

## **Substandard Housing Contributory Factors: Analysing Scenarios in Neighbourhoods of Port Harcourt Municipality, Nigeria**



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**ABSTRACT:** The study assessed substandard housing contributory factors of neighbourhoods in Port Harcourt municipality, Nigeria. The objectives of the study are to identify factors that are contributing to substandard housing in Port Harcourt municipality; assess the impact of contributory factors to substandard housing in the study area; and identify physical planning measures to improve substandard housing in the study area. The study employed quantitative research approach and experimental research design for collection and analyses of data in the study. Stratified and simple random sampling techniques were used for collection of data. Slovin formula was used to determine the sample size and a total of 399 respondents (households) were interviewed from three grouped neighbourhoods and communities (planned neighbourhoods, indigenous enclaves and waterfront communities). The revealed the contributory factors to substandard housing in the study area are low income, large household size, multiple households in a building, limited habitable rooms per household, building construction materials, rapidly deteriorating physical condition of buildings, and sharing of facilities by households in buildings. The study also revealed the impacts of these factors include urban neighbourhoods and communities are deteriorating into slum and squatter settlements and rapid defacing of the urban fabrics and landscape. The study makes the following recommendations to improve housing standards including regular physical assessment of buildings in the study area to ascertain their fitness for habitation; waterfront environment should be reclaimed and planned by government for residents' easy accessibility and affordability; development control agencies should ensure residential buildings are developed according to approved plan and specifications; mortgage and financial institutions should grant soft and interest-free loans to low-income earners and the poor; government should prioritise the development of low-cost houses for low-income earners and poor citizens; social amenities and services should be provided to enhance housing and neighbourhood quality; and government and its agencies of urban development and physical planning as a matter of urgency carry out spatial reorganisation through urban renewal programmes and projects at various neighbourhoods and communities.

**KEYWORDS:** Urbanisation, Substandard Housing, Contributory Factors, Neighbourhoods, Port Harcourt Municipality

### **BACKGROUND OF THE STUDY**

Urban areas in developing countries are experiencing rapid urbanisation in recent times especially in the continents of Africa and Asia (United Nations (UN), 2018). This rapid urbanisation has presented many challenges to African cities and urban areas (Pinault, 2019). One major challenge accentuated by urbanisation in African cities and urban area is shortage of housing for the populace and this has led to the development of substandard housing in many cities and urban areas. Nigerian cities and urban areas are also faced with same challenge of substandard housing development to house her teeming population as the country need about 17 million houses (700,000 houses annually) to overcome housing provision (National Bureau of Statistics (NBS), 2012 cit. Eyinla, 2020).

Port Harcourt municipality which is an emerging cosmopolitan urban area in Nigeria sharing large part of the deficit to housing shortage taken cognisance of large population size. This condition has prompt the increase of development of substandard housing in the municipality. According to Wokekoro (2009), Port Harcourt municipality substandard and deficient housing account for 37.8% and 20% in her study. This record is alarming and poses threat to the urban environmental condition and quality of life of residents. This scenario has transformed and increased the rapid formation of slum and squatter developments in various parts of the municipality which has become conspicuous and pronounced in the cityscape. These structures are erected in places where urban planning schemes are seemly not provided and lack basic urban infrastructure and services that will make life worthwhile for residents.

Urban planning and management agencies are expected to live up to expectation in the resolving of substandard housing threats that is bedeviling the municipality landscape which is not the case. General observation shows that housing quality especially in high

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density areas in Port Harcourt is poor in condition. Thus, the issue of substandard housing needs attention especially considering rapid population growth and urbanisation in Port Harcourt municipality. Thus, this condition need to be investigated by assessing substandard housing contributory factors in neighbourhoods of the municipality of Port Harcourt, Nigeria and identify physical planning policy framework as measures to address the situation.

