

URBAN SLUM AND THE ENVIRONMENT:

A CASE STUDY OF KPAKUNGU

BY

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ABTRACT

This project works centers on the use of questionnaire technique for assessing the effects of urban slum and the Environment. Data was collected based on the following requirement such as landuse structure, number of rooms per household, number of person per room, construction materials used, age the structure, ventilation condition, availability of kitchen, toilet and bathroom, type of sewage disposal facilities, type of water supply available, refuse collection points, accessibility of motorable road and accessibility of dwelling units to primary schools.

However, comprehensive analysis based on graphical work have postulated to give a wide understanding. The recommendation centers on two policies. In the first category, are long term policy issue relating to the prevention of urban slum, while in the second category are the short term policy issue relation to the physical improvement urban slum in Kpakungu.

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CHPATER ONE

1.0 INTRODUCTION

Urban stum settlements are identified as places where people live and are predominantly engaged in primary activities such as agriculture, street trading, hawking etc. other demographic characteristics such as community size, density, heterogeneity are casually related to the occupational difference. Hence urban slum areas are further defined as homogenous areas of low density and small, isolated settlement, one can therefore say that urban slum settlement areas small, homogenous settlement where people depend on primary activities as means of livelihood. It is also to be noted that these settlements lack essential public facilities and community services. In additional, urban slum settlement are characterized by poverty, illiteracy and they engage in activities.

Schnore (1966) suggests that certain variables should be measured to find out whether a settlement is a slum or not. He says to defined urban slum settlement, one need to incline to the choice of those variables*which can be statistically measured. These variables include population, type and level of economic activity predominant in.the area, migration pattern, heterogeneity and social differentiation and stratification.

Man is unhappy with the problems associated with and induced by urban slum settlement today he is in great danger in his environment and he is no longer in proper relation or balance with the other elements of the environment. Many of the inhabitants of urban slum settlement do not have means to satisfy their basic needs; and live in houses of very low quality.

Urban slum settlement is an environmental ethic, which is becoming as externalities and being incorporated into our principles by less to do in the society.

The settlement ethic establishes that the human race is part of settlement that includes trees, rocks, animals water and scenery. And those human races are morally bound to assured the settlement continues to exist. Thus this ethics affirms human's belief that this earth is our only suitable habitat and recongnises that rights of people to breathe clean air, drink unspoiled water, and generally exist in a quality settlement (Jones, 1973).

1.1 HISTORICAL BACKGROUND

Humans are a special species. Throughout known history, people lived together in-groups, often linked kinship. The commonest human settlement is the village-clusters of dwellings housing between 100 and

10,00 people, often flanked by areas of cultivation and pasture. (Idachba, 1985).

In Federal capital territory Abuja, there were some 382 settlements, of which 372 were rural, and 98% of these were villages with less than 2,500 inhabitants.

While most people still live in Ghetto or slum settlements, the proportion of urban dwellers is rising fast. Accommodation and lack of access to land in urban areas have led to increasing numbers of people to move to inner city tenements or illegal settlement. The influx, added to rapid increase in the numbers of already living there, has made the world urban dwellers the fastest growing sector of human population (FEPA1999).

The anatomy of a settlement is fundamental to its functioning. Unfortunately, virtually all illegal settlements of Ghetto or urban slum settlements were laid out before motor vehicles transport became common, and their road system are often inadequate for present needs. Infact, many urban squatters settlement are grinding to halt because of it's congestion, while noise and pollution endangers health and erode the quality of life.

However, it is common for a city population to live in overcrowded inner urban tenements or illegal settlements. For most, water supply, sanitation, garbage collection and access to health care are grossly

inadequate. The environments in which they live are the most life threatening in the world.

The failures of government are not merely administrative, however, in many case they also reflect historical influences. Much growth of urban slum settlement has out stripped the capabilities of municipal governments because national government do not give them sufficient authority to raise revenues and manage their affairs.

