indigenous settlers have resulted in housing shortage, infrastructure overload, and the proliferation of defective housing and informal settlements in the city and surrounding territories. In Nigeria, government intervention in housing the urban poor is plagued by three key factors, namely: the inherent tendency to confuse squatter settlements with the urban poor; sectional housing delivery system that favours the middle class and high income earners; and inability to reach the target groups and that resulted in volumetric and unvolumetric housing settlements in Abuja (Abuja Dialectics). Based on the visual assessment schedules, the housing and infrastructure profiles of the selected informal settlements were found to be grossly inadequate. The major compositions were “Quick-Fix-Homes”, built with recycled and decaying planks, zinc, cardboards and abandoned aluminium products mostly sourced from nearby construction sites. The areas also lacked basic city infrastructure such as roads, electricity, city water, toilet facilities, and gutters. One innovative architectural scheme models of high-rise buildings with economic options is recommended in solving Abuja Dialectic housing issues. The idea was to retain the urban poor settlements in their current locations with infrastructure and spatial to the Abuja central city.

### **Background**

In May 1967, Lagos emerged as both the Federal Capital of Nigeria as well as the capital of Lagos State with the creation of states and the continued retention of Lagos as the Federal Capital was seriously questioned. The dual role became a source of embarrassing political and administrative complications with the result of that, Lagos became not only unlivable and unserviceable, but also ungovernable (Nwafor, 1980, Okonkwo, 2006).

Nwafor (1980) stated that, as a result of the peripheral location of Lagos, the city has tended to acquire a ‘regional’ rather than a truly national capital where provincialism is stronger than the feeling of the nation’s unity. In Nigeria where there is an urgent need to create a national identity and preserve the country as a political unit, the ‘created capital’ should be so located as to convey ‘a feeling of locational and functional neutrality’ (Nwafor (1980), citing Stephenson, 1970, Okonkwo, 2006).

The need to transfer the capital of Nigeria from Lagos to Abuja, came as a result of the former nation's capital, Lagos, being over crowded, congested and had no lands for expansion. Olaitan (2004) indicated that, the concept of Abuja as a befitting Federal Capital Territory,

centrally located and without the defects of Lagos was spawned in 1975. According to Olaitan (2004), the Federal Capital City is located on the Gwagwa Plains in the northeastern quadrant of the Federal Capital Territory. The site for the Federal Capital City was chosen for its location at the center of the nation, its moderate climate, small population and also for political reasons. To accomplish the goal of relocating the Federal Capital to an area, geographically central to Nigeria and with relative equal accessibility to all parts of the nation, about 845 villages were displaced to make way for the Federal Capital Territory, FCT, (Olaitan, 2004). The government wanted an area, free of all encumbrances, a principle of “equal citizenship” within the territory where no one can “claim any special privilege of "indigeneity” as was the case with Lagos (Jibril, 2006, Okonkwo, 2006).

In the process of establishing a befitting new nation's capital, a Master Plan of the Abuja Federal Capital Territory was design. The resultant Master Plan was prepared such that land use, infrastructure, housing, transportation, recreation, economic and social services are coordinated and inter-related, Olaitan (2004), citing Abba (2003). Successive governments in Abuja have neglected these principles. As such, series of distortions to the concept, direction and implementation of the master plan are prevalent today (Olaitan, 2004).

According to Jibril (2006), the first major policy statement made by Government in 1976, when it decided to move the Federal Capital of Nigeria from Lagos (in the coastal area) to Abuja (in the central part of the country) was for complete relocation of the entire inhabitants outside the new Federal Capital Territory, of about 8000 square kilometers. This was aimed at freeing the territory from any primordial claims, and to enable Government take direct control, plan and develop the new city without any encumbrance, but that was not the case within the governments of Abuja. In making reference to the Abuja Master plan (FCDA, 1979), Olaitan (2004) indicated that, reference to the Abuja Master Plan reveals that in scope, besides including the major elements of the regional development plan for the Territory, the plan intended to regulate land use, transportation systems, infrastructure, housing and other services in a manner that recognized their inter-relationships and spatial requirements which are paramount in any physical planning exercise of its magnitude.