## STATEMENT OF THE PROBLEM

The visible and most obvious consequence of urban growth in developing countries is rapid urbanisation. This has led to deterioration of available housing stocks, poor neighbourhood and living conditions which have characterised into informal settlements development in many quarters of urban areas in developing countries. This scenario is not in variance to Port Harcourt municipality. In Port Harcourt municipality the scenario of substandard housing has become consistent and persistence occurrence in recent times. Critical observation shows that there is rapid increase in quantity and quality of substandard housing in Port Harcourt municipality. This has caused evidence of deterioration in housing conditions such as building of residential structures with substandard materials, lack of basic infrastructure and services, slum and squatter formation. These conditions may be aggravated by poor urban planning and management by the municipal authority and urban development and physical planning agency in the municipality. Thus, if the situation is not addressed may lead to further increase in level of deterioration of the urban fabric and environment of the municipality as the landscape will be enveloped with substandard housing and informality. There is need to identify and access the substandard housing contributory factors in neighbourhoods of Port Harcourt municipality, Nigeria that is alarming and identify and proffer physical planning measures as policy framework and guide to improve housing conditions and neighbourhood quality as to better quality of life and being of residents. Furthermore, this will add to the state of knowledge of substandard housing in developing countries urban areas such as Nigeria.

## AIM AND OBJECTIVES OF THE STUDY

The aim of the study is to assessed substandard housing contributory factors in neighbourhoods of Port Harcourt municipality, Nigeria.

Objectives of the study are to:

- i. Identify factors that are contributing to substandard housing in neighbourhoods of Port Harcourt municipality;
- ii. Assess the impact of contributory factors to substandard housing in neighbourhoods of the study area; and
- iii. Identify physical planning measures to improve substandard housing in neighbourhoods of the study area.

## SCOPE OF THE STUDY

The study geographically covers Port Harcourt municipality (see Fig.1). The content scope includes identifying of factors that are contributing to substandard housing in neighbourhoods of Port Harcourt municipality, assessing the impact of contributory factors to substandard housing in neighbourhood of the study area, and identifying physical planning measures to improve substandard housing in neighbourhoods of the study area.

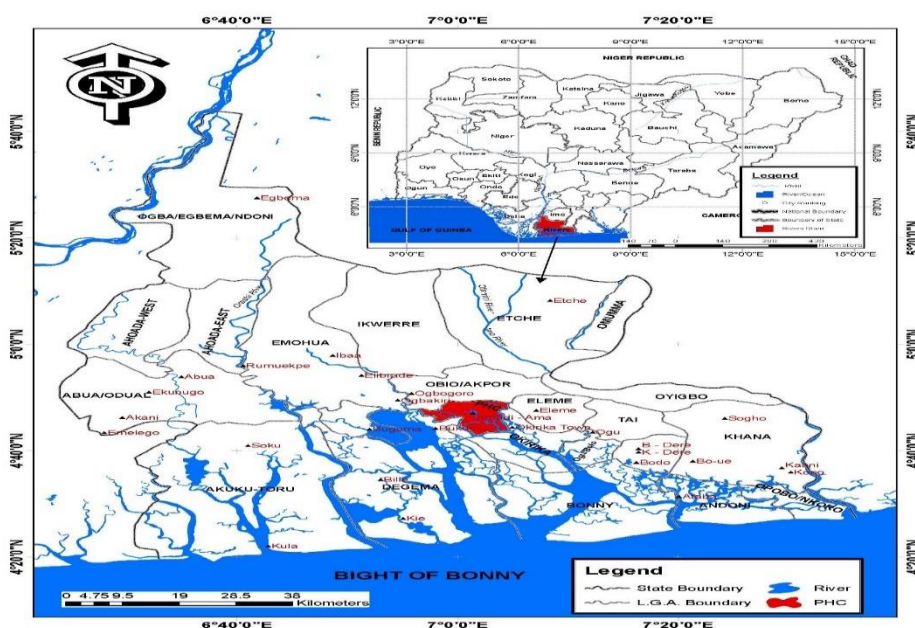


Fig. 1: Map Showing Port Harcourt Municipality

Source: GIS Lab, Department of Urban & Regional Planning, RSU, 2021

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## **LITERATURE REVIEW**

### **Substandard Housing - An Overview**

Substandard housing has become a regular phenomenon in the landscape of urban communities and neighbourhoods especially in developing countries (Zainal, Kaur, Ahmad & Khalili, 2012). This condition has attracted governments, international agencies and professionals' attention in the built environment on sustainable approaches to adopt in addressing substandard housing that accommodate many urbanites (United Nations Human Settlements Programme (UN-Habitat), 2021). Adequate and affordable housing is a fundamental human right to all humans which ensures safety, security and habitable conditions that demonstrate citizens' inclusiveness and sustainability in their living environment (UN-Habitat, 2021). However, adequate and affordable housing is not limited to putting roof over the head of a person but provide the opportunity for the person to have better quality of life in all ramifications (UN-Habitat, 2021).

