

ASSESSING THE QUALITY OF HOUSING IN EMERGING AUCHI URBAN REGION, EDO STATE

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Abstract

The quality of urban settlements depends on the proportion and intensity of residential use in relation to other land uses. The quality of housing is often gauged through some indicators. The study considers the quality of housing in an emerging urban region of Auchi. The study is based on field survey of 886 sampled respondents of Auchi Region using the questionnaire instrument. The Region was divided into three zones that were further subdivided into 24 sampling units. The indicators of occupancy, building materials, age, and basic facilities were analysed descriptively; attributes of housing such as age, wall material, condition of dwelling units, general condition of housing were inferentially analysed in terms of spatial variability. Apart from quality of construction materials, other indicators of housing quality performed low (the indicators of age, facilities, and general condition of housing are significant, but with generally low Eta values). Landlords are urged to carry out a routine maintenance of their houses to prevent deterioration. Town Planning Authorities are also to monitor building developments to prevent space not being crammed up by illegal structures.

Keywords: Accessibility, Auchi, indicator, occupancy, quality of housing, variability.

Introduction

A major component of the urban environment is the built space comprising mainly housing. Housing provides the substructure on which many urban features that affect the quality of the physical environment of the settlement take place. The urban space is used for different purposes of which the residential use is most prevalent. (Chapin, 1974; Obateru, 1986; Olurin, 2007; Onaiwu, 2007). The quality of urban areas is often compromised if the mix of land use in residential areas is disproportionately of higher density than in other land use areas.

The quality of housing has been variously measured by indicators. For example, the U.S Department of Housing and Urban Development (HUD) sets standards for housing receiving federal assistance (U.S. Department of Housing and Urban Development (HUD)). The issues raised in the standards are generally followed in measuring housing quality in many developed countries. The Housing Quality standards consist of performance and acceptability requirements that relate to the following: sanitary facilities, food preparation and refuse disposal, space and security, thermal environment, illumination and electricity, structure and materials, interior air quality, water supply, lead-based point, access, site and neighbourhood, sanitary condition and smoke detectors (Housing Quality standards, www.healthywanestraining.org/codes/HQS.htm). Also, the U.K. Homes and Communities

Agency (HCA) reduces housing standards to set of ten housing quality indicators (<http://www.homesandcommunities.co.uk/hqu>). However, in many less developed countries these lists are generally not followed as only few indicators are applied. (Ozo, 1987; Kabir, 2006).

In Auchi Region the quality of housing is quite low because of its emergence as an urban environment with still low rural housing characteristics (Omuta, 2002). The assessment of housing quality was based on few indicators of occupancy, facilities at homes, and stability of construction materials which many assessors regard as minimum standards. The study adopted a questionnaire survey of 886 respondents in Auchi region. The paper describes the quality of some housing attributes and its variability. The settlements in an emerging urban region need intervention in the minimum standards of housing quality in order that they do not become slums as they grow.

The Study Area

The location for the investigation is Auchi Region. Taking Auchi as the locus, and a radius of 10.5km, the area spans about 346.316km². The area has western boundary with Owan East and Akoko-Edo Local Government Areas, on the east with Etsako Central and in the south is bounded by Esan West, Esan Central and Esan North-east. The area has some few urban centres in Auchi and Jattu. Ughiole, South-Ibie and Jattu are coalescing with Auchi to form one continuous urban forum. This area encircles most parts of Etsako West Local Government Area of Edo State of Nigeria and includes some peripheral settlements of Ikpeshi, warrake which fall under Akoko-Edo and Owan East Local Government Areas of Edo State respectively. Auchi Region has 38 settlements and an estimated population of 232,126 in 2012.

Methodology

Auchi region is an area circumscribed by an area of 10.5 kilometres radius and contains a population of 232,126. The study population is based on the population of 24 sampled units which is 26,468 persons. A sampling fraction of 0.005 was used which is 1082 respondents. This ideal sample size is 384 at an accuracy of error margin of 5 per cent and at 95 per cent confidence level (Van Ambury cited in Mitchell and Jolley, 2007). However, a higher sample size was used because of the wide divergence in the distribution of the population of the sampling units which would have affected the assumptions of the statistics used in data analysis. The 24 spatial units were further divided to core, intermediate, and peripheral zones. Thus, the spatial sampling was based stratified proportional sampling.

The variables of the survey were structured into the questionnaire for the survey which border on housing quality indicators, occupancy ratio, facilities at home, age, accessibility, maintenance status, construction materials and so forth. These questions were directed to heads of households during the interviewer during the survey.

The analyses of data were based on both descriptive and inferential statistics with the aid of SPSS version 17. Descriptive statistics of percentage used to describe the state of the environmental health of Auchi region; while the inferential statistics of one-way analysis of

variance was used to establish the variability of the variables that affect the housing condition in Auchi Region. The variables were scored on a 5-point scale.

Results

Housing Quality Indicators

Housing is not merely the shells which people live in, but a bundle of services, such as, amenities, privacy, security, location and so forth. These services are often used as parameters for measuring the quality of housing in settlements. These services need to be measurable to gauge the performance of housing. In many studies, the housing quality is measured by the use of indicators (Ozo, 1987; Sustainable Seattle, 1998). In the paper housing quality is gauged by occupancy, facilities, construction materials, age, accessibility, and so forth.

Occupancy Ratio

Occupancy ratio indicates the crowdedness of a room in terms of the number of people that live in it. This measure is a way of describing the ideal number of people that should live in a room for comfort. The desirable occupancy ratio is 2:1, that is, two persons per room. The survey result of the occupancy ratio is shown in Table 1.

Table 1: Occupancy Ratio in Auchi Region, Edo State

S/No.	Persons Per Room	Core	Intermediate	Periphery	Total Frequency/ Per cent
1.	Less than 1 person	9 (1.0%)	10(1.1%)	15 (1.7%)	34 (3.8%)
2.	1 person	25 (2.8%)	45(5.1%)	65 (7.3%)	135 (15.2%)
3.	2 persons	112(12.6%)	196(22.1%)	120 (13.6%)	428(48.3%)
4.	3 persons	158(17.9%)	33(3.7%)	37(4.2%)	228(25.8%)
5.	4 persons and above	37(4.2%)	22(2.5%)	2(0.2%)	61(6.9%)
Grand Total		341	239		886(100.0%)

Source: Field survey November, 2011.

About 67.3 per cent of the respondents claimed that their households live within the desirable occupancy ratio of 2:1. The remaining respondents (32.7%) live above the occupancy ratio of 2:1 persons per room.

Table 1 also shows the zonal variations in housing occupancy ratio in Auchi Region. Combining the categories of less than one person a room, the periphery has 9.0 per cent of its residents living in low density; followed by the intermediate with 6.2 per cent; and the core with 3.8 per cent. On the other hand, the highest occupancy ratios i.e. three persons and above living in room) are observed in the core (22.1%). Thus, the core has the highest occupancy ratio in the region and the periphery the least.

Basic Facilities in Homes of Respondents

The facilities available to the occupants of a house determine to a considerable extent the quality enjoyed by such occupants. Apart from the types of facilities available, units or quantity available to the occupants of the homes in the region are equally important (Mba, 2005). The study investigated the provision of toilets in terms of number of persons per unit, types and sanitary conditions of the homes of respondents in Auchi Region.

Types of Toilets used by Respondents

The different types of toilets are amenable to sanitation in different ways. Table 2 shows the different types of toilets in use in the urban region.

Table 2: Toilet types in Auchi Region, Edo State

S/No.	Toilet type	Core	Intermediate	Periphery	Total Frequency/ per cent
1.	No toilet	2 (0.2%)	2(0.2%)	14(1.6%)	18 (2.0%)
2.	Bucket toilet	0(0.0%)	10(1.2%)	2(0.2%)	12 (1.4%)
3.	Pit toilet	80(9.0%)	95(10.7%)	101(11.5%) 62(7.0%)	276(31.2%)
4.	Ventilated improve toilet	78(8.8%)	67(7.6%)	60(6.8%)	207(23.4%)
5.	Water closet	181(20.4%)	132(14.9%)		373(42.1%)
Grand Total		341	306	239	886(100.0%)

Source: Field survey November, 2011.

Some houses (2.0%) have no toilets and this is an unacceptable situation. About 1.4 per cent of the sampled respondents use bucket toilets, although this is quite low but it is highly undesirable. Many respondents claimed that they use pit latrines and these constitute 31.2 per cent. The use of pit latrines is not approved by sanitary experts because of the health problems associated with them. The ventilated improved toilets and the water closets are the types of toilets mainly recommended by sanitary experts. Water closets constitute 42.1 per cent of the toilets, while ventilated improved toilets make up 23.4 per cent.

Types of toilets also vary between the three different zones of the region. Absence of toilet is most serious in the periphery (1.6%) where many residents use pit toilets. The residents of the core that use pit toilets are 9.0 per cent; the intermediate residents are 10.7 per cent; the periphery is 11.5 per cent. The core had 20.4 per cent of its residents using water closet; the intermediate had 14.9 per cent; and the periphery had 6.8 per cent, the lowest users of water closet in the region.

Number of Persons using a Toilet

The extent of shared facilities affects the satisfaction derived by those using such facilities. Table 3 shows the number of persons using a unit of toilet in the study area. The best use is achieved on a ratio of 1:1 (i.e. one person per a unit of toilet); and the worst use at a ratio of above 8:1 (i.e. above eight persons to a unit of toilet).

Table 3: Users of a Unit of Toilet in Auchi Region, Edo State

S/No.	Ratio of Use	Frequency	Per cent
1.	1:1	96	10.8
2.	2:1	206	23.3
3.	4:1	228	25.7
4.	6:1	181	20.4
5.	8:1 and above	175	19.8
Total		886	100.0

Source: Field survey November, 2011.

Using a desired ratio of 4:1, 59.8 per cent respondents claimed that the use of their toilets fall within this. The ratio range of 1:1 and 4:1 will minimize the problem of queuing of users to attend a toilet unit. About 40.2 per cent of the respondents claimed that six and more people use a toilet unit in their houses.

Housing Construction Materials

The materials for the construction of a house affect the structural stability of the house. In the study area, the materials for the construction of the walls and roofs were examined in order to assess the quality of the housing shells.

Walling materials in Auchi Region

The walling materials are important to the structural stability of the house, protection and the privacy of the occupants. Table 4 shows the different types of walling materials and their frequency of use.

Table 4: Walling Materials used in Auchi Region, Edo State

S/No.	Types of material	Frequency	Per cent
1.	Mud, unrendered	91	10.3
2.	Stick	20	2.3
3.	Burnt clay	28	3.2
4.	Mud with cement plastering	206	23.3
5.	Cement with cement plastering	541	61.1
Total		886	100.0

Source: Field survey November, 2011.

The respondents of the survey mentioned mud, stick burnt clay and mud with cement plastering as walling materials in the study area. These are known to be structurally unstable materials for buildings and they cumulatively make up 38.9 per cent of the materials for the walls. Apart from their structural instability, they are also prone to pest infestation because of the cracks they develop. Another category of stable structural wallings materials are the concrete and cement rendered walls. This group accounts for 61.1 per cent of the houses in the study area.

Roofing Materials in Auchi Urban Region

The roof shields occupants of a house from the effects of rain and sunshine. The stability of the roof determines the extent of the protection it offers against the weather elements. The roofing materials used in Auchi Region are shown in Table 5.

Table 5: Materials for Roofing in Auchi Region, Edo State

S/No.	Types of material	Frequency	Per cent
1.	Leaf	30	3.4
2.	Corrugated iron sheets	583	65.8
3.	Asbestos sheets	106	12.0
4.	Long span aluminium sheets	140	15.8
5.	Decked with cement	27	3.0
Total		886	100.0

Source: Field survey November, 2011.

Table 5 shows that 3.4 per cent of the houses were covered with leaves. These were mainly found in the rural areas and where the Hausas live. Apart from the houses with leaves, the other houses have roofing materials that are adequate for sheltering against the weather elements.

Age of Houses in the Region

The quality of buildings depreciates with time. The respondents of the survey were asked to estimate the ages of the houses they live in. The estimated ages of the houses are found in Table 6.

Table 6: Ages of Houses in Auchi Region, Edo State

S/No.	Age	Core	Intermediate	Periphery	Total Frequency/ Per cent
1.	1 yr. - 10 yrs.	72(8.1%)	53(6.0%)	14(1.6%)	139(15.7%)
2.	11yrs. – 20 yrs.	84(9.5%)	60(6.8%)	19(2.1%)	163(18.4%)
3.	21 yrs. – 30 yrs	68(7.5%)	46(5.2%)	53(6.0%)	167(18.8%)
4.	31 yrs. – 40 yrs.	73(8.4%)	68(7.7%)	84(9.5%)	227(25.6%)
5.	41 yrs. and above	44(4.8%)	79(8.9%)	69(7.8%)	190(21.5%)
Grand Total		341	306	239	886(100.0%)

Source: Field survey November, 2011.

If a cut-off point is placed at 30 years for buildings in which intense dilapidation starts, then 52.9 per cent of the houses will fall under this. What this implies is that at the age of 30 years most buildings might have started showing serious dilapidation and need some repairs, minor or major as the case may be. From the survey about 47.1 per cent of the houses are old buildings that needed repairs or outright replacement.

Table 6 also shows how the different classes of the houses in the region in terms of their ages are distributed zonally. The highest number of buildings of one to ten years was found in the core (8.1%). This is expected of the core as the most urbanized part of the region which has the greatest number of housing starts. Contrarily, the lowest number of houses older than 30 years found in the core is 13.2 per cent; the intermediate has 16.6 per cent; and the periphery had 17.3 per cent. Thus the settlements of the periphery have the highest number of buildings above 30 years in the region.

Maintenance Status of Houses

The condition of the dwelling units deteriorates as people continue to live in them. The nature and extent of the deterioration affect the quality of the houses. The respondents were asked to assess this condition in their dwelling units. Their responses are shown in Table 7.

Table 7: Condition of the Houses in Auchi Region, Edo State

S/No.	Condition	Core	Intermediate	Periphery	Total Frequency/Per cent
1.	Dilapidated, needs demolition	25(2.8%)	21(2.4%)	20(2.2%)	66(7.4%)
2.	Broken walls to be reconstructed	36(4.0%)	44(5.0%)	54(6.1%)	134(15.1%)
3.	Needs major repair	82(9.3%)	78(8.9%)	62(7.0%)	222(25.2%)
4.	Needs minor repairs	152(17.9%)	99(11.2%)	53(6.0%)	314(35.4%)
5.	Well maintained	46(4.1%)	64(7.2%)	50(5.6%)	150(16.9%)
Grand Total		341	306	239	886(1000.0%)

Source: Field survey November, 2011.

The respondents feel that 7.4 per cent of the houses need demolition because they are not fit for human habitation. Some 15.1 per cent of the houses have broken walls and need to be reconstructed. Another 25.2 per cent of the houses need major repairs. Considering the role played by good housing that is well maintained, and with 47.6 per cent of the houses falling into the conditions described as poor housing condition, this is an unacceptable situation. Only 16.9 per cent of the houses are well-maintained. And 35.4 per cent of housing still needs minor repairs to make them well maintained.

The sub-regional variability of the housing conditions is also shown in Table 8. The core has the highest rate of dilapidation of 2.8 per cent; next is the intermediate zone which has 2.4 per cent; the least is the periphery which has 2.2 per cent. The rate of dilapidation may be due to the high occupancy ratio and prevalence of erosion at the core and intermediate zones respectively. The houses that need minor repairs form the bulk of the houses in the three zones. The settlement of Auchi Town has the highest category of these houses which are 17.2 per cent; followed by the intermediate settlements with 11.2 per cent; and peripheral zone with the least of 6.0 per cent of houses that need minor repairs. The spatial spread of other conditions of the houses in the zones is depicted in Table 8.

Accessibility of Housing by Motorable Roads

An indicator of housing quality often neglected by users is accessibility through roads by vehicles. This attribute was assessed by respondents and the claims are shown in Table 8. The respondents of the survey claimed that about 52.1 per cent of their houses have vehicular access by motorable roads. The houses that are fairly accessible by roads are 31.0 per cent. The remaining 16.9 per cent of the houses are inaccessible by roads. Cumulatively, 7.9 per cent of the core zone is vehicularly inaccessible; 4.9 per cent of the intermediate is inaccessible; and 4.1 per cent of the peripheral zone is inaccessible.

Table 8: Accessibility of Residences by motorable Roads in Auchi Region, Edo State

S/No.	Accessibility by roads	Core	Intermediate	Periphery	Total Frequency/ Per cent
1.	Very inaccessible	14 (1.6%)	10(1.1%)	12(1.3%)	36(4.0%)
2.	Inaccessible	55(6.3%)	34 (3.8%)	25(2.8%)	114(12.9%)
3.	Fairly accessible	125(14.1%)	80 (9.0%)	70(7.9%)	275(31.0%)
4.	Accessible	134(15.2%)	156(17.6%)	193(11.6%)	393(44.4%)
5.	Very Accessible	13(1.5%)	26(2.9%)	29(3.3%)	68(7.7%)
Grand Total		341	306	239	886(100.0%)

Source: Field survey November, 2011.

Most of the zones have vehicularly accessible roads; and spatially the core has 15.2 per cent of the roads that are accessible, the intermediate 17.6 per cent and the periphery 11.6 per cent of accessible roads in the region. The respondents were asked to describe the condition of the roads surrounding their houses. The responses are shown in Table 9.

Table 9: Condition of Roads in where Respondents Stay in Auchi Region, Edo State

S/No.	Condition of Roads	Frequency	Per cent
1.	Bushy	38	4.3
2.	Unsurfaced road littered with refuse	145	16.4
3.	Unsurfaced road, eroded	157	17.7
4.	Unsurfaced road, but motorable	352	39.7
5.	Tarred road	194	21.9
Total		886	100.0

Source: Field survey November, 2011.

The respondents claimed that 4.3 per cent of the roads are unmotorable bush paths. The unsurfaced roads that are littered with refuse constitute 16.4 per cent. The unsurfaced roads that are eroded are 17.7 per cent. Thus, about 38.4 per cent of the roads are inaccessible by vehicles. Unsurfaced roads that are motorable are 39.7 per cent and if these roads are not maintained, they will degenerate and become impassable by vehicles. Only 21.9 per cent of the roads in the study area are tarred.

General Condition of Housing Satisfaction

The respondents were asked to assess the general condition of housing as a way of presenting a summary view of the extent of their satisfaction with the houses they live in. The responses to this overall picture of housing are shown in Table 10.

Table 10: Satisfaction of General Conditions of Housing

S/No.	Level of Satisfaction	Core	Intermediate	Periphery	Total Frequency/ Per cent
1.	Very unsatisfactory	16(1.8%)	14(1.6%)	6(0.7%)	36(4.1%)
2.	Unsatisfactory	62(7.0%)	60(6.8%)	40(4.5%)	162(18.3%)
3.	Average	161(23.2%)	128(14.4%)	95(5.7%)	384(43.3%)
4.	satisfactory	87(9.9%)	82(9.2%)	82(9.2%)	251(28.3%)
5.	Very satisfactory	15(1.7%)	22(2.5%)	16(1.6%)	53(6.0%)
Grand Total		341	306	239	886(100.0%)

Source: Field survey November, 2011.

The assessment of the level of satisfaction of the overall quality of housing based on occupancy, basic facilities, accessibility, age of buildings, maintenance status enables one to gauge the level of emotional attachment of those who live in housing units. This result can be used in different types of housing intervention proposed by researchers and policy-makers. (Kabir, 2006; Olurin, 2007). The respondents who are satisfied with their housing condition in the core zone were 9.9 per cent; the intermediate zones were 9.2 per cent; and the peripheral zones were 9.2 per cent. Only few respondents are very satisfied with their housing conditions. This category the core had 1.7 per cent of its residents, the intermediate residents were 2.5 per cent and the peripheral zone residents were 1.8 per cent respectively. In terms of the unsatisfactory categories of level of satisfaction, cumulatively, the core zone had 8.8 per cent, the intermediate had 8.4 per cent and the peripheral zone had 5.4 per cent. Thus, some portions of the core are the most unsatisfactory parts to live in the region.

Determined Significant Level of Housing Quality

Following the descriptive analysis of housing quality variables, a hypothesis test using one-way analysis of variance, post-hoc test was carried out in the three zones of Auchi to find out the housing variables that are significant. Before carrying out the test, the descriptive tables showing the number in each group, means, and standard deviation, minimum and maximum were checked. These were followed by Levene's test for homogeneity of variance, which tests whether the variance in the zone is the same for the three groups. The test was significant for age of house (.075) and general condition of housing: Genconho (.529), and it was not significant for condition of dwelling unit in terms of maintenance: Conwell (.000) and wall

material: Walmart (.000). The cut off point for Levene’s test of significance is any number greater than .05 (Pallant, 2011; Tabachnick and Fidell, 2007). Since two values violated the Lavene’s test, more robust tests were used, which are Robust Tests of Equality of Means. These are the Welch and Brown–Forsythe tests.

Table 11 gives both between-groups sum of squares, degree of freedom, mean squares, F ratio and level of significance. The cut off point for level of significance is value less than or equal .05 (Pallant, 2011).

Table 11: Significant Level Test of Housing Quality

Variables	Groups	Sum of squares	Df	Mean square	F	Sig.
Age of house (Age)	Between groups	23.021	2	11.510	6.153	.002
	Within groups	1651.878	883	1.871		
	Total	1674.898	885			
Wall Material (Walmart)	Between groups	33.939	2	16.969	10.788	.000
	Within groups	1388.915	883	1.573		
	Total	1422.853	885			
Condition of dwelling unit (Conwell)	Between groups	2.661	2	1.431	1.077	.341
	Within groups	1172.452	883	1.328		
	Total	1175.314	885			
General condition of housing unit (Genconho)	Between groups	6.485	2	3.242	3.841	.022
	Within groups	745.440	883	.844		

Source: Analysis of variance based on Version 17 of SPSS.

From Table 11 only the condition of dwelling: Conwell (.341) that was not significant. In order to determine the groups that are different, this information is shown in multiple comparisons table and this gives the results of the Turkey post-hoc tests. The means for each group are given in the Descriptive table.

From the Table, it was significant for age of house (.002), wall material (.000) and general condition of housing (.022). It was only condition of maintenance of dwelling that was not significant (.341) because this is greater than .05.

The statistical significance only shows that the differences in the variability of variables were not likely to occur by chance. There is also the need to describe the magnitudes of these differences. The magnitude is often described as the effect size statistic, which indicates the proportion of variance of the dependent variable that is explained by the independent variable. According to Tabachnick and Fidell (2007) a value of less than 0.1 indicates small effect size,

between 0.1 and less than 0.6 medium effect size and above 0.6 is large effect size. Effect size ranges from 0 to 1, the formula for determining effect size using Eta squared is:

$$\text{Eta squared} = \frac{\text{Sum of squares between groups}}{\text{Total sum of squares}}$$

The effect sizes for the housing quality indicators are calculated as follows:

Age of house:

$$\text{Eta squared } (\eta^2) = \frac{23.021}{1,674.895} = 0.013$$

Wall material:

$$\text{Eta squared } (\eta^2) = \frac{33.939}{1,422.853} = 0.023$$

Condition of dwelling unit:

$$\text{Eta squared } (\eta^2) = \frac{2.861}{1172.452} = 0.0024$$

General condition of housing:

$$\text{Eta squared } (\eta^2) = \frac{6.485}{751.924} = 0.008$$

From the computations shown above, the various independent variables used in explaining the variability in housing quality recorded very low Eta squared values. This explains that there is no marked difference in housing quality among the settlements in the three zones of Auchi Region of Edo State.

Conclusion and Recommendations

The housing quality of the emergent urban region of Auchi shows that rural housing characteristics are visible as indicated by similar studies in the past (Masakazu, 2003).

Occupancy ratio is quite high with about 48.3 per cent claiming to be at least 2 persons in a room and 32.7 per cent of the respondents living in more than 2 persons in a room. These characteristics corresponded with what has been observed in many urban areas in Nigeria.

Many housing units lack good toilet facilities in terms of types and the number of people using a unit of them. The variability in the types of toilet facilities in the core, intermediate and peripheral zones was significant. The core has most of the water closets in the region.

The elements of walls and roofing materials were found to be generally adequate across the zones of Auchi region. There were few houses that have their roofs made of leaves.

The maintenance status of the housing units was quite low. The vehicular accessibility of the houses was inadequate. The variability of housing indicators of age, general condition of housing were significant and these features are expected as the degree of urbanity varies from

the core to the periphery both spatially and in population size (Montgomery et al., 2004). The growth in population is expected to translate into more houses to be built in terms of roomy and self-contained to accommodate the growing population of Auchi Polytechnic students. There is the need for landlords to maintain and repair their houses to prevent degradation that sets in from use over time. There is need for small-scale water schemes to be embarked upon by government and private citizens to improve on the sanitary condition of the houses. Monitoring of building developments should be done by the Town Planning Authorities to prevent illegal structures that can cram up the regional space as a result of high intensive use of space.

The coalescence of Jattu, Iyakpi, and Aviele with Auchi Town would amount to a challenging housing situation. There is need for Edo State Government to prepare a master plan to guide the development of such emerging urban region in terms of sub-division plans and zoning regulations. These planning instruments will help to improve on the quality of housing in Auchi Urban region.

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