



## **‘TOTAL HOUSING’ CONCEPT FOR THE SLUMS OF AFRICA AS CONTAINMENT STRATEGY FOR EPIDEMICS**

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**ABSTRACT:** *Housing has evolved over the ages in terms of both its meaning and practice. While the concept of housing as a physical entity serving the life activities of man has conservatively evolved through the millennia, the physical manifestation of housing has undergone a revolutionary change, especially in advanced nations. This change has resulted mainly from the social revolution and the technological advancement that has occurred in the short span of the modern era. However, housing in the slums of African cities has remained rudimentary to this day. Surveys of housing conditions in these settlements in several countries have confirmed them to be little more than just shelters against adverse climatic elements. Efforts to improve the quality of housing in the Informal Settlements of the Third World to make them compatible with modern living activities have had little success, especially in the sub-Saharan African region. Combinations of culture, ignorance, and poor economic status have worked to frustrate such efforts. The COVID-19 epidemic, which has been the most profound pandemic to date in the modern era, has thrown up added challenges to improving the conditions of these housing. The experience of this epidemic has had a significant influence on work, living and travel, among other life activities and accordingly calls for new housing. Based on the interim result of an ongoing housing survey of a Nigerian city backed by similar surveys from literature, a new housing concept- ‘Total Housing’ is proposed.*

**KEYWORDS:** Africa; Epidemics; Slums; Total Housing.



## INTRODUCTION

One of the most profound events of this century is arguably the COVID-19 pandemic. It impacted virtually every aspect of man's activity on planet Earth, leading to what was popularly termed the 'new normal'. Hence, it affected living, social relations, livelihoods, industry, and travel and should definitely affect the physical spaces which accommodate these activities. It did not only overwhelm the best health systems in the world but also laid bare the gross inadequacies of housing and communities of the developing nations, especially those of Africa. Only the grace of God saved what could have been a gross calamity for the region, even though that should not be relied on for the future.

Although the poor quality of housing in the slums of Africa has been common knowledge for decades, the COVID-19 has helped to underscore the urgent need for a new housing genre to address all health issues and the general well being of the citizens. Uji & Okonkwo (2007) report that the slums of the Third World Cities (TWC), also referred to in the literature as 'Informal Settlements' and 'Squatter Settlements' among other terminologies, are essentially the same phenomenon with respect to their poor quality housing and informality. This was based on their extensive literature review and empirical survey of three Nigerian cities (Bauchi, Jos and Makurdi). This study re-surveyed one of these cities (Bauchi Metropolis) in 2019, and the findings indicated similar characteristics except for worsening housing conditions.

However, a number of scholars have reported some key differences in the informal settlements between regions, cities and even within the same city (Odongo & Lea, 1977; Drakakis-Smith, 1979; Uji & Okonkwo, 2007). This suggests localised actions for the improvement of each city or community while a general framework for improvement can be developed for at least each region. Latin America and parts of Asia have achieved some success in improving housing in their informal settlements mainly because of their government's involvement in the process. On the contrary, the Nigerian government, like most others in sub-Saharan Africa, has yet to develop any policy on these settlements with regard to appropriate housing and general organisation of space. Thus, a *laissez-faire* situation best describes the spatial development of their informal settlements. This chapter, therefore, is an attempt to propose a new housing concept termed 'Total Housing' that will serve as a framework for addressing existing and future health challenges as well as the other myriad problems of the informal settlements of the sub-Saharan Africa region. A pragmatic proposal for implementation shall equally be suggested.

## MEANING OF HOUSING AND ITS EVOLUTION

Housing, which is a relatively recent terminology, like its older synonyms such as dwelling, home or house, is more than a physical entity. It connotes a process, a social status, and many other meanings that the human mind can conceive. Hence, Mandelker and Montgomery (1973) describe housing as both a process and a product. In fact, Turner (1968) tends to emphasise the process aspect, especially for housing in the informal settlements of the third world, where housing is more of a continuous process in response to the changing circumstances of the residents. Housing, unlike the other basic needs of man, serves in addition to the physiological needs of his social, psychological and, to a large extent, spiritual needs. Here lies its complexity, the difficulty in defining it in absolute terms and the necessity for its continuous evolution.