The UN-Habitat (2021) has estimated that in 2030 over 3 billion people, which about 40% of the world population will require access to adequate and affordable housing and this alarm is gradually becoming reality as many urban areas governments and local authorities are not prepared for this expected phenomenon. This condition has made over 100 million people homeless globally putting more pressure on urban areas and local authorities resulting to the development of substandard housing as accommodation for many urban populaces globally. Substandard housing is conceptualised as housing unit lacking complete plumbing or sanitary facilities for exclusive use of the occupants or not meeting the housing and building codes and regulations of a local authority and poses threat to health, safety and security to the occupants and the general public (Law Insider, 2021). The condition of substandard housing also shows deflection and deterioration of the dwelling unit and its physical environment that may not be suitable for habitation. These conditions have described the concept of substandard housing and are evident in many urban areas of developing countries in Africa, Asia, South America and the Caribbean, though still exist in some neighbourhoods of cities in develop countries. America Development Bank report that 10-15million households in Latin America live in unsatisfactory and substandard housing and this situation will continue to increase annually despite government efforts to increase housing stocks in the continent through various housing programme interventions (Rojas, 1995).

### **ISSUES AND FACTORS AIDING SUBSTANDARD HOUSING PRODUCTION**

Issues of substandard housing in urban areas has been associated with rapid urbanisation. Rapid urbanisation has created conditions that has brought the emergence of substandard housing in urban areas defacing the urban fabric of cities with slum and squatter developments (Eyenghe, Williams & Tobi, 2019). The deficiency of producing large quantity of decent housing has contributed to substandard housing and poor neighbourhood and environmental condition thereby degrading the urban environment physically, socially and economically (Ibimilua, 2011; Eyenghe & Wokekoro, 2020). These substandard housing lacked proper ventilation, non-accessibility of inbuilt latrine and kitchen, access roads, water supply and sanitation problems and electricity supply making them to portray informality. One major challenge to the encouragement of substandard housing development in urban areas is poor attention to urban planning practices by government.

Other factors highlighted aiding the production of substandard housing in urban areas from studies rate to some degree to a basic condition of destitution, low earning by households and high unemployment rate (Cockburn, 2001). Angel (2000), also identified lack of access to land by urban poor, reluctance by government to defy concentrated/and possession, rampant land hypotheses, failure of focal government to direct land markets and disappointment of metropolitan governments to give functional metropolitan advancement procedures and legal hindrances to access. Furthermore, limited housing supply by government and private sector is another reason for substandard housing development as arrangement for better accommodation is declining as other urban demands compete with financial resources available. Urbanisation, provincial metropolitan relocation, insecure land residency, ineffective government arrangements and administrative systems, displacement which involved planned eviction, natural disaster and access to finance. Significant degree of deficiencies exists both regarding nature of dwelling unit and nature of essential infrastructure and services, social administrations and conveniences such as consumable and clean drinking water, electricity supply, access roads, and well-being organisations (Nnah, 2006). These conditions are accentuated by the political settings and financial capacity of a country and requires efforts of governments, international agencies and private sector to systematic address the problem and improve housing conditions for urban societies.

### **METHODOLOGY**

The study employed quantitative research approach and experimental research design for collection and analyses of data in the study. The study employed stratified and simple random sampling techniques for collection of data in the study area. The study applied Slovin formula to determine the sample size which a total of 399 respondents (households) were interviewed. Thus, to determine the sample size, the study area was grouped into three strata namely; planned neighbourhoods, indigenous enclaves and waterfront communities. The study identified 25 communities and neighbourhoods in the study area which 50% of the communities

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and neighbourhoods were randomly selected for sampling. The population of the communities and neighbourhoods were projected from the 1991 Census report (National Population Commission (NPC), 1991) to 2020 using 6.5% growth rate (NPC, 2018). Average household size of 5 persons (National Bureau of Statistics (NBS), 2016) was used to determine the total number of households in the study area (see Table 1). Hence, questionnaire administration was carried out to collect primary data from households in the study area using closed and opened ended questionnaires. However, after survey of households in the study area, 387 questionnaires were considered valid for collation and analysis of data for the study.