According to the Abuja Master plan (1979), the development of the city was designed to be in four phases with a clearly defined target population of three million inhabitants. The city was designed as an efficient and attractive environment at each stage of its growth – from Phase I, which was designed to accommodate 230,000 residents through Phases II and III, which were to accommodate 585,000 and 640,000 respectively, to Phase IV aimed at accommodating 1. 7 Million. Its ultimate population is estimated at 3.1 million (Olaitan, 2004). As it is the case with development implementation in most developing nations, Abuja Master plan was distorted, following different policy changes that affected Abuja. According to Jibril (2006), between 1976 and 2003, (a period of 27 years) there has been about four major policy changes affecting resettlement within the FCT.

It was the original intent of the Abuja Master Plan to relocate the inhabitants, occupying the Federal Capital Territory area, but according to Jibril (2006), careful enumeration later revealed that the figure was not ‘few’ – about 150,000 – 300,000 people. Uprooting such a huge population was thought to be unwise and could have delayed the take off of the project. It was then decided to allow the inhabitants to remain, but could be resettled within the territory, should their places of abode be affected by city development project. In some cases, at the time of relocation, plans were canceled for political reasons. While the people affected were fully prepared for movement to the new location, another policy change happened. This major shift in

policy direction can be said to be the root cause of problems of squatters and Land Administration within the FCT (Jibril, 2006).

Bello (2009) stated that, generally, as the population and affluence grow, there is an increase in the demand for land by government, private individuals and corporate bodies. Unfortunately, since the physical overall supply of land within a geographical area is fixed, demand always outstrips supply by a very wide margin, especially in the urban centres. This inevitably brings about the survival of the fittest syndrome. In this struggle, government has the upper hand through the exercise of their power of eminent domain, while individuals and corporate bodies meet their land requirements in the open markets. Within the open market, the corporate bodies and the rich individuals usually with higher bargaining power, dominate the transaction; while the urban poor are left with little or no choice but to make do with the crumbs. Consequently, this group of individuals, in most cases, occupies the less desirable areas such as marshy sites, neighborhood adjacent to refuse dumps and where they can find one, they encroach on government lands. The emergent settlement usually evolved as a spatial concentration of poor people in the poor areas of the cities. As expected, this settlement is usually characterized by infrastructure deficiencies, shanty structures, poor sanitation, urban violence and crime. These composition and characteristics have always made squatter settlement a source of worry and concern to their adjacent neighbours and governments (plate 1).



Plate 1. Typical Abuja Slum Architecture  
Source: Abuja Metro (2014).

The unplanned territorial growth and developments occurring in the territory could also be traced back to the governments rush to relocate the government workers from Lagos to Abuja as Olaitan (2004) agreed. These problems are as a result of the rushed movement of workers from Lagos to Abuja without adequate provision for accommodation. The result was the emergence of a number of shantytowns and squatter settlements occupied by workers and the growing service population in such places as Karu / Nyanya, Karmo and Gwagwalada (Olaitan, 2004).

Adeponle (2013) observed that Abuja city is growing faster (13%) than the provisions of its Master Plan. It is fast turning into an environmental embarrassment, with developments springing up in gross isolation of zoning and other planning codes. Abuja, which was supposed to be an epitome of beauty and an enlightened vision of city development, has suffered over the years from unnecessary distortions in the implementation of its Master Plan. Adeponle (2013) further indicated that, rapid urban expansion without effective environmental consciousness means that in virtually every urban center – from large cities and metropolitan areas to regional centers and small market towns – a substantial proportion of the population is at risk from natural and human induced environmental hazards. The shantytowns, slums, settlements and influx of people into the territory and without appropriate sustainable economic base, led to Abuja's urbanization.