According to Gana (1978), the illegal (squatters) settlement scenery is one of a more nucleated and unsettled pattern of village based on particulars economic activities at the time of their establishment, such as fishing, hunting, farming, trading, social organization and history, evidence of adjustment to physiographic, socio-cultural and slave settlement located to the farms.

The Nigeria slum settlement' has always been dominant scenery in the country mainly because the settlement space has been most extensive. Virtually the settlement space of the country in pre-colonial era were few and in apart. From available records, these settlements were of relatively small population and did not process features associated with modern urban centres, (Chike Mba, 1995).

1.2 STATEMENT OF PROBLEMS

The environment of man is complex, and to understand the evolution and character of a settlement many problems are involved. These problems should not be seen as discrete entities, for they interact with each other. Geographers because of their subject matters, altitude and approaches, undertake studies that are of direct tangible benefit to man problems associated with his settlement pattern.

Urban slum settlement way of life has also resulted to various environmental problems. Many of such environment problems are as follows; Smog (Pollutants), which results from combustion and burning process of fossil fuel, fuelwood and others which is harmful to man, animal and vegetation. Indoor air pollution as a result of the use of asbestos in so many building may develop a rare form of lung cancer. (WHO year). In addition, the radioactive gas RADON, which is present in well water and building materials, such as traditional or local blocks/brick if they are made from materials with a high radon concentration; which is known to irritate to ear, throat, and lungs cancer (WHO 1988).

Furthermore, the dumping of cars and lorries involved in ghastly motor accidents, and exposing of life expectancy has render the land wasted. Water pollution is most carried out along the stream where solid wastes,

condemned motor battery, industrial waste, unidentified chemical from motor mechanic were dumped, human faeces, which are washed into water and render it unfit for drinking, bathing, cooking etc.

Soil erosion resulting from deforestation and agricultural practice is prominent and serious.

The most common forms of human waste disposal are pit, pan and bucket latrines and open defecation. More than half of the population does not live in facilities with a private toilet.

In the study area (Kpakungu), outfall from the poorly functioning sewage system contaminates the ground surface and poor sewage coverage results in serious stream pollution, as well as soil contamination from the open defecation in slum areas. It was discovered that organic waste from households is the pollutant of water bodies.

However, the overview of other associated environmental problems at the urban slum settlement level are as follows:- The menace of sanitation, street trading, lack of potable water supply, health problems, inadequate infrastructure and noise pollution.

Another serious defect of the land use structure in the urban slums is the small amount of land devoted to transport, such as roads and streets. This indicates that mobility within the slum areas is highly restricted.

It has been discovered that insignificant proposition of land in the urban slum areas of Kpakungu is devoted to commercial and other land use types. This indicates that community services in the slum areas do not adequate space. In facts, recreational space is non existent in all the slum areas.

One implication of the almost complete allocation of developed land in the slums areas is the high population density per hectare in the areas. The field survey by NPC (1991) indicates that the densities range from 600 persons per hectare in Abuja to 1,500 persons per hectare in Ibadan. These high densities contrast with the normal standard of between 100 and 200 persons per hectare, which is accepted in high-density residential areas of Nigeria cities. The high densities therefore constitute serious constraints on the maintenance of an acceptable standard of environmental sanitation in these areas.

1.3 AIMS

The aim of this study is to assess the effects of urban slum settlement to the environment. The specific objectives are:

- (1) To encourage planning and management of human settlement to satisfy the physical, social and other need of their environment on

a sustainable basis by maintaining the balance of the ecosystem of which the settlement is an integral sections.

- (2) To persuade people to discontinue the development of squatter settlement and participate in the newly introduced self-housing scheme.
- (3) To identify and recommend efficient and sustainable ways to implement such laws and regulations.
- (4) To examine the trends in the growth of burning fossil fuel or ingestion of fuel in the air, water and food, and suggest a sustainable and appropriate way of reducing them.