**Table 1: Sampled Neighbourhoods, Communities and Sample Size for the Study**

Strata	Sampled Neighbourhoods and Communities	1991 Population	2021 Population (Projected Using 6.5% Growth Rate)	No. of Households (HH) 5 persons per HH	No. of Population Sampled
1	<b>Planned Neighbourhoods</b>				
	Orije Old GRA	6,482	40,253	8,051	11
	Oromenike (D/Line)	21,377	132,751	26,550	35
	PH Township	12,369	76,812	15,362	20
	Mgbundugwu (Mile 1 & 2)	55,682	345,785	69,157	91
2	<b>Indigenous Enclaves</b>				
	Oromerezimgbu	6,595	40,955	8,191	11
	Elekahia	15,302	95,025	19,005	25
	Ogbunabali	15,014	93,237	18,647	24
	Okuru-Ama	5,603	34,795	6,959	9
	Amadi-Ama	7,034	43,681	8,736	12
	Fimie-Ama	1,250	7,763	1,553	2
	Abuloma	10,454	64,919	12,984	17
3	<b>Waterfront Communities</b>				
	Bundu	16,266	101,012	20,202	26
	Nembe Water Side	71,388	443,320	88,664	116
	<b>Total</b>	<b>244,816</b>	<b>1,520,308</b>	<b>304,041</b>	<b>399</b>

Source: NPC, 1991; NPC, 2018; NBS, 2016; Researchers' Fieldwork, 2021

## RESULTS AND FINDINGS

### Substandard Housing Contributory Factors in the Neighbourhoods of the Study Area

The study has revealed the income of residents is a major contributing factor to substandard housing in the study area. Table 2 showed that 68.6% of the respondents earn between less than ₦18,000-₦90,000 monthly. Though, the high earned monthly incomes from study are ₦18,000-₦36,000, and Less than ₦18,000 and ₦36,001-₦72,000 accounting for 26.9% and 15.7% respectively. This earning monthly is reflected in across all studied neighbourhoods (planned neighbourhoods, indigenous enclaves and waterfront settlements). The data in table 2 also showed that respondents earning above ₦144,001 are residing in the planned neighbourhoods and indigenous enclaves in the study area while in the waterfront communities no response was recorded.

Thus, the study showed that those in the high income bracket were very few. The study also revealed that there were more people that fell within the low socio-economic status in waterfront settlements than the other two neighbourhoods (planned neighbourhoods and indigenous enclaves). This factor has a major influence in determining the type of residential buildings found in the three studied neighbourhoods in the study area especially, the waterfront settlements and some indigenous enclaves. Another factor contributing to substandard housing in the study area as revealed in the study is the household size i.e. number persons per household. From the study, it was discovered that 32.8% of the households have 2-4 persons (32.8%), and closely followed by 5-6 persons (31.5%) which accounts for more than 64% of the respondents as this seen in all neighbourhoods studied. The study recorded there are households with 9+ persons representing 2.1% and this is found in waterfront settlements, and 7-8 persons per household representing 8.3% is observed in all three neighbourhoods and this has caused high occupancy rate and overcrowding. (see Table 3). The study further revealed that 18.3% of the buildings are occupied by 4 households, closely followed by 16.5% and 16% accounting for 3 and 5 households respectively occupying a building in the study area. The buildings with 9-11+ households are more in waterfront

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communities and planned neighbourhoods (Mile 1 & 2, and PH Township) (see Table 4). From table 5, the study revealed that 42.9% and 27.6% of the households occupied 1 and 2 habitable rooms respectively accounting for 70.5% and this increases the household crowding index of the study area. These conditions have further caused deterioration of houses in the study area to be substandard from best practice indicators and guidelines.

