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Spontaneous Settlements at the Peri-Urban Fringe: The Benefits of Adopting the Principles of Sustainability.

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Abstract: Widely influence by urbanization, peri-urban fringe settlement continues to developed spontaneously and encroaching on the rural hinterland of the large metropolises of the ancient Kano city wall. This Peri-urban residential settlement has development over the years sporadically without basic housing development and control measures in physical planning and environmental management. The resultant effect is absence of public utilities, deplorable environment, poor living conditions, inadequate social amenities, and lack of neighborhood infrastructures. This study is aimed at examining the impact and challenges of spontaneous development in Dan'bare-settlement of Kano metropolis. Using both mixed method of Quantitative and Qualitative techniques, a Ninety (90) structure closed ended questionnaires were administered to residents to evaluate their perception on social housing attributes and neighborhood infrastructure condition in the study area. Seventy five (75) questionnaires were retrieved representing (83.33%) responses rate and collated data was analyzed using the relevant descriptive and inferential statistical techniques. Result of the survey shown that the respondents were satisfied with the housing services design attributes and Social infrastructures. However, respondents were dissatisfied with neighborhood infrastructures attributes; this includes "Quality of Open Spaces" and "Availability of Pipe borne water", Vehicular movement & Circulation, Accessibility of Road, Buildings protection against Dampness, Pedestrian movement & Circulations, Refused / Sewage disposal, Quality of Layout & spatial Circulation, Provision of Greenery / Landscape, Drainage efficient, with mean values and RSI values below (M =1.800 and RSI = 0.600), and ranked 12^{th} and below all in the third quartile. Therefore, the study recommend that government should upgrade such unhealthy built-up environment with strong political will that could needs

redevelopment by providing infrastructure facilities that promotes social and economic sustainability for the settlers.

Keywords: Dan'bare- Kano, fringe settlement, peri-urban, spontaneous settlements, urban planning, urbanizations.

1.0 Introduction

The continuous search for better living environment and means of livelihood has necessitated family instability in search of enabling housing in peri urban fringe settlement of developing state, which has attracted attention of research in recent time. The contemporary features of this spontaneous settlement are due to urbanization which has increases migration and haphazard development. Spontaneous settlements are physically developed housing construction as a result of an outward spread of built-up areas without adequate regard to sustainable building practices which experiencing growth that is unplanned and uncontrolled. Spontaneous settlements are interchangeably used with squatter or informal settlement in various literatures that are growing faster than officially approved designated developments (UNCHS, 2002).. The developments lack the basic provision of infrastructure amenities and services that reflect the absence of government presence for the necessary facilities that enhances livability. The most visible features of spontaneous settlement are that it enhances rapid development of accommodation, business and services forming a timid population of slums and squatter settlements in both the core and fringe of it major towns and neighborhoods. This Ibrahim (2018) observed that housing demand in Kano is higher than the supply, thereby forcing the low-income earners to improvise informal developments for housing accommodation. The quality of housing attributes in such settlements varies from lack of basic infrastructural facilities as access to water, electricity, sanitation, usual marked by overcrowding of a densely populated, dirty surface run-off waste, human living conditions, and social disorganization".

Maiwada (2016) opined spontaneous settlements are high density area of the peri-urban zone which has characteristic similar to those of cities that lacks street-levels and community based open spaces, subdivision of land without the knowledge of approval of planning authorities and are without the jurisdiction of land customary title. Unah (2019a) identify amongst most common fringing settlement that are situated far away from the city bowl lack functional infrastructural facilities, such as water supply, elliptic electricity supply, inaccessible untarred motor able roads, and poorly constructed buildings. Jiboye (2011) posited that spontaneous increases the size of cities which are responsible for acute shortage of habitable dwelling units. This has resulted in diverse urban problems like overcrowding, deplorable environment, poor living conditions, inadequate and poor state of public infrastructures, increased rate of poverty and social vices among several others. Rapid urbanization is major challenges to sustainable housing development in most fringing settlements that expresses a significant contributor to spontaneous haphazard housing growth and this poses a challenge to environmental sustainability (Nwokoro and Dekolo 2012, Amao and

Ogunlade 2015), inadequate social amenities, and increase in social vices **(**Enoguanbhor and Gollnow *et al.* 2019). Jiboye (2012) opine that residents most skeptical about the quality of their housing unit as well as their neighborhood features.