Urbanization has its consequences. Adeyemi (2013), observed that Abuja was the fastest growing city in the country, with attendant population growth which had in turn, resulted in over stretching of available infrastructure. Urbanization which occurs without adequate industrialization, sufficient formal employment or secure wages, has condemned burgeoning urban populations in the Third World to poor-quality housing. The problem has been compounded by lack of government funds for housing subsidies, by inflated land prices boosted by housing needs and speculation, and by real-estate profiteering on the part of the upper and middle classes. The operation of the class structure of Third World cities nowhere more geographical explicit than in the composition and working of the housing market. Only the small upper and middle classes in Third World cities have income, job security and credit worthiness to purchase or rent houses in properly surveyed, serviced and legally conveyed developments (Dickenson, 1983).

The same small upper and middle classes in Third World cities have benefited from government sponsored housing programmes in the past. In his Housing and Environmental Planning, Olu-Sule (1988) indicated that, prior to 1973 government activities in public housing had been quite sectional and favored only the working class elites in the society. The poor and low-income were relegated to the background. For example, during the first Development Plan period, 1962 – 68, no attention was accorded housing generally. It was under the town and country planning. Government's policy to house the low-income and the underprivileged did not crystallize even during the Second National Development Plan of 1970 – 74. In spite of the N49 million allocated Town and Country Planning, housing was overshadowed by other priorities of the planning department.

Housing as major government social service venture did not receive any priority attention it deserved until the Third National Development Plan of 1975 – 80 when the Federal Government of Nigeria allocated the sum of N2.5 billion to housing for the creation of 202, 000 units mostly for low-income families. The defective and ineffective methods of allocating these houses to the low-income, the medium-income and under which the underprivileged masses received their shares is the bone of contention in the Nigeria public housing policy\_(Olu-Sule, 1988).

The 1980 – 85 Development Plan when N1.6 million was allocated to housing sector did not achieve any better success than its predecessor. The plan included the construction of 200, 000 housing units; provision of staff quarters and staff housing loans; site and services programme and urban development in collaboration with the World Bank. In addition to Federal Government budgeting efforts, the state governments committed the sum of N1.1 million to the housing sector during 1980 – 85 Development Plan. The core of the problem in all these

Development Plans -1962 – 68 to 1980 – 85 was not the financial allocation or the units completed, but who got the houses. Hard evidence exists that those who benefited from the general government financial capital investment in housing sector has been the upper-income families (Olu-Sule, 1988).

For the urban poor, in the process of finding a place to live, Aduge-Ani (2013) indicated that, a family of seven persons, which comprises the father, mother and about five children live in one room apartment. These people do not even have spaces for bathroom as they take their bath in open spaces.

Lack of accommodation has become the bane of most Abuja residents. During the Mallam Nasir el-Rufai administration of the Federal Capital Territory (FCT), many residents of Abuja lost their houses to the demolition exercise. That incident, however, contributed to the high cost of securing accommodation in the city centre and even in the satellite towns. The influx of people into Abuja to look for greener pastures has helped to worsen the situation. To the average civil servant, securing a befitting accommodation in the FCT, irrespective of its location, is not only a challenge, but also an uphill task. Decent accommodation has continued to constitute a big problem to Abuja residents. Houses located at Garki, Maitama, Asokoro, Wuse, Jabi and Utako districts are practically beyond what the middle and low income earners can afford (Web Team, 2011). That resulted to concentration of squatter settlements in the Federal Capital Territory (plates 1, 8, 9, 10, 11, 12, 13, 17 and 18).

The questions are, who are the people mostly affected by the poor implementation of the Abuja master plan, Abuja demolitions and, the high cost of securing housing accommodation in Abuja and its territory? According to Bamidele (2010), most of the workers who cannot afford to live within the city, find their way to the squatter settlements and uncompleted or abandoned buildings within the city which punctuated all high-brow areas of the city and many (plates 1, 8, 9, 10, 11, 12, 13, 17 and 18). The people, according to Uji and Okonkwo (2007), frustrated by the inadequacies and failure of the conventional approaches to provide urban shelter and services to a significantly large enough proportion of the poor in the urban areas of the developing nations, these ever-increasing class of urban populations have to resort to squatting on public or private land, either by invading and forcefully occupying or leasing such land (illegally subdivided) on which they hurriedly construct (through self-help) their shelter from any available materials using any readily affordable and available technology.