1.5 JUSTIFICATION FOR THE STUDY

The pattern in Minna urban slum centres whereby the poor are forced to live in areas with every deplorable living condition comes into sharp focus in the Kpakungu area. That all houses in Minna GRA areas enjoy pipe-born water supply while residents of the poor neighborhoods of Kpakungu mainly depends on water from wells. Where residents have no access to well or pipe – born water some enterpreneuce fill the gap of selling water. Kpakungu a 20 litre tin of water sells for N20.00. In the absence of pipe – born water supply, pit and bucket latrines are the most common toilet

still pose grave danger to health, but the health hazards are gently intensified when conservancy contractors who are paid through the local Government council demand extra bribes from inhabitants of poor areas before performing their duties. However, most residents empty their human wastes at night into the drains, refuse dumps and swamps.

The studies demand to know, the deplorable environment in which a large proportion of residents live is greatly exacerbated during the raining season (about eight months of each year) during which several areas are flooded. At this time, many households are either forced to live in damp, water logged buildings and water wade knee-deep in floodwaters or, extreme conditions, to vacate their homes.

However, the unsatisfactory method of disposing of domestic refuse and human waste constitutes a major health hazard for this area. In addition the absence of a fire station increase the danger of major fire out-break.

The variables through which pollution reach us include not only the air we breathe, the water we drink, the food we eat, but also the sounds we hear.

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The variables through which pollutants reach us include not only the air we breathe, the water we drink, the food we eat, but also the sounds we hear. This emphasizes the point that noise pollution constitutes an element of the general environmental pollution problem. Infact, noise is no longer regarded as a mere musiance, it has now been found to be a hazard, posing serious threat to the quality of life enjoyed especially in the urban environment, Egunjobi (1988).

It is against this background that attempt is made to raise some basic issues with a view to establishing a basic for understanding the problem and then indicate possible directions for policy making.

CHAPTER TWO

2.0 BACKGROUND INFORMATION OF THE STUDY AREA:

Settlement, particularly urban or illegal settlement (unglanned environment tend to display certain internal form such as the degree of connectivity of their dwellings and this overall shape. The form of any urban slum settlement is reflection of the population, socio-economic background, landform, drainage, climate conditions Geology (topographical) and cultural environment in, which it has developed. Thus these forms of settlement may be compact with closely space dwellings due to scarcity of land.

2.1 POPULATION

The worlds traditional framer are conservatives and their life style is difficult to change the kasamojong in Uganda Masai of Tazania and Nigeria's Gwari and Nupe share a comtept for farming and other stationary occupations (IUCN 1988).

However, for the over 10 000 resident (CENSUS NPC -1991) of kpakungu made up the Yoruba Hausa Lgbo Gwari Nupe Fulni etc. Kpakungu is 5 000 square kilometer.

2.2 LOCATION OF STUDY AREA

The study areas lies within latitude $9^{\circ}32'41''\text{N}$ and longitude $6^{\circ}30'36''\text{E}$. it covers area of about 195Km^2 , accessible through minor and major roads.

Minna metropolis covers so many wards, e.g. Bosso, Maikunkele, Chanchaga, Muitubi, Kpakungu, Paida, Sanká Kahuta, Saiko, Kongila, Keterengwari, Dutsen Kura etc.

Minna metropolis is growing capital of Niger state, with estimated population of 143,896 (NUDB).

2.3 CLIMATE

Minna lies within the middle belt of Nigeria, with sub-humid type of climate classified as the tropical wet and dry (AW) by Koppen (1971).

Share two seasons are very dependent on the two prevailing air masses over the country at different time of the year, the dry tropical continental air mass of originating from the Atlantic Ocean.

The two air masses, nearly opposite in direction met a zone of discontinuity stretching East-West across West Africa known as the inter-tropical discontinuity (ITD). It migrates north word, and south wards, following the earth revolution. It reaches the southern limit at a latitude 5°N

in January, and its northern limit in the variety of latitude 2⁰-2N in August.