Nkolika *et al.* (2018) identified land use change as implications for land degradation, desertification, biodiversity loss, habitat destruction of built environment, such as overpopulation, pollution, traffic congestion, inadequate agrarian land, eroded drainage and inadequate provision of refuse evacuation (Unah 2019b, 2020) urban sprawl, physical plan and landscape distortions, pressure on infrastructure facilities, imbalance of land use, threat to security land, livelihood and properties, This peripheral fringing growth represents a viable and effective housing option that need to be planned in order to avoid the much criticism for apparent inefficiency in population explosion in the near future. This study is aimed at examining the impact and challenges of spontaneous development in Dan'bare-settlement of Kano metropolis. Using post occupancy evaluation, the specific objectives of the study are to: identify and categories social housing attributes for assessing spontaneous development, enhancing living conditions and environmental quality and improve neighborhood sustainable infrastructural towards an achievable recommendation. The paper addresses this gap in housing infrastructure using Dan'bare peri-urban settlement because of its proximity to Bayero University.

2.0 Literature Review and Background of study

From the 1980s to date, growing deterioration of urban environmental quality, and the developments of spontaneous settlements at it peripheral have gradually become the attributes of the development patterns in our cities, surrounding towns and peri fringing settlements. In view of these dynamics development and the prevailing economic situations in Nigeria, many citizens have resorted to building and settling in unapproved lands and unplanned settlements. This call for an attempt to upgrade and maintain the designed environment in order to control the quality of developments in the area in term of it physical attributes (Ilesanmi 2012, Alagbe & Aduwo, 2014, Ibem and Azuh, 2014). City peripheral settlement has been haphazard in development plan, as this settlement is spontaneously built to cater for humans immediate needs. Urban planners who are responsible for the process of designing how cities, towns, and neighborhood should be have not been up to their task, or rather have not envisaged development of fringing settlement to be much a problem. Poor planning of settlement and non-compliance of building regulations mostly resulted into what is known as Unplanned or Spontaneous growth (Olujimi, 2009).

Jiboye (2011) posits that existing housing stocks are inadequate to cater for the increasing population, such that the low income group, have been complicated by high rate of population growth overcrowding, slum and substandard housing as well as unhealthy and poor environmental conditions, influx of rural immigrants, deplorable urban services and infrastructures, and a lack of implementation of planning policies are

expressions of this problem. Apart from the acute shortfall in housing supply in relation to demand, the majority of housing condition in the hinterland mostly owned by the indigenes and remained unplanned (Unah 2019b, 2020). Zubair, Ojigi and Mbih (2015) opined that these spontaneous settlements need monitoring to assist development planners in stopping improper housing arrangements and inequalities that exist in infrastructure distribution. Ekandem and Daudu *et al.*, (2014) opt that Spontaneous settlement are becoming a major feature of the developing cities. This urban growth has effects on the number and complexity of human activities, which have necessitated a critical assessment of city landscape and hinterland by Unah and Ibrahim, (2019). These includes increased focus on environmental quality and sustainability, right of the physically challenged, effect of traffic and transport in the city's efficiency, growing emphasis on the private sector and effect of new lifestyles. In this context, Goodfellow (2013) opined that the solution of how to plan for fringing-urban expansion is to implement regulations on the use of scarce, valuable and environmentally strained land. This is supported by Aluko (2011) who posit that for human needs to be satisfied on the fixed land and development, the tasks of authorities involved in the physical planning must be sort for.

Ekandem and Daudu *et al.* (2014) opined that noticeable features of spontaneous settlement are basically unplanned, unpretentious and apparently chaotic layout of buildings characterized by high residential density, poor drainage network, overcrowding, and physical disorders. The unavoidable impact of inadequate and implementation of landscape design accessories and features on satisfaction of both site planning and outdoor functional space (Unah and Ibrahim, 2019, Unah 2020b). It presents a totally neglected declination of image of the city, while the settlers with very few exceptions have no security of tenure which discourages them from investing in any standard housing improvement and development (Obiefuna and Agbo, 1999). Mabogunje (1990) and Okpala (2008) posit that history of attempts to plan and regulate urban spaces in Africa since independence has for the most part constituted a litany of failure. Therefore, the authorities charged with the responsibility of managing and planning the affairs of spontaneous development have to swing into action in curbing the alarming increase in population and pressure on the infrastructures in this area.