Table 6 revealed the various building materials used for construction in the study area. The most used roofing materials in the study area is corrugated iron and aluminum sheets accounting for 53.7% and 41.8% respectively while plastic and thatched materials representing 0.8% and 0.3% respectively are used in buildings located in waterfront settlements. The wall materials observed mostly used in the three studied neighbourhoods is concrete accounting for 88%. Other wall materials include curtain accounting for 0.3% (indigenous enclaves), and zinc and mud are found as wall materials in waterfront settlements representing 1% and 0.3% respectively. Floor materials used for building construction as revealed in the study include tile, concrete screed and laterite accounting for 59.4%, 18.3% (planned neighbourhoods and waterfront communities) and 0.8% (waterfront communities) respectively. Other floor materials observed used for buildings include sand, terrazzo and marble. For window material, all three neighbourhoods used mostly wood, GMP and louvre as window accounting for 43.4%, 32.3% and 24% respectively while 1% used curtain as window material as showed in waterfront communities. Thus, the materials used for doors as revealed in the study are wood and steel doors accounting for 65.5% and 23.4% respectively.

Other factors identified that contribute to substandard housing in the study area is the physical condition of the buildings occupied by residents. Table 7 revealed, roofing condition across the neighbourhoods are in good shape accounting for 71.8% while some buildings roof conditions are leaking representing 20.2%. Dilapidated roofs are recorded in all neighbourhoods accounting for 6.5% while destroyed roofs as observed in waterfront communities representing 1.5%. The buildings, some have cracked walls which is found more in waterfront communities representing 33.1% while 66.9% of the buildings in the study area have no cracks in their walls and this is observed in the planned neighbourhoods. The floor condition is mostly screed and not damaged representing 61.1% and 14.7% respectively as observed more in planned neighbourhoods and indigenous enclaves. While 13% and 2.6% of the floors need repair and damaged respectively as observed more in waterfront communities. Also, in table 7, 30.7% of the buildings have water supply while 69.3% don't have water supply as this is observed in all neighbourhoods. Most of the buildings are observed have electrical fittings for electricity supply while very few do not have representing 97.9% and 2.1% respectively. Other factors as revealed in the study that contribute to substandard housing are building facilities shared by households in the study area. From data presented in table 8 showed that 53.3% of the households share toilet facility in their building while 46.7% do not share toilet facility. The sharing of toilet is observed more in planned neighbourhoods and waterfront communities. The same scenario is observed in sharing of kitchen and bathroom facilities by households in the study area representing 28.7% and 46.8% respectively. It is recorded that 70.3% and 53.2% of the households do not share kitchen and bathroom facilities respectively as it is observed more in indigenous enclaves.

One other contributory factor to substandard housing is the lack of implementation of the Nigerian Urban and Regional Planning Law of 1992, National Building Code of Nigeria of 2006, National Housing Policy of 2004 and Rivers State Physical Planning and Development Law of 2003 which empowers Urban and Regional Planning Agencies in the country and Rivers State to make and implement physical planning regulations and standards for housing development (FGN, 1992; FGN, 2006; FGN, 2004; RSG, 2003).

**Table 2: Monthly Income of Respondents**

Monthly Income	Planned		Indigenous		Waterfront		Aggregate	
	No.	%	No.	%	No.	%	No	%
Less than ₦18,000	11	7.2	14	13.7	36	27.1	61	15.7
₦18,001-₦36,000	36	23.7	19	18.6	49	36.8	104	26.9
₦36,001-₦72,000	23	15.1	7	6.9	31	23.3	61	15.7
₦72,001-₦90,000	16	10.5	14	13.7	9	6.8	39	10.1
₦90,001-₦108,000	6	3.9	11	10.8	2	1.5	19	4.9
₦108,001-₦126,000	4	2.6	10	9.8	1	0.8	15	3.8
₦126,001-₦144,000	9	5.9	4	3.9	3	2.3	16	4.1
₦144,001-₦162,000	4	2.6	3	2.9	-	-	7	1.8
₦180,001-₦198,000	2	1.3	2	2	-	-	4	1
₦198,001-₦216,000	2	1.3	2	2	-	-	4	1
₦216,001-₦234,000	1	0.7	2	2	-	-	3	0.8
₦234,001-₦252,000	7	4.6	3	2.9	-	-	10	2.6
₦252,001-₦270,000	1	0.7	1	1	-	-	2	0.5