Notwithstanding the urbanization phenomenon, be it political, social and economy, the important focus of this report is the spatial housing design (spatial integration) of the urban poor in Abuja. In the past, various FCT governments have tried, accommodating the interests of the Abuja urban poor settlements and without success. The government's approaches have not necessarily, extensively reviewed and investigated the ancestral concerns of most of the residents of the Abuja urban poor communities. A lot of government's solutions are centered around quick-fix urban renewal programmes that have not in anyway, helped the course of the urban poor communities and settlements in Abuja metropolis. The demolition exercises (several), resettlements and land swaps programmes adopted by the government have added more frustrations to the Abuja urban poor problems instead of solving them.

Nigeria is transitioning into a reformed economy, transitioning from public sector dominated economic activities to private sector, commonly known as "Public-Private Partnership" (PPP).

The Federal Capital Development Authority's (FCDA) swamp programme is in line with the nation's Public-Private Partnership programme. It is a housing and urban renewal programme,

transferring densities to accommodate the interest of the inner city dwellers (the urban poor), but was not the case according to Aduge-Ani (2013), Federal Capital Territory Administration (FCTA) has been allocating their present communities to developers without telling them what they have in mind concerning their relocation or resettlement.

Almost all the government housing programmes have failed to address the housing needs of the urban poor, especially, the Abuja urban poor housing demands. In a reformed economy, not much has been done, to make sustainable, the urban poor housing and accommodation problems in the nation's big cities and urban areas. To achieve that, the government must look into sustainable spatial integration and retention of the urban poor settlements in line with regional/territorial spatial developments that would accommodate the interest of that segment of the communities, rendering essential services to the rich (high brow areas of the communities), plates 2 to 7.

**The Segment of the Communities Providing Essential Services, yet living in make-shift homes**



**Plate 2.** Abuja soft drinks and Gala seller  
**Source:** Author's field work



**Plate 3.** Abuja vegetable seller  
**Source:** Author's field work



**Plate 4.** Abuja meat seller  
**Source:** Author's field work



**Plate 5.** Abuja plantain seller  
**Source:** Author's field work



**Plate 6.** Abuja plantain roasters  
**Source:** Author's field work



**Plate 7.** Abuja barrow yam seller and other merchants at the background  
**Source:** Author's field work

Keeping and maintaining the government's failed, orthodox housing delivering schemes to the expanding poor Nigerian populations, how can the government, sustainably, provide where the urban poor can live without disturbing the urban equilibrium, knowing that they (the urban poor) have no lands, that they squat anywhere they see and provide services needed to maintain the rich communities?

### **Conceptual Theory to Spatial Dialectics**

Some scholars have suggested that the basis of urban life in Africa is so very recent in an historical sense, that we are still able to detect some of the early characteristics in many of the towns of contemporary Africa (Okonkwo, 1998 citing Gutkind, 1974). Both subsistence economy and nomadism still prevail over most of the continent today. Whether or not the prevalence of these early characteristics is widespread is a matter of less important in this work. Rather, of interest, is the presentation of an insight into the socioeconomic and sometimes political phenomena of urban development.

As man's attitude, towards the group, the community and society of which he is a member, has been changing throughout known history, so his reaction to his environment has passed through successive stages of transformation. Cities have played an important role in this process, which consists of a never-ending dialogue between challenge and response and which derives to strength and continuity from elementary thoughts of mankind-religion, exchange of ideas and goods and need for protection and gregarious living. For millennia human efforts have been directed, as far as cities are concerned, toward the same goal. Always and everywhere the basic elements of cities have been the same-dwelling houses, public buildings, and spaces between them. But the form and its meaning have changed, for both express the spiritual and intellectual conception of the universe that men have made for themselves (Okonkwo, 1998 citing Gutkind, 1974, p11 - 12).

Today, the major threat to human environment is more complex, more closely connected with the very way in which cities are built. For example, the largest cities have grown nearly tenfold in a century. Yet, there consumption of land is greater still. An immense transport system is required. In the wealthier countries this bears strongly on the fact that masses of automobiles raise the level of air pollution and noise, and create serious problems of congestions and

accidents. In poor countries where poor housing structures dominate the urban landscape, spaces are littered with settlements lacking the most basic urban infrastructures (plates 8 to 11). All this tend to reduce the quality of the human environment especially in the urban areas (Okonkwo, 1998, p32).