This spontaneous settlement are areas where groups of housing units have been constructed on land that the occupants have no legal claim to occupy and areas where housing is not in compliance with current planning and building regulations. Ibrahim and Gyoh (2018) determined that development control requires constant and periodic monitoring of such settlement for proper construction in line with building bye laws. Maigari (2018) posit that Government failure to implement the residential proposal for some political reasons coupled with strong pressure for urban residential needs made the individual farm owners to informally convert their farm holdings to residential plots and sell them out to either developers or land speculators. Respondents maintained that 'it was through that process that the study area in less than 10 years developed into full residential area

mainly occupied by low income groups'. Some of the issues raised include: nature and types of the occupants of the study area; means of house ownership and rent, availability and access to utilities such as potable drinking water, clinics and hospitals, schools, and market, building and building materials; neighborhood infrastructures and security issues.

2.1 The Growth of Spontaneous Settlement

The post-independence reformed periods mark a new era of accelerated development in most Nigerian urban centers. This rapid growth was further sustained and accelerated by the political and social changes leading to urbanization in most part of the country which extend beyond their pervious administrative boundaries, engulfing nearby rural settlements and drawing which keep the rural population at a geometrical rate. The Vancouver Conference (1976) aver spontaneous as area of "squatter's settlements". Many school of thoughts have their positive outlook as portraying squatter settlement as a highly successfully solution to housing problem to both urban area and it peripheral. Other research literatures usually referred this settlement to as "Urban poor" or described it positively as "Popular Settlement". This is in recognition of the fact that they are mostly inhabited by virtually low income people, while others described it as Uncontrolled settlement in reference to lack of regulation in the designing, layout and building stages. Agbola and Olurin (1998) opt that in developing countries, the governance and management of towns and cities are most daunting as the cities appear to be growing beyond the control of planners, beyond management capacities and beyond available resources. Anus (1988) posits that spontaneous settlement of unplanned infrastructure is much a question of legality of land.

Spontaneous Settlement is characterizes by: (i) Haphazard housing development in the urban suburbs where majority of the structures are without planning permit. (ii) Improper uncoordinated layouts of the physical development which promotes high level of inaccessibility within the area (iii) lack essential social and welfare infrastructure like water, electricity health care and education facilities among others (iv) The unsanitary conditions in the area poses continuous threat to healthy living of the inhabitants and it's an
area regarded as an area that is dangerously unsafe for living because of its associated social vices (v) Spontaneous settlement presents a repulsive outlook of the city (Patton 1980, olujimi, 2009).

The following are factors responsible for growth of Spontaneous settlement; (1) rapid urbanization and influx of people into urban areas (2) lack of community participation in the land planning process (3) land allocation policy does not favor the low-income or locals in the society (4) government reluctance or inability to provide affirmative guidance for land development leading to undirected and haphazard development (5) inability of government to compulsory develops the seizure / acquired parcels of land from the locals in the state. This is paramount in government attitude and non-readiness of to pay compensation (6) increase in rural-urban migration has continuously put pressure in the existing housing facility (7) inabilities and ineffectiveness of the planning authorities to implement the building bye-law as when necessary.(8)