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<del>₦288,001</del> - <del>₦306,000</del>	1	0.7	1	1	-	-	2	0.5
<del>₦306,001</del> - <del>₦324,000</del>	1	0.7	1	1	-	-	2	0.5
<del>₦324,001</del> - <del>₦342,000</del>	2	1.3	6	5.9	-	-	8	2.1
<del>₦342,001</del> - <del>₦360,000</del>	5	3.3	-	-	-	-	5	1.3
<del>₦360,001</del> - <del>₦378,000</del>	2	1.3	-	-	-	-	2	0.5
<del>₦396,001</del> - <del>₦414,000</del>	1	0.7	-	-	-	-	1	0.3
<del>₦414,001</del> - <del>₦432,000</del>	2	1.3	-	-	-	-	2	0.5
<del>₦432,001+</del>	5	3.3	-	-	-	-	5	0.3
No Response	11	7.2	2	2	2	1.5	15	3.8
<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021

**Table 3: Household Size of Respondents**

Household Size	Planned		Indigenous		Waterfront		Aggregate	
	No.	%	No.	%	No.	%	No.	%
1-2	22	14.5	19	18.6	57	42.9	98	25.3
2-4	63	41.4	32	31.4	32	24.1	127	32.8
5-6	56	36.8	40	39.2	26	19.5	122	31.5
7-8	10	6.6	11	10.8	11	8.3	32	8.3
8+	1	0.7	-	-	7	5.3	8	2.1
<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021

**Table 4: Number of Household(s) in a Building**

No. of HHs in Building(s)	Planned		Indigenous		Waterfront		Aggregate	
	No.	%	No.	%	No.	%	No.	%
1	4	2.6	7	6.9	20	15	31	8
2	21	13.8	16	15.7	15	11.3	52	13.5
3	24	15.8	13	12.7	27	20.3	64	16.5
4	30	19.7	21	20.6	20	15	71	18.3
5	32	21.1	13	12.7	17	12.8	62	16
6	19	12.5	14	13.7	12	9	45	11.7
7	11	7.2	10	9.8	8	6	29	7.5
8	6	3.9	5	4.9	8	6	19	4.9
9	1	0.7	-	-	2	1.5	3	0.8
10	3	2	-	-	3	2.3	6	1.5
11+	1	0.7	3	2.9	1	.8	5	1.3
<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021

**Table 5: Habitable Room(s) per Household**

Habitable Room(s)	Planned		Indigenous		Waterfront		Aggregate	
	No.	%	No.	%	No.	%	No.	%
1	53	34.9	25	24.5	88	66.2	166	42.9
2	46	30.3	29	28.4	32	24.1	107	27.6
3	16	10.5	15	14.7	3	2.3	34	8.8
4	14	9.2	12	11.8	2	1.5	28	7.3
5	4	2.6	8	7.8	2	1.5	14	3.6
6	1	.7	6	5.9	2	1.5	9	2.3
7	5	3.3	1	1.0	1	.8	7	1.8
8	2	1.3	-	-	2	1.5	4	1
9	-	-	-	-	1	.8	1	0.3
10	1	.7	2	2.0	-	-	3	0.8

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11+	10	6.6	4	3.9	-	-	14	3.6
<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researcher's Fieldwork, 2021