Plate 8. Alum, Mpape ,Abuja  
source: Babajide Orevba



Plate 9. Berger Quarry Abuja  
Source: Babajide Orevba



Plate 10. An Abuja Slum  
Source: Babajide Orevba



Plate 11. Abuja neighborhood  
Source: Babajide Orevba

It is important to realize how these pressures resulting from development, on the urban geography mutually reinforce rather than correct one another. Although cities transform resources in ways that contribute strongly to economic development and social welfare, they also generate waste that pollute the urban-human environment and degrade renewable natural resources. A simple fact in this respect is that, though man's interaction with nature has brought about the formation of urban spaces and centres and their extension, the same process of interaction has also led to the degeneration of the spaces it created (plates 8, 9, 10 and 11). This is an important issue in housing and residential quantity and quality (Okonkwo, 1998, p33-34).

In time and space, it was the first Industrial Revolution that brought to the limelight, for the first time, the failure of urban development and the problems of the urban poor. On historical focus of sociology and society, the process of industrialization and population growth compounded urban development failures (Okonkwo, 1998).

The problems and challenges posed by the rapid urban growth in Nigeria are immense. More easily observable and perhaps very frightening are the general human and environmental

poverty, the declining quality of life and the underutilized as well as the untapped wealth of human resources. Housing and associated facilities (such as water, electricity, waste disposal) are grossly inadequate. Millions live in substandard environments called slums, plagued by squalor and grossly inadequate social amenities, such as, a shortage of schools, poor health facilities and lack of opportunities for recreation among others (plates 12 and 13). Juvenile delinquency and crime have become endemic in urban areas as a result of the gradual decline of traditional social values and the breakdown of family cohesiveness and community (Adepoju Adetoye, 1995). All these are urbanization problems.



Plate 12. Tale of urban slums in Abuja mega city  
Source: Fred Itua, Nguamo Aka, Ruth Agada and Amaka Agu



Plate 13. An Abuja slum.  
Source: Babajide Orevba

Urbanization is not a recent phenomenon in the history of Nigeria. Also, city growths date back into the country's pre-colonial era. Both urbanization and city growth have in the course of time been in relation to the level of the country's socio-economic development. Pre-colonial Nigerian cities recorded gradual growths in general terms. Where and whenever they existed their growths were associated with one basic feature: they controlled the spatial economic order; and provided spaces for cultural interaction. At colonization, the British introduced another socio-economic pattern of development characterized principally by a new hierarchy of administrative centers and a colonial export-oriented cash-crop economy. This resulted in the dislocation of the pre-colonial traditional urban economies and their system in Nigeria, thus affecting city development patterns. Cities then grew quite in relation to the impact of colonialism on the socio-economic life of the country. And most of Nigeria's major cities today emerged out of this colonial impact (Okonkwo, 2013).

However, in whichever form the making process of an urban center, town or city is examined one must contend with the complex nature of the subject because its political, social and economic implications are characterized by 'urban development' and 'urbanization,' which underscore, in a permanent way, the making of urban centers at any time, in any place and at any scale.

If urbanization could be summed up as the process of concentration of people and their socioeconomic activities within a place over a period of time, urban development does not depend on steady concentration and coalescence of urban facilities and services about a given

center; it is fundamentally guided by man's reaction to his environment which passes through successive stages of transformation. However, while concentration process of people in a place (urban center) could be continuous and seemingly unstoppable, as is the case in Nigeria, the environmental transformation that accompanies it has important implications for proper understanding of the political, social and economic structure of the built environment of the place. As the form and meaning of the built environment are transformed and changed overtime, they both express the spiritual and intellectual conception of the universe which men have made for themselves, in response to human, organizational and institutional need (Okonkwo, 1998).