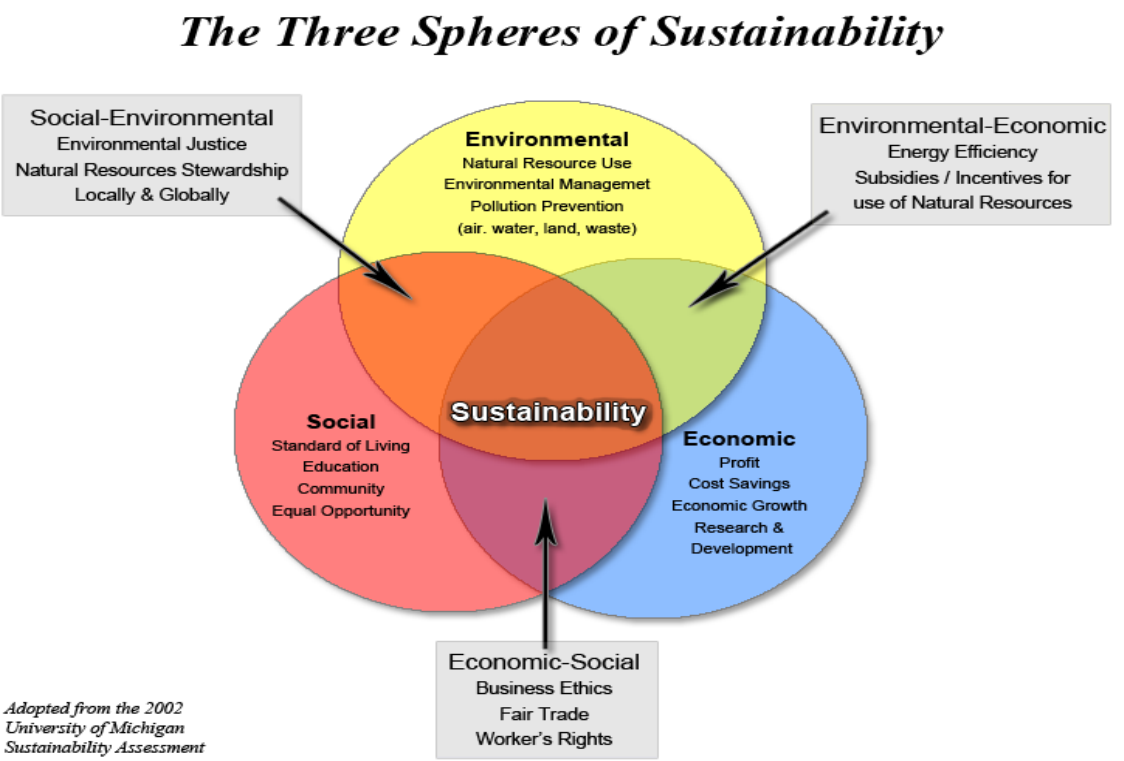
lack of government political will to implement development control measures, as insufficient planning staff to carryout effective monitory and lack of equipment such as development control monitory vehicles (9) change in land- use density area and relocation for other used, necessitate spontaneous settlement as it entire built up in directing absolute lack of control in its development (10) poor drainage network which has been observed in these settlements are mostly blocked by household refuse. Surface run-off indiscriminately flows between buildings, eroding the walls in most instances; it creates a deep gully which is security problems (11) non- intervention of government functionaries in sub-urban area with no planned resettlement program as lead to a conscious gradual extension of the city whereby self-help is practice in the provision of houses (12) most of the isolated parcels of land hoarded at the suburbs riot subjected to conventional design into layout that could seek planning approval even when such parcels of land are designed into layout are not linked to others accessibility purposes, (13) inefficient public administration, inappropriate planning and inadequate land administration tools. Manifestations of informality are attributed to the lack of effective planning, effective land management system and zoning regulations for urban development.

3.0 Sustainability

Sustainability is the process of creating sustainable places that promote wellbeing by understanding what people need from the places they live and work. Woodcraf (2011) as cited in Dantong (2018) stated that sustainability combines physical infrastructure to support cultural life social amenities, and systems for community engagement and space for people. According to Magee *et al* (2013) the first approach to sustainable design is environment sustainability, economic sustainability and social sustainability (see figure 1). This approach encompasses topics as: social equity, livability, health equity, community development, social capital and support, human rights, labor right, cultural responsibility and community resilience. Several research study has identified that sustainability does not focus on only neighborhood and community, but also physical environment.

3.1 Adopting the Principle of Sustainable Development

Sustainability is a wide spectrum that has to be adopted into various concepts. The United Nation World Commission on Environmental and Development (UNWCED, 1997) described that Sustainability is "the arrangement of technological, scientific, environment, economic and social resources in such a way that the resultant heterogeneous system can be maintained in a state of temporal and spatial equilibrium.



The World Commission on Environment and Development (WCED) as cited in Ajah (2016) headed by Gro Harlem Brundtland, in 1987 defined 'sustainable development' as 'development which meets the needs of the present generation without compromising the ability of future generation to meet their own needs' (WCED, 1987). This definition is the foremost accepted definitions that underpin most interpretation of this concept (Boyko *et al*, 2006). Brundtlands definition also creates knock-on subsets of sustainable development to meet various sectors needs such as sustainable housing, sustainable communities, sustainable business, sustainable construction, and sustainable agriculture and so on.