**Table 6: Building Construction Materials**

S/N	Building Materials	Planned		Indigenous		Waterfront		Aggregate	
		No.	%	No.	%	No.	%	No.	%
<b>Roofing Material</b>									
1	Corrugated Iron Sheet	89	58.6	53	52	66	49.6	208	53.7
2	Aluminum Sheet	61	40.1	47	46.1	54	40.6	162	41.8
3	Concrete	2	1.3	1	1	10	7.5	13	3.4
4	Thatched Roof	-	-	1	1	-	-	1	0.3
5	Plastic	-	-	-	-	3	2.3	3	0.8
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Wall Material</b>									
1	Wood	1	.7	-	-	21	15.8	22	5.8
2	Concrete	143	94.1	93	91.2	103	77.4	339	88
3	Bricks	8	5.3	8	7.8	5	3.8	21	4.6
4	Curtain	-	-	1	1.0	-	-	1	0.3
5	Mud	-	-	-	-	1	.8	1	0.3
6	Zinc	-	-	-	-	3	2.3	3	1
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Floor Material</b>									
1	Tile	115	75.7	78	76.5	37	27.8	230	59.4
2	Terrazzo	3	2	1	1	-	-	4	1
3	Sand	1	0.7	-	-	-	-	1	0.3
4	Concrete Screed	16	10.5	-	-	55	41.4	71	18.3
5	Marble			1	1	-	-	1	0.3
6	Laterite					3	2.3	3	0.8
7	Other	17	11.2	22	21.6	38	28.6	77	19.9
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Window Material</b>									
1	Wood	59	38.8	8	7.8	101	75.9	168	43.4
2	Louvre	41	27.0	33	32.4	19	14.3	93	24
3	GMP	51	33.6	61	59.8	13	9.8	125	32.3
4	Curtain	1	0.7					1	0.3
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Door Material</b>									
1	Steel door	45	29.6	44	43.1	1	.8	90	23.4
2	Bullet proof door	13	8.6	15	14.7	5	3.8	33	9
3	Wooden door	93	61.2	39	38.2	124	93.2	253	65.5
4	GMP door	1	0.7	4	3.9	3	2.3	8	2.1
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>44</b>	<b>43.1</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021

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**Table 7: Physical Condition of Buildings**

S/N o	Physical Condition of Building	Planned		Indigenous		Waterfront		Total	
		No.	%	No.	%	No.	%	No.	%
<b>Roof Condition</b>									
1	Leaking	22	14.5	10	9.8	46	34.6	78	20.2
2	Destroyed	-	-	-	-	6	4.5	6	1.5
3	Dilapidated	4	2.6	7	6.9	14	10.5	25	6.5
4	In good shape	126	82.9	85	83.3	67	50.4	278	71.8
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Cracked Wall</b>									
1.	Yes	39	25.7	21	20.6	68	51.1	128	33.1
2.	No	113	74.3	81	79.4	65	48.9	259	66.9
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Floor Condition</b>									
1	Screed	108	71.1	65	63.7	88	66.2	261	67.4
2	Damaged	3	2.0	1	1.0	6	4.5	10	2.6
3	Not damaged	21	13.8	24	23.5	12	9.0	57	14.7
4	Needs Repair	18	11.8	5	4.9	27	20.3	50	13
5	Earth	2	1.3	7	6.9	-	-	9	2.3
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Water Supply</b>									
1	Yes	58	38.2	49	48	12	9	119	30.7
2	No	94	61.8	53	52	121	91	268	69.3
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Electrical Fittings</b>									
1	Yes	151	99.3	98	96.1	130	97.7	379	97.9
2	No	1	.7	4	3.9	3	2.3	8	2.1
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021

**Table 8: Facilities Shared by Households in Building**

S/N o	Facilities Shared by HHs	Planned		Indigenous		Waterfront		Aggregate	
		No.	%	No.	%	No.	%	No.	%
<b>Toilet Facility</b>									
1	Yes	60	39.5	33	32.4	113	85	206	53.3
2	No	92	60.5	69	67.6	20	15	181	46.7
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Kitchen Facility</b>									
1	Yes	60	39.5	11	10.8	44	33.1	115	29.7
2	No	92	60.5	91	89.2	89	66.9	272	70.3
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>
<b>Bathroom Facility</b>									
1	Yes	71	46.7	24	23.5	86	64.7	181	46.8
2	No	81	53.3	78	76.5	47	35.3	206	53.2
	<b>Total</b>	<b>152</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>387</b>	<b>100</b>

Source: Researchers' Fieldwork, 2021



## **Substandard Housing Contributory Factors: Analysing Scenarios in Neighbourhoods of Port Harcourt Municipality, Nigeria**