The emergence of Urban Design as both intellectual, professional and administrative instrument to address urban development failures can never be over emphasized. Architecture, urban planning and settlements cannot be reasonably discussed without fundamentally understanding the history of urban design, which ties them together. According Dalley (1989, p.120), the history of urban planning focuses on the people, places, concepts, and practices of planning of urban development over time.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Union of Architects (UIA) Charter (2001), in its preamble stated that: We, the architects, concerned for the future qualitative development of the built environment in a fast changing world, believe that architecture involves everything that influences the way in which the built environment is planned, designed, made, used, furnished, landscaped and maintained.

According to Catanese and Snyder, (1979), physical planning must now be defined to include all these diverse examples without excluding the more traditional focus upon the design of the "built environment." One such definition is that physical planning is the determination of the spatial distribution of human actions and conditions to achieve predetermined goals. This concept is the key to understanding the expanded role of physical planning.

All human actions and conditions are distributed in space: groups, cultural beliefs, buildings, vehicles, environmental pollutants, political power, energy consumption, skills, and technology. Any of these variables can be defined, observed, located, and translated into a map to show how they are distributed in space. Almost all urban planning activities sooner or later refer to a map showing the spatial distribution of critical variables that typically include population figures, economic and social conditions, and characteristics of the physical environment. Interest in the spatial distribution of activities and condition is not limited to urban planning. Many disciplines, including geography, architecture, engineering, economics, agriculture, sociology, anthropology, business, and public health use the concept of spatial distribution for solving problems.

Simply including spatial distributions in the analysis of an urban problem does not imply that physical planning is taking place. Only when a spatial distribution is part of an action recommended to achieve some purpose can we say that a physical plan is being proposed. For example, if a planner analyzes the socioeconomic conditions in areas of the city and recommends a social program which does not differentiate between areas, then there is no physical plan, only a social plan. However, if social programs vary among areas, there is a physical plan. What kinds of actions and conditions do planners spatially distribute, and for what purpose? There are essentially four types of variables whose spatial distribution is manipulated in physical plans: objects, functions, activities, and goals.

Within the context of physical planning, the spatial distribution of objects refers to items such as buildings, parks, trees, roads, highways, sewer lines, and utility plants. Spatially distributed objects may be as small as traffic signs and as large as airports. This aspect of

physical plans comes closest to the traditional image of the urban planner. For example, the layout of pathways, residences, and marketplaces was a function of the planners in ancient Greece. Today planners are still actively engaged in planning the layout of suburban subdivisions, the design of new towns, and the location and distribution of parks, recreational facilities, hospital, schools, museums, libraries, and art centers.

There are other less obvious situations in which planners are concerned with the spatial distribution of objects. The location of a series of firehouses or ambulance stations is a form of physical planning in which objects are placed to achieve an effective distribution of critical public services. Large objects, such as industrial parks, highways, and shopping centers, also must be planned and located in space. Although the explicit functions of these objects are of paramount importance to the physical planner, they have many other attributes with which the planner must be concerned. For example, while an urban highway fulfills the function of transportation, because of its properties as a physical object it has a significant impact upon the quality of life within the neighborhoods through which it passes. Determining what impacts will occur and who will be affected is critical in the spatial distribution of such objects. Similarly, in the design of a downtown center the aesthetic qualities of the objects are as significant as the functions of the building. Thus the spatial distribution of objects is often an extremely complex problem that relates not only to the proper location of an object from the standpoint of its explicit purpose, but also to its form and visual quality, symbolic importance, and its interaction with other objects and human activities (Catanese and Snyder, 1979 p176-178).

The complexity of this problem is made manifest in various noticeable attempts (formal and informal) by urban dwellers (both poor and rich) to provide housing for themselves in the city. Housing, according to Uji and Okonkwo, (2007, p17), Turner (1974), sees 'housing' as human dwelling, a roof over one's head meant to serve as shelter for human living, interaction and carrying out of activities away from in clemencies of weather. Uji and Okonkwo (2007) further indicated that, Turner (1974) associates housing with the process of responding to the needs for shelter and the associated demands of social services, health and public facilities which go with the physical shelter in order to ensure congruent living with the environment. Housing generally refers to the social problem of insuring that members of society have a home to live in, whether this is a house, or some other kind of dwelling, lodging, or shelter (Housing, 2013).