For a sustainable approach to be adopted and used in developing environment like Danbare a series of principles which involves managing the environmental resources, recognition of the importance of economic success and social equity must be considered (DEFRA, 2011). Raretz (1998) opined that the Brundtland's definition of sustainable development on how decisions and actions taken today can affect the future generation especially in relation to natural resources (land), environment, health among others should be taken seriously. Sustainable development to curb spontaneous growth therefore entails developing our urban centers in such a way that it will be comfortable for living, working at the present and in the future.

The three dimensions of sustainability are needed in order to create a balance and to

obtain a desired outcome of sustainable development. This includes;

Environmental Sustainability: ***E***nvironmental strategies relevant to prevent spontaneous settlement of Danbare should include: Capacity for adaptation, durable life safety, provision of infrastructure facilities and integration of the natural environment. This dimension aims to attain a stable base for resources, managing excessive use and exploitation of natural resources and depleting non-renewable resources thereby creating a means where this resources are replenished (Harris, 2000).

Social Sustainability: This dimension looks at attaining the needs and desires of the society and local communities by improving quality of life, quality of space, provision for social self -determination and cultural diversity and promoting human health by creating a healthy safe working environment (Cooper and Stewart, 2006). This dimension is extremely important because in order to achieve sustainability in Danbare, the people must be able to experience safety, social cultural-life support, social amenities, wealth and high quality of life and system for community engagement, Successful implementation of social sustainability requires the involvement of stakeholders which are citizens, workers and public officials (Litman,2011)

Economic Sustainability: Economic sustainability is an aspect of sustainability known to be the capacity and ability to put local and regional resources into productive achievement for the long-term gains of the people (Alleni, 2009). Economic sustainability tries to ensure that there is fair distribution and efficient division of resources in Danbare, which can create an economic growth and maintain a healthy balance in our ecosystem.

4.0 Materials and Methods

4.1 Study Area of Dan`bare

The study area Dan'bare settlement is located in Kumbotso Local Government Area Kano state, Nigeria. It lies between latitude 11°57'36" to 11°57'55" N and longitude 8°26'45" to 8°27'15" E and at about 508.7 metres (1526ft) above sea level. The climate is a hot, semi-arid type with an annual average rainfall of about 690mm (27.2 in); majority of which falls from June through September Maigari (2018). It has close proximity to Rijiyar-Zaki, Dorayi, Kabuga Housing Estate, and Yamadawa residential areas and run parallel opposite to Bayero University along Gwarzo road. The area was used for farmland by the local inhabitant whose workforces draw their livelihoods from agriculture. Danbare settlement was a proposed site for Cargo Airport at a certain time in the early 1990's by the late Gen. Abacha, Military regime. But subsequently, this was abandoned due to his death. Until the last two decades when it was proposed by former Governor of Kano state, Mallam Ibrahim Shekarau administration in the year 2005 to be developed as a formal residential area. The growth of Danbare settlement is fueled by it location opposite Bayero University New Campus which has contributed to sporadically and haphazard building development as a result of increase in demand for "Off-Campus" accommodation by students and the prevailing economic situations in Kano State, has also allowed many citizens to resort to building and settling in unapproved lands.

4.2 Methods

The research method involved a field survey were both mixed method of Quantitative and Qualitative techniques was used. A total of Ninety (90) structure questionnaires were administered to

residents to evaluate their perception on housing attributes social and neighborhood infrastructure condition in the study area. Seventy five (75) amount to (83.33%) responses was retrieved and used for the study and supplemented by field observation were used for the data analysis. The questionnaires were categories into two sections. The first stage provides information on residents' demographic such as: gender, Level of Education, Length of Stay, Status/ Occupation of Respondents, Religion, Tenure Status, Average Monthly Income (Naira), Income Classification and Gender of Respondents. The data from this section are presented using simple frequency (N) and percentage (%). The second stage deals with respondent's satisfaction level, which requested that residents rate twenty one (21) items as questionnaire designed to collect data from the residents as provided in Table 2. Likert scale was used to rate residents' perception on a three-point scale, (a) provided=3, (b) fairly provided=2 and (c) not provided=1. Each response was coded as follow: very bad = 1, fair = 2, and very good = 3 respectively. Using variables / categories of; housing services infrastructure, neighborhood facilities and socio-economic environment. Data were presented using the relevant descriptive and inferential statistical techniques. The sum of Weight Mean, Standard Deviation and Relatively Important Index (R.I.I) were analysis and ranked accordingly. Thus: Relative Importance Index thus:

$$\text{R. I. I.} = \frac{(3n3+2n2+1n1)}{3N} \quad \ldots\ldots (1)$$

Factors with RSI of 0.70 - 0.80 considered highly (Available and important) in this study. The ratings correspond in the upper quartile range (70% and above). The RSI values between 0.60 and 0.69 correspond to the second quartile (60% - 69%) are considered (relatively available), while RSI values below 0.59 (or median) are considered (Lacking and Not-Available) for the purposes of this study.

Table 1: Guide to degree of significant impact

Degree of Significant Impact	Rating using Summation of Mean Weighted Value (ΣMWV)	Interpretation
Available and important	0.70 - 0.80	present
relatively available	0.60 and 0.69	insufficient
Lacking and Not-Available	0.59 and below	not present

Source: Fieldwork survey, 2019.

5.0 Result and Discussion

Demographic results from the questionnaires as presented in Table 1: it show that 74.67% of the respondents were males, and 25.33 % were females while educational level such as (School Certificate 26.67%, O' Levels 22.67%) respectively. identified with low Income Earner of Monthly Income (Less than N20,000 = 30.67%, N21,000 - 50,000 = 41.33%) respectively. And whose Occupation are mainly (Trader = 33.33%, Artisan = 28.00% and Students = 26.67%) respectively. The Tenure Status are identified as (Owner Occupied = 48.00% and Private rented =38.67 %) Length of Stay more between 1-5 year = 42.67% and 16 and above = 34.66 %) respectively, this signified more student dominated settlement, other demographic statistics such as Religion (Islam =74.67% and Christianity = 22.67%) and finally are Classified as Low income earner of 74.67%).

Table 2: Respondents' Characteristic

Variables	Key Performance Indicators	Frequencies	Percentage (%)
Level of Education	School Certificate	20	26.67
	O' Levels	17	22.67
	Ordinal National Diploma	8	10.67
	Higher National Diploma	9	12.00
	Bachelor of Sciences	11	14.66
	Master of Sciences	9	12.00
	Ph. D	1	1.33
	Total	75	100.00
Length of Stay	1-5	32	42.67
	6-15	17	22.67
	16 and above	26	34.66
	total	75	100
Status/ Occupation of Respondents	Trader	25	33.33
	Students	20	26.67
	Artisan	21	28.00
	Civil Servant	9	12.00
	total	75	100.00
Religion	Islam	56	74.67
	Christianity	17	22.67
	None	2	2.66
	total	75	100
Tenure Status	Private rented	29	38.67
	Owner Occupied	36	48.00
	Inherited	9	12.00
	Free/ Sponsored	1	1.33
	total	75	100.00
Average Monthly Income (Naira)	Less than N20,000	23	30.67
	N21,000 - 50,000	31	41.33
	N51,000 - 100,000	16	21.33
	N101,000 and Above	5	6.67
	total	75	10.00
Income Classification	Low	56	74.67
	Middle	17	22.67
	High	2	2.66
	Total	75	100.00
Gender of Respondents	Female	19	25.33
	Male	56	74.67
	total	75	100.00

SOURCE: Author's Field Survey 2019

Table 3: Residents' perception on the condition of Neighborhood facilities provided in the settlement

VARIABLES	N	Sum	Mean	Std. Dev.	R.S.I	Rank
Proximity of Educational facilities	75	180	2.400	0.0320	0.800	1ST
Aesthetic and Appearance of the houses	75	174	2.320	0.0 309	0.773	2nd
Proximity to Religious facilities	73	166	2.274	0,0311	0.758	3rd
Housing Types	74	167	2.256	0.0305	0.752	4th
Proximity & availability of Market & Shop	74	163	2.203	0.0298	0.730	5th
Type of Bldg Materials used for Construction	75	162	2.160	0.0 88	0.720	6th
Quality of houses integration	72	151	2.097	0.0291	0. 700	7th
Power supply to the buildings	73	151	2.068	0.0283	0.690	8th
Provision of Security & Vigilante	74	137	1.851	0.0250	0.617	9th
External Lighting of buildings	73	135	1.849	0.0253	0.616	10th
Availability of Street Light	75	135	1.800	0.0240	0.600	11th
Vehicular movement & Circulation	74	133	1.797	0.0242	0.599	12th
Accessibility of Road	72	125	1.736	0.0241	0.581	13th
Buildings protection against Dampness	74	130	1.757	0.0237	0.580	14th
Pedestrian movement & Circulations	73	129	1.767	0.0238	0.579	15th
Refused / Sewage disposal	75	126	1.703	0.0230	0.567	16th
Quality of Layout & spatial Circulation	75	127	1.693	0.0223	0.564	17th
Provision of Greenery / Landscape	74	125	1.689	0.0228	0.563	18th
Drainage efficient	75	121	1.613	0.0215	0.537	19th
Availability of Pipe borne water	75	119	1.587	0.0212	0.529	20th
Quality of Open Spaces	73	105	1.438	0.0197	0.479	21st

Source; Author field Research 2019

5.1 Discussion

Result of the survey shown that the respondents were satisfied with the housing services design attributes such as 'Aesthetic and Appearance', 'Housing Types, Type of Bldg Materials used for Construction, and Quality of houses integration, which recorded mean values of M=2.320, 2.256, 2.160 and 2.097 and ranked 2nd, 4th, 6th and 7th respectively (on Table 3), in the first quartile. Social infrastructures also ranked satisfaction by the respondents, this includes: Proximity of Educational facilities, Proximity to Religious facilities, Proximity & availability of Market & Shop in first quartiles, while Power supply to the buildings, Provision of Security & Vigilante, External Lighting of buildings and Availability of Street Light all recorded mean values of M=2.400, 2.274, 2.203 , 2.068, 1.851, 1.849 and 1.800 in both first and second quartiles respectively on Table 3.

However, respondents were dissatisfied with neighborhood infrastructures attributes; this includes "Quality of Open Spaces" and "Availability of Pipe borne water" (Jiboye 2012) which the respondents considered "Lacking and Not-Available". These Neighborhood amenities were particularly ranked lowest (Enoguanbhor and Gollnow *et al.* 2019). Other includes Vehicular movement & Circulation, Accessibility of Road, Pedestrian movement & Circulations, (Unah 2019a), Buildings protection against Dampness, Refused / Sewage disposal, Quality of Layout & spatial Circulation, Provision of Greenery / Landscape (Unah 2020b), Drainage efficient, with mean values and RSI values below (M =1.800 and RSI = 0.600), and ranked 12th and below all in the third quartile.

6.0 Conclusion

This paper has established Spontaneous settlement as a result of the inconsistency of the development policies, implementation of planning and enforcement of building regulations. WBI (2011) posited that effective use of policies and planning instruments to manage spontaneous growth will lead to an equitable, efficient and sustainable outcome. The study has shown that spontaneous settlement has been an integral part of human development as it is shown in Dan'bare Kano. The study has also shown that there is negative effect on the activities of spontaneous growth, which can be negated by adopting the principle of sustainability. Housing attributes and social infrastructural Amenities in Dan'bare has played a vital role in rejuvenating of the spontaneous settlement as observed from the respondents. This attributes has scored the fact that informal settlers can provides affordable accommodation similar to what is obtainable in formal environment. Although, this unbroken linkage of peri-urban settlement appeared uncomfortable with unintended housing layout attributes and neighborhood infrastructures attributes. Therefore, this finding is of great significant in the character that emphasized more impact on environment functional spaces this includes: landscaping, outdoor space, greenery and site planning design parameters, which has critical features in sustainable housing environment that need to be upgraded. This is important as the neighborhood and social

infrastructure has exerted detrimental effects on construction and development of housing despite their illegality of building regulation. This has demonstrated the need for economic, health, social and environmental wellbeing of the area and improvement of it immediate surroundings. Therefore, it is necessary to recommend that government should upgrade such unhealthy and basic social / neighborhood infrastructures with strong political will by upgrading built-up developments that could undergo such process and provide functional facilities for area that needs redevelopment and that promotes social and economic sustainability for the settlers.

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