The (ITD) as explained above reaches the study area latitude 9⁰ 35'N between

March and April at it recedes in October.

2.4 TEMPERATURE

The highest temperature is usually recorded in April at 31⁰C and the lowest in August 25⁰C.

Table 2.1 below shows that temperature varies with months and years. The highest peak of April 31⁰C clearly shows the period of highest air pollution through evaporation in the indisposed dump sites and distraction of the adjoining soil and microbe in the environs.

TABLE 2.1 TEMPERATURE OF THE STUDY AREA (°C) FOR 1996-1998

FIGURES IN (°C) MONTHS													
YEARS	J	F	M	A	M	J	J	A	S	O	N	D	MEAN
1996	27.7	30.3	31.6	31.3	28.1	26.0	25.3	24.7	25.5	25.9	23.3	26.7	27.4
1997	28.2	28.4	31.0	29.8	27.5	26.6	25.8	21.3	26.2	26.8	27.2	26.9	27.1
1998	27.4	31.2	32.3	32.4	29.0	27.1	26.1	25.4	25.4	26.0	27.8	28.0	28.3

2.5 RAINFALL

Generally rain begins in April and the highest amount occurs from June to September with August as the peak. The length of rain was on varies from 7 month in 1996 and 1988 to 8 months in 1997 (table 3). The winter or dry season commences as from November to March, with no amount of rainfall received over the period under study.

TABLE 2.2 THE MONTHLY RAINFALL TOTAL FOR 1996-1998

FIGURE IN (MM)

YEARS	J	F	M	A	M	J	J	A	S	O	N	D	MEAN
1996	0	03	0	48.6	164.5	225.0	,	257.0	191.1	127.4	0	26.7	27.4
1997	0	0	0	3.6	80.6	223.0	,	172.4	192.7	203.3	15.0	26.9	27.1
1998	0	0	0	8.25	121.0	155.1	,	243.0	201.9	212.6	0	.0	28.3

From the table above, there is going to be highest run off in August, thus the surface water contamination will be at the highest rate and also ground H₂O pollution during the period.

2.6 LANDUSE OF THE STUDY AREA

Relatively flat to flat terrains are cultivated for farming, and major farm produce are maize, guineacorn, yam and rice.

Under human geography, the central part of the settlement cosmopolitan with a lot of people engaged in petty-trade and subsistent farming. The area is also more density populated. The inhabitants in the villages are most Gwari and Nupe farmers.

2.7 LAND FORM

The area covered by this study of low topography relief without high land or hills. The highest points are the western part of Chanchanga with hills of about 250m above sea level and about 60-70m above the country rocks. It has typical guinea-Savannah vegetation composed of shrubs, few short tree species, with grasses between the height 1.5-3.5m the trees have average height of about 16m. Major occupation of the people is farming and cattle rearing.

CHAPTER THREE

3.0 LITERATURE REVIEW

Drakakis –Smith, (1981), is of the view that believe there is no single and accepted definition of what a slum is. He further went to say that, there are various definitions, which reflect the different orientations of various disciplines such as sociology, demography, economic, medicine and physical planning. At the same time, different societies define slums in different ways, even among people in the same discipline. Thus, the physical planners definition of a slum in the united states of America or Great Britain is bound to be different from that of a developing country such as Nigeria. this is a reflection of the varying levels of socio-economic development which characterizes different countries in the world.

Despite this lack of agreement, Drakasis 1981 provide an overview of what constitutes a slum area in the context of third world countries in general and Nigeria in particular. Third world cities are known to have two types of environmentally degraded areas. The first is the squatter settlement which comprises un-controlled or temporary dwelling largely inhabited by immigrants from outside the city concerned. Often, such areas are occupied illegally since building plans are not approved before dwellings are built. The second type is the slum proper which can be defined as legal, permanent

dwelling which have become substandard through age, neglect and or subdivision into micro-occupation units as rooms, cubicles or cocklofts. (Onokerhoraye. A.E., 1988).