### **IMPACT OF CONTRIBUTORY FACTORS TO SUBSTANDARD HOUSING IN NEIGHBOURHOODS OF THE STUDY AREA**

The impacts of contributory factors to substandard housing in Port Harcourt municipality are severe to the residents and the environment. The low-income earners are more impacted negatively. The earnings have made these social class of people to reside in waterfront communities where land and rent are cheap compared to the one of planned neighbourhood such as Old GRA. Over 68.6% of the household heads earn between less than ₦18,000-₦90,000 monthly, which has made them not afford decent accommodation for their households as discovered in the study. Such cheap accommodations are found in all studied neighbourhoods and communities (Mile 1 & 2, and PH Township) other than the Old GRA neighbourhood (see Table 2). This condition to afford cheap accommodation by households is attributed by the household size, number of households per building and habitable rooms per household in the study area as about 64% of the household size are between 2-4 persons and 5-6 persons as all three studied neighbourhoods have this structure of household but household size of 7 and above persons are more in waterfront communities. This is also observed in number of households in a building, as some building have 3, 4, 5 and 9-11+ households occupying between 1 and 2 habitable rooms. The conditions have negatively impacted on the buildings and rapidly increased the occupancy ratio reflecting overcrowding in the study area especially in low density planned neighbourhoods such as Mile 1 & 2 and PH Township neighbourhoods and waterfront communities (see Tables 3, 4 and 5).

However, the household structure covering income, household size and habitable room for households in the study area have resulted to rapid deterioration and degeneration into substandard housing from best practice indicators and guidelines. This condition is reflecting on the building materials used for housing construction as some are very old and do not meet the contemporary architecture. The buildings, some have leaking and dilapidated roofs with plastic and thatched materials; zinc, mud and curtain as walling materials; tile, concrete screed and laterite as floor materials; wood, GMP and louvre as window materials; and wood and steel materials for door as it mostly used in some planned neighbourhoods and waterfront communities of high densities (see Tables 6 and 7). This condition has defaced the neighbourhoods and community landscape and transforming to slum and squatter settlements. This is observed in the physical condition of the buildings occupied by the residents of the study area as walls are cracking, floors damaged and need repairs because of old age as observed in some planned neighbourhoods. Most buildings do not have water supply and depend on private provision by residents through private boreholes. Most of the buildings have electrical fittings which supply electricity to residents but still depend on private generators to support public power supply. Many households shared facilities such as toilet, kitchen and bathroom in buildings they are occupying and this reduces the physical condition of residential structures and the environment of the buildings. All these conditions affect the building quality and entire landscape of the municipality as most neighbourhoods and communities are fast decaying physically and socially. This is also reducing the economic value of buildings and urban environment of the municipality.

### **CONCLUSION**

Urban areas in developing countries are transforming rapidly, and building condition are major contributors to these changes occurring. Port Harcourt municipality is one of the urban areas experiencing these changes as a result of depreciating residential neighbourhoods and urban communities as many buildings becoming substandard in physical context and impacting on urban landscape. The study has identified and highlighted factors contributing to substandard housing including low income, large household size, multiple households in a building, limited habitable rooms per household, materials used for building construction, deteriorating physical condition of buildings, and households sharing of facilities such as toilet, kitchen and bathroom in buildings. All these factors have contributed negatively on the buildings to substandard structures in neighbourhoods and urban communities of the municipality as some are transforming into slums and squatters. The study has contributed the body of knowledge of substandard housing in urban areas and further advanced the subject matter.

### **RECOMMENDATIONS**

The study makes the following recommendations:

- i. Physical assessment of buildings in the study area should be carried out regularly to ascertain their fitness for habitation;
- ii. Waterfront environment should be reclaimed and planned by government for residents' easy accessibility and affordability;
- iii. Development Control agencies should ensure residential buildings are developed according to approved plan and specifications that meet building regulations and standards;
- iv. Governments of various levels through mortgage and financial institutions should grant soft and interest-free loans to low-income earners and the poor in the municipality to enable them build their own houses;
- v. Government should prioritise the development of low-cost houses for low-income earners and poor citizens across the country;

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- vi. Social amenities and services such as potable water supply, electricity, access roads and drainage needed by the residents in neighbourhoods and communities should be priority in term of provision to improve housing and neighbourhood quality; and
- vii. Government and its agencies of urban development and physical planning as a matter of urgency carry out spatial reorganisation through urban renewal programmes and projects at various neighbourhoods and communities in the municipality, so as to create decent and serene urban environment for the residents.

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