From the moment man transitioned from a wandering life to a sedentary one, his house has evolved in time and space. Mason (2012) has listed technological development, advances in architecture, family size, rise in living standards and governmental incentives as some of the factors affecting housing evolution. To this list can be added the current climate change issue and the health concerns that arose in the industrial cities of the 18<sup>th</sup> century and thereafter. Mason (2012) chronicled the evolution of housing in North America from the time of settlement there to the present and a peep into the future thus: the first homes were very small, usually one-room, one-storey structures which were enlarged with new spaces by the middle of the 18<sup>th</sup> century. The 19<sup>th</sup> century saw more compact city houses, normally in row formation, with the spaces now being differentiated into public and private rooms. The early 20<sup>th</sup> century saw an initial decrease in the square footage of houses to compensate for the higher costs of new technologies. Another reason cited for this decrease was the stoppage of home production of household goods, which were now industrialised. However, with time, houses began to increase in size again, with improvements in the economy and the development of suburbia. Paradoxically, lot size and family size have decreased in the face of increasing house sizes. He opines that while the future looks very unpredictable, what is certain is that the population will continue to increase against the finite land resource, making it premium and expensive.

It can be reasonably assumed that the development in Europe and other developed nations is similar to that of North America except for their antiquity. For the Third World, especially Africa, where Muhammad-Oumar (1997) observed the scarcity of study and documentation of 'domestic architecture' (another expression for housing), existential evidence suggests a similar path of development. However, the constraints of technology and economy seemed to have stunted the growth. On the whole while housing evolution has proceeded naturally worldwide, the role of governments through legislation and other administrative instruments has been the main driver in the modern era.

## HOUSING QUALITY AND HEALTH

Housing quality is largely a subjective and a relative phenomenon that is at the same time dynamic. However, housing quality is generally agreed to embrace the state of the physical shelter, the physical environment (both immediate and remote), and the defining social environment of the community. Housing quality is the adequacy or lack of key housing features and services deriving from them to the occupants. Among the key services housing should render to occupants is healthy living guaranteed by a sanitary environment in and around the house, good air quality, and freedom from dampness, mould and other health-threatening agents/vectors. Rim-Rukeh (2015) reports that slums originating from the Industrial Revolution and its aftermath necessitated the formulation of housing standards by advanced nations, beginning with Britain. The major purpose of these standards was to safeguard public health, which was then seriously challenged by the quality of deplorable housing. This is very similar to the conditions existing in the informal settlements of Third World cities today. Hence, in the U.S., housing standard was initiated and championed by The American Public Health Association (APHA) before other government agencies were charged with the responsibility (Mood, 1986). Adair *et al.* (2016) also report evidence that the physical quality of housing is associated with many physical and mental health conditions. Accordingly, interventions of governments worldwide in setting housing quality standards are primarily aimed at safeguarding public health and safety.



## HOUSING IN THE INFORMAL SETTLEMENTS OF AFRICA

Housing in the informal settlements of the Third World, especially sub-Saharan Africa, generally has three defining characteristics. They are classified as ‘slums’ because they lack the basic housing utilities/services considered as minimum. This may be in addition to the poor structural integrity of the main shelter elements such as the roof, wall, floor, etc. Secondly, they are ‘informal’ because they have been developed in contravention of the official housing standards/regulations and/or without government approval. Finally, they are ‘squatter settlements’ because the occupants lack legal tenure to the land (Dovey & King, 2011). The combination of these characteristics normally constitutes and/or leads to a deplorable state of housing quality.

The following key housing deficiencies have been reported in the informal settlements of most of the Third World: unsound shelter structures, inadequate space in and around the house, inadequate or complete absence of housing utilities/services and inappropriate location and/or inadequate social facilities (Fernandez, 2011; Onyekachi, 2014; Marutlulle, 2017). Unsound shelter components, such as foundations, floors, walls, roofs, etc., compromise their ability to withstand adverse climatic elements (rain, dampness, sunshine, etc.). Structural stability, fire safety, etc., are also at stake. Space constraints, on the other hand, result in inadequate building setbacks, open spaces, access roads and interior space, leading to poor lighting, ventilation, air quality and higher densities. Similarly, inadequate basic utilities/services such as portable water, sewerage, solid waste disposal, and power/energy supply have direct adverse health implications. Finally, poor location and/or neighbourhood services deprive residents of access to health, education, economic and recreational opportunities. In summary, poor housing quality in the informal settlements of TWC deprives the residents of adequate health and all essential life needs.