Odongo, 1979 noted that, most contemporary attitudes and interpretation of the nature and origin of slums are derived from the Victorian era. During the Victorian period, slum dwellers were viewed as a socio-spatially isolated group whose separation was attributed variously to preferred deviance, the rejection of the work ethic, and other anti-socials value. In the words, slum areas have viewed as generations of host deviant behaviours such as criminality, prostitution and juvenile delinquency. The theoretical foundation for this social perspective on slum areas can be traced back to the works of the Chicago school of social Ecologists especially those of park, Mckenzie and Biogess (Odemerho), 1988).

Economically, slum/squatters areas are viewed, as areas inhabited by the poor in the urban system. The economic perception of slum areas is thus largely that of a people who are unskilled and therefore cannot be employed. Since there is no employment, there is no source of income for the vast majority of the dwellers of slum/squatters areas. Thus, PORTES (1971) in a not untypical passage has described urban slums in Chile as housing the poorest of the poor the unemployed, the vagabond and the delinquent. The

unskilled, and illiterate and often the alcoholic, the vagabond, and the delinquent.

There is the political perspective which views urban slum settlement as the breeding ground of political radicalism and violence. This perspective stems from the basic assumption that slum dwellers, experiences of poor living conditions and a variety of socio-economic hardship would, in time generate feelings of frustration and discontent. Such feelings would eventually lead to an eruption of political radicalism and violence (PORTERS, 1971).

Abrams 1966 is of the view that over-crowding is generally regarded as a hazard to health and, in particular, encourages the spread of infection diseases, such as typhoid and tube culosis. This is most pronounced in a residential situation in which sleeping accommodation is congested and the verification facilities poor. Thus, the theory that a filthy and decaying environment is indeed a health hazard of slum in India and Lagos, CLINARD (1966) and MARRIS (1961) have independently observed that the often supposed poor health of slum dwellers is not exclusively a consequence of poor housing conditions as such, as poor health could also be attributed to unbalanced diet, inadequate medical facilities and conflux disregard of personnel hygiene.

In Nigeria (Lagos State) Public Health Bye-law of April 1972 recommends a room occupancy of 2 persons per room, only the high-income areas conform with this standard, while residents of low income areas live in overcrowded rooms with occupancy ratios ranging from 8 person per room in a defined area of squatters settlement (MABOGUNJE, 1968, page 270).

Besides overcrowding in slums and squatters settlements. MABOGUNJE view the grossly inadequate essential services of water supply, storm drainage, roads, electricity, waste removal and disposal.

In third world countries, studies of slums as a social problem have, in general, tender to follow the colleagues. Reviewing studies carried out in Ghana, Uganda, the Philippines and Venezuela, among other developing countries, Clinaod and Abbott (1973) have a significant degree of correlation between slum/squatter housing and deviant behaviours.

The survey conducted by the Nigerian Institute of Social and Economic Research (NISER) in 1982, shows that vigorous definition and identification of slum/squatter areas was attempted. The selected slum/squatter areas in each urban area was made after a through reconnaissance survey of all the worst residential areas with respect to their physical characteristics. In addition, the questionnaire administered focused on the social and economic of the households and dwelling in which the

inhabitants live. However, the analysis have focuses on the physical characteristics of the dwellings and the overall environments in which they are located.

In the opinion of a British writer SCHNORE (1966), suggested that certain variables should be measured to find out whether a settlement is a slum/squatters or not he says to defined squatters settlers one needs to incline to the choice of those variables which be statically measured these variables include population type and level of economic activity predominant in the area migration pattern heterogeneity and social differentiation and stratification.

Squatters settlement scenery is one of a more nucleated and unsettled pattern of villages based on particular economic activities at the time of their establishment such as hunting social organization and history evidence of adjustment to physiographic and slave settlement located to the forms (Gana 1978).