The process of urbanization of Abuja has been seen to rather produce what the present work could term "spatial dialectics" especially in spatial distribution of objects. The city is characterized by dual urban spaces: the formal (where all is organized) and informal (undeveloped squatter settlement). Overtime, both the formal and informal spaces have also developed an interdependence relationship. While the formal spaces are inhabited by the rich or those who could afford them, the urban poor are crowded in the informal urban spaces which dot mostly the central city areas of Abuja (see plates 12 and 13). Thus the public spaces in these informal settlements have become or have assumed the function of "housing/shelter" for the Abuja urban poor (plates 14 to 16).



Plate 14.



Plate 15.



Plate 16

Plates 14, 15 and 16, Abuja's public space (housing/shelter)

Source: the author

A typical space becomes the shelter/house and the house becomes the space (for most of these people who are security guards, their relations and friends):- the case of urban poor and urban poor housing in Abuja. In most cases, these spaces are without spatially distributed objects yet, they are side by side with formal settlements without proper links and visually acceptable urban objects, elements and qualities. The nature, socioeconomic complexity of these informal spaces, which analysis is shown on plates 14, 15 and 16 of this work, constitute a strongly identifiable character which is in this work christened *Spatial Housing*. It is so termed because of the assumption of the public/open space into the provision of the basic (spatial) socioeconomic, psychological, shelter, etc needs of the urban poor. This phenomenon is different from those of the destitutes/homeless people in the city. The informal inhabitants are more or less fixed in location (even though improper location) and actively dependent on the socioeconomic activities of the urban economy. However, economic growth in urban areas has not kept pace with the increase in the urban population (BBC, 2013). To that effect, Abuja urbanization is growing more than the area's urban development vis-à-vis housing and economic resources. In the formal sense, spaces can be defined and differentiated, however same cannot be said in the informal, hence 'spatial dialectics'.

As indicated earlier, urban objects includes buildings, parks, trees, roads, highways, sewer lines, and utility plants used by urban planners and architects in defining spaces. Space: is the boundless three-dimensional extent in which objects and events have relative position and direction (Space, 2013). Within the space is the spatial housing characterized by informal volumetric and unvolumetric combination now called the 'spatial house', 'open house' or 'house without limit'.

In a larger scale, the spatial housing would serve the interest of the Abuja urban poor, caught up in both Abuja's spatial dialectics and dualistic economy. The urban poor are equally known to live in the open, in shanty structures, marshy sites, and poor sanitary environments in want of where to live to stay close to work, both formal and informal. The urban poor inhabitants of "spatial housing" live within the formal areas while caving out their informal spaces within the same. According to Okonkwo and Agbonome (2012) citing Llyod (1979), the urban poor are

considered to be inhabitants of shantytowns, slums and squatter settlements, who ordinarily, cannot afford, or have no access to means of meaningful existence. In other words, they generally are supposed to have no (or limited) access resources, employment and opportunities for self-improvement, education and advancement in the sense of modern technological developments. Whether we call them unauthorized housing, informal housing, spontaneous or shelter settlements, they are settlements (usually in urban areas) also referred to as 'shantytowns' by Llyod (1979) who considered them as settlements found on land that may, usually, be illegally subdivided, with perpetual disregard for any form of urban settlement laws (Okonkwo and Agbonome (2012) citing Llyod (1979). In urban poor settlement locations, Okonkwo and Agbonome (2012) citing Osetereichh (1981), indicated that, because of uncontrolled nature and planlessness of the development, buildings may either come too close to one another or obstruct and conflict with one another constituting serious potential fire hazard and making accesses to them also difficult, and provision of basic facilities almost impossibly expensive. Their own alternative facilities like deep wells and latrines also come into conflict with each other, posing serious fire hazards. They are usually characterized by physical forms that have acquired or become grime-and rat-infested, peeling paints and with surroundings littered garbage cans and refuse dumps, a generally depleted and unsanitary environment usually attributed to poverty of the occupant (plates 17 and 18).



Plate 17. Utako, Abuja Settlement area  
Source: the author



Plate 18. Utako Village, Okonjo Iwulal Way  
Source: the author

Whether or not it is clear, urban design can ameliorate the deeper problems of cities. But short of liquidation, what then is the future for urban design? It is arguable that it is ultimately the tasks of managing and improving the spatial dialectics. Expanding the concept of an inclusive, democratic, and civil domain will remain the critical challenge for urban design; the process may begin with solutions that are incremental and marginal in scope, but it must progress with larger vision of what needs to be accomplished (Loukaitou – Sideris and Banerjee, 1998, 308), Sustainable Spatial Housing Design for the Urban Poor in Abuja, Nigeria is thus a documentation/identification of a prevailing urban phenomenon with interest to make remediation recommendations.

## **Conclusion**

The government's approaches to solving the problems of the urban poor housing issues in Abuja Federal Capital Territory have not worked and to start solving them, this report explored sustainable spatial integration and retention of the urban poor settlement areas that architecturally bridged the gap (spatial solution) between the urban poor settlements (place of abode) and place of work, a sustainable spatial housing design for the urban poor in Abuja. It investigated, incorporated and adopted urban design principles, embracing the use of high rise and row housing. It is a widely accepted fact that the towers and skyscrapers are advantageous in housing accommodation, in urban areas with high population density and decreases the cost of municipal infrastructure (Tower Block, 2013).

### **Recommendations**

The focal point of this paper was to introduce sustainability (adequacy) of spatial urban development in the Abuja Federal Capital Territory with special attention to the urban poor housing retention (shanty, squatter, ghettos, etc.). This paper recommends granting and giving lands to the residents of the urban poor settlements of Abuja, to enable them build and economically develop their settlements. The government's approaches to solving the problems of the urban poor housing issues in Abuja Federal Capital Territory have not worked and to start solving them, this research recommends retention and sustainable spatial integration of the urban poor settlement areas, that would architecturally bridge the gap (spatial solution) between the urban poor settlements (place of abode) and place of work. It recommends adopting urban design principles, dealing with the density of the urban poor settlements, the aesthetics, urban amenities, well defined means of circulation, functional parks, how the urban poor settlement areas function and decongestion of the areas by building high rise and row houses. The buildings would embrace facilities for factories and industries (commerce) on the lower floors, where the residents would be gainfully engaged in economic activities while they live on the upper floors.

### **Researcher's Proposed Models**

Without boring the reader and being repetitive or rhythmic, the current author thinks it worth's the effort to reiterate the emphasis on the use of High-rise or Row housing approach as was the case in advanced world in solving urban housing population issues. At the same time, sustainably, spatially integrate the urban poor settlement areas in Abuja FCT with the central city infrastructure. Asian countries with limited lands and huge urban population problems solved their housing needs through vertical building approach and the model could be adopted in Abuja with huge housing needs. The arguments over the mechanical and electrical supports to propel the proposals are no longer major concerns. Technology has advanced and the use of battery-inverters, high-powered generators and water supply boreholes, the dependency on state provided municipal services are dwindling.

**Spatial Housing Design Proposed Model:** The neighborhoods of Abuja urban poor settlements are all different and will not adopt a particular layout pattern, but will embrace integrating housing and commercial activities that would promote growth and integration with the Abuja City Center utilizing high-rise building approach. This model adopted the high-rise building approach with factories and municipal activities on lower floors while the upper floors serve as residential units. Community gatherings and business activities are located at the middle of the subdivision to spatially and economically tie the model.



Plate 19. Recommended model for Abuja Spatial Housing Design (site plan).  
Source: author



Plate 20 Recommended model for Abuja Spatial Housing Design (perspective).  
Source: author



Plate 21. Recommended model for Abuja Spatial Housing Design (perspective –a different view)

Source: author



Plate 22. Recommended model for Abuja Spatial Housing Design (perspective-a different view showing urban the elements).

Source: author



Plate 23 Recommended model for Abuja Spatial Housing Design (perspective – showing a landmark).

Source: author

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