Estimates of the sizes of these informal settlements vary greatly, as indicated by various surveys, even as UN-Habitat (2016) reports that accurate, localised, standardised and available qualitative and quantitative data on informal settlements remain limited. What is certain, however, is that the great majority of the poor, and in recent decades, a significant population of the middle and high income, live in these settlements. Accordingly, on average, over 75% of the population of city residents in sub-Saharan Africa live in informal settlements. It would, therefore, be an unmistakable statement of equity if their governments could focus on improving the housing quality.

Government policies and interventions in the informal settlements have varied from one region to the other over time. In Latin America, for instance, Uji & Okonkwo (2007) report that following the works and advocacy of J. F. C. Turner, the governments of the region were the first to view the phenomenon positively. This has largely accounted for the great improvement in the quality of the settlements in recent decades. Hence, Werthmann and Beardsley (2019) report that some of the world’s most effective efforts to improve informal settlements are taking place in Latin America. Asia comprises one of the most varied racial groups of any region. The socio-economic constitution also reflects the characteristics of informal settlements. Accordingly, case studies in Asia show that there are wide discrepancies in how city governments manage and perceive informal settlements and residents, including the policies they put in place to support their needs (Satterthwaite, 2008). Sometimes, policies for informal settlements are fluid as the stated intentions are not followed through on the ground (Reerink & Gelder, 2010). Some slum improvement projects, for example, fail to achieve their



stated purposes (Minnery *et al.*, 2013), while some city governments' projects are led by neo-liberal development policies that reflect strong policy connections between city governments, developers and the emergence of large scale urban development projects (Das, 2017). Uji and Okonkwo (2007) observed that informal settlements received much more intensive study in Asia and Latin America than in Africa. The probable consequence of this is that African governments are way behind their Latin American and Asian counterparts in any effective interventions to improve or prevent informal settlements, although the Northern Africa sub-region, the Republic of South Africa and Kenya have made notable efforts. The COVID-19 pandemic provides a unique opportunity for the African region to take a bold step towards addressing the challenges of its informal settlements. As the region rebuilds its post-COVID age economy and communities, housing remains a fulcrum for action.

### THE ACCIDENT OF COVID-19 PANDEMIC

A pandemic is essentially an accident as though its occurrence is known, yet it is unpredictable. Such was the outbreak of COVID-19 beginning in China in the last month of 2019 and spreading quickly to all corners of the globe a few months thereafter. The World Health Organization (WHO) officially announced it as an international health emergency on January 30, 2020 (Bouey, 2020). COVID-19 is a coronavirus-caused disease with a greater risk of severe illness and death for the aged and those with underlying health conditions that affect the cardiovascular, respiratory and immune systems (WHO, 2020). Human-to-human infections were soon confirmed through contact with infected surfaces and through air droplets. CCSA (2020) reports that over 90% of COVID-19 cases occur in cities where the urban poor live in informal settlements, which negatively impact livelihoods, housing, and access to basic needs.

Spread containment measures such as physical distancing, personal hygiene, and lockdowns were hardly feasible in the crowded, unsanitary environments of the informal settlements. ICT facilities were widely used during lockdowns to carry out and/or access services from homes; the Third World, especially Africa, having reportedly the least access globally, did not fare well here either (CCSA, 2020). The contact tracing strategy to track and control spread was the most difficult one in the chaotic environment of the settlements. On the whole, the physical and social settings of the informal settlements provide the least resilience to the control and containment of a pandemic or any epidemic.

The hope for re-engineering these environments lies in the appropriate utilisation of a number of recovery funds put in place by various organisations and individuals. Specifically, Gondure (2020) reports that a number of international financial institutions, such as the World Bank, the International Monetary Fund (IMF) and others, have provided a number of stimulus packages for African countries targeted at small businesses and vulnerable populations.