According to (Chike Mba 1995) the Nigerian squatters settlement has always been a dominant scenery in the country mainly because Nigerian the settlement space has been most extensive virtually the settlement spaces of the country in pre- colonial era were few and far apart from available records

these settlement were of relating small population and had not the features associated with modern urban centers.

Peter Hagget (1979) is of the view that uncontrolled or squatters settlement often lie around the periphery of the built up area and are made up of temporary buildings (built by the squatter themselves) with few social infrastructure he went further to say that their names vary from country. In Jamaica they may be called Ghetto In Latin America ranchos or favelas; In Asia bustees or Kampongs in Africa bidonvilles or sharty towns.

Hagget further articulated that the uncontrolled squatter settlement are largely a third world problem inward immigration of rural poor area in the western world has led to a spatially different through socially similar phenomenon, the ghetto. That, the term ghetto originally described Jewish areas within the medieval cities of eastern and southern Europe. In such cities the Jews lived apart from the rest of the community and in some cases even a well separating their area from the rest of the city.

According to P.K. MAKINWA-ABEBUSOYE, 1998, defined squatters settlement/slum as area characterized by sub-standard housing built mainly of corrugated iron sheets, planks and plywood, drains, ventilation and natural light. He further said existing houses are usually overcrowded

rooming houses and most of these, over 80% contain more than these households. (F.O. ODEMERHON AND SADA, 1988. P. 142).

CHAPTER FOUR

4.0 METHODOLOGY.

Reconnaissance survey (Questionnaire) of the physical features:-

One hundred houses and households were randomly selected for the questionnaire. The (questionnaire) focuses on the social, economic and physical characteristics of the households and dwellings in which the inhabitants live.

The urban settlement areas in Kpakungu is a good example of the traditional slum areas which are made up of residential areas built up during the pre-colonial era or during the early years of colonial administration in Nigeria. Apart from the poor building material and low technology which gave birth so such slum, lack of development control contributed remarkably to their emergence. On the other hand the development is as a result of the expansion of the built-up areas of an urban area into existing rural villages.

Since such villages were unplanned and the houses built of local materials to house mainly farmers; the physical environment of their areas contrast sharply with that of the surrounding urban neighbourhoods.

The subsequent expansion of the continuously built-up urban area eventually places such slum areas between the center and the sub-urban. Finally, the squatter settlement of Kpakungu also owes its origin to the

squatter of urban dwellers who could not find or afford accommodation in the city of Minna. Since these slum areas are located outside.

CHAPTER FIVE

DISCUSSION OF RESULT

5.1 RECONNAISSANCE SURVEY (QUESTIONNAIRE) OF HOUSING CHARACTERISTICS

The field survey of the housing characteristics attempt to measure the degree of overcrowding. Nigerian planning standards for urban areas indicate that the average numbers of rooms per households should be three (Niser, 1982 By A.G. Onokerhoraye).

However, table 4.2 shows that the majority of the house-holds in the surveyed areas of Kpakungu live in one or two rooms. The situation in market place one is essentially similar. In these two areas, only a few of the households live in the rooms.

However, the number of rooms per household as an indicator of the pressure on accommodation is not adequate because it does not take into consideration, the size of the households concerned. Consequently, the usual indicator of overcrowding is the numbers of persons per habitable rooms. Table 4.1 presents the pattern in the sectional areas of Kpakungu central Kpakungu, open market, along Dutse Kura road along Bida road and Kpakungu. It indicates that, over 80 percent of the dwellings surveyed have

four or five persons per room. This is against the average national standard of two persons per room in the urban areas.

TABLE 4.1 NUMBER OF ROOMS PER HOUSEHOLDS (PERCENTAGE TOTAL).

NUMBER OF ROOMS	CENTRAL KPAKUNGU	OPEN MARKET	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION
Room per Household	9	6	5	5	25
Room per Household	30	30	40	45	30
Room per Household	61	64	55	50	45

TABLE 4.2 NUMBER OF