## TOTAL HOUSING: A PROPOSAL FOR THE SLUMS OF AFRICA

For housing to remain appropriate and adequate it must evolve in accordance with changing circumstances, needs and aspirations of man. The COVID-19 pandemic has ushered in a new era of living to which the living shell (housing) must respond. The informal settlements of, especially, sub-Saharan Africa stand most in need of change having lagged behind in all indices of human dignity taken for granted elsewhere. The COVID-19 pandemic and its aftermath serve as catalyst.

Housing as a product or a physical entity has always served an unchanging function, i.e. as space and container for human activities; housing necessarily changes as these activities change. Housing as a process on the other hand is always in a state of flux in accordance with the ever dynamic social and physical environments of man. The concept of 'Total housing' must be derived from these two perspectives of housing.

Total housing as being conceived here for the informal settlements of Africa is not entirely novel; rather, it is a reach for the ideal against the backdrop of the realities of life in the settlements. Life in a typical informal settlement has been observed through participant observation for several years (the author has lived in one for over twenty years), and the following interaction between a man, his housing environment and activities have been noted. The typical life activities of the average household comprise:

- i) **Work:** this is production of goods and services to meet life's requirements otherwise referred to as occupation or livelihood. This takes place within the housing area for most of the residents in line with their aspirations.
- ii) **Physiological functions:** includes feeding, marital relations, excretion, sanitation and rest. These are majorly activities requiring privacy.
- iii) **Mental and spiritual exercises:** includes study, worship and meditation. These happen within the house and occasionally outside the housing area.
- iv) **Recreation:** active and passive non-utilitarian activities. Mainly within the house for adults, while minors may indulge in these outside the house.
- v) **Socialisation:** social activities among household members and with guests. Carried out in the house and neighbourhood.
- vi) **Communication:** movement from place to place within and outside the house and communication between persons within and around the house.

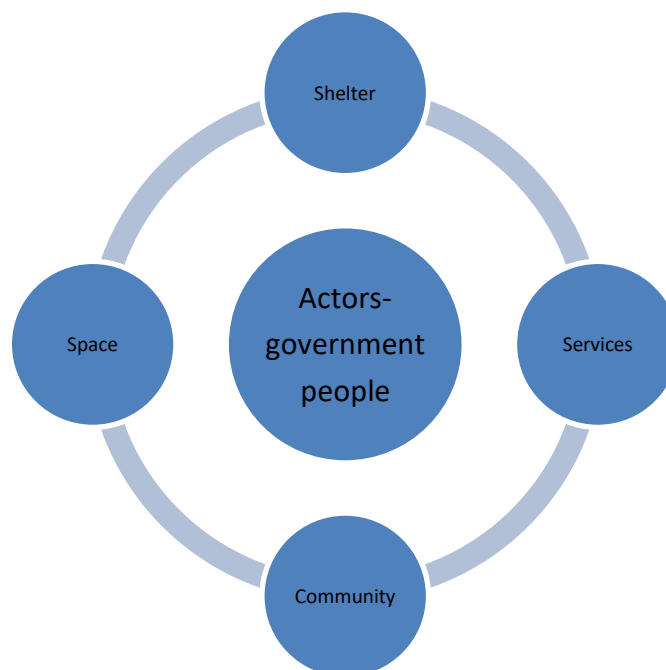
Suitable conditions, which define the quality of housing, must exist for the above activities to be effectively carried out. These conditions include:

- 1 **Comfort:** includes suitable environmental conditions, effectiveness and convenience in carrying out activities, privacy and so forth
- 2 **Safety:** freedom from accidents, injuries, insecurity and similar threats.
- 3 **Health:** sanitary environment, fittings and facilities.

The physical reality of the housing in the informal settlements as earlier sketched, is grossly inadequate to contain and serve the above activities. As earlier reported, housing in informal settlements is more of a process than a finite product. Unfortunately, this process as currently carried on, is not robust enough to result in adequate housing. Therefore, the basic elements of total housing as a panacea to these deficiencies are adequate space, sound shelter elements, housing services, and a living community.

Adequate space begins with an appropriate plot size that translates to adequate indoor and outdoor spaces for lower density, crowdedness index and associated positives. The access road, which is the space for traffic (human, vehicular, etc.) and services (drainage, service lines, etc.), is considered under adequate space. Sound shelter elements comprise foundation, floor, walls, etc., which should be stable, durable, fire resistant, and damp proof to give adequate protection to occupants, goods and activities. Housing services are basic facilities such as water, sewerage, energy and solid waste disposal. Communication infrastructure is also to be considered basic. Finally, a living community with accessible educational, health, economic and recreational facilities is an essential link for sustainable housing.

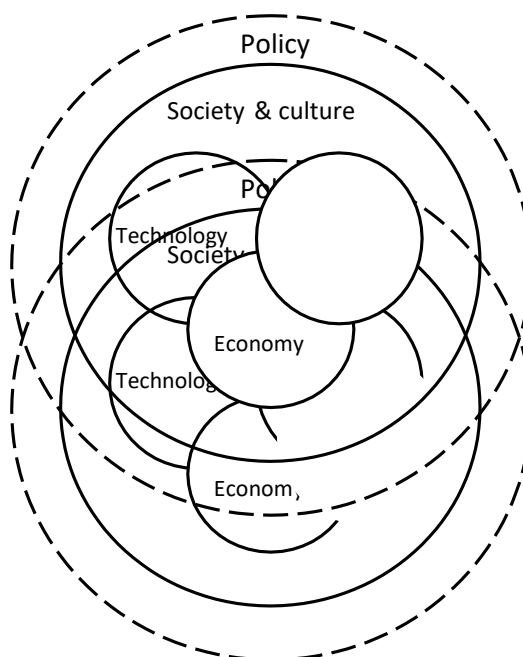
Total housing as a process is conceived as the integration of these four elements with the agency of two principal actors, namely the government and the people. The government, in line with the ‘Sustainable—Affordable Habitat Housing Theory’, acts as the driver (Nair *et al.*, 2005). The housing process in informal settlements is slow and continuous; accordingly, the four elements may be prioritised and phased based on local peculiarities and needs.



**Figure 1:** Elements of Total Housing

## CONCLUSION

Third World nations, especially those of sub-Saharan Africa today, face an unending social strife ranging from minor to major incidences. This state of affairs can hardly be divorced from the various social deprivations the poor of these nations face. They have limited access to shelter, education, health services, and economic opportunities, to mention some.



**Figure 2:** Sustainable-Affordable Habitat, Nair et al. (2005)

The COVID-19 pandemic has largely aggravated the situation. However, one of the major lessons of the pandemic is that the global community has a common destiny and should spur the richer nations and individuals to a greater commitment to equity. The Millennium Development Goals (MDGs) and the succeeding Sustainable Development Goals (SDGs) were efforts in that direction. Nevertheless, a focus on housing, based on the concept of total housing, provides a more comprehensive framework for addressing the issues of health, wealth and general well-being of the vulnerable citizens of Africa and the rest of the Third World.

Considering the huge qualitative housing deficit against the current precarious world economy, prioritisation and phasing of the process becomes imperative. The starting point will necessarily be the issue of adequate space as the sub-Saharan African nations have relatively larger household sizes. Existing high densities constitute a major constraint to improving housing quality. It is also expected to be the least costly of the elements of housing as there is a relative abundance of land. Adequate space will include appropriate plot sizes, access road right of way, and institutional /public spaces (for schools, health centres, etc.). The issue of services that have direct implications for health can then be addressed on an incremental basis. Key services include water, sewerage, energy, solid waste disposal and ICT facilities.

In the overall process, the government should be the driver. In Nigeria, for instance, the government does virtually nothing, leaving a laissez-faire situation in the informal settlements.





Over five decades of housing programmes have not touched these settlements, sustaining a high level of housing inequity as in other sectors. The government has the duty to mobilise and harness the financial, administrative and other resources of their communities for a sustainable process. Finally, although the process is expected to be relatively low-cost, financial aid from international financial institutions, NGOs, and concerned citizens will go a long way toward guaranteeing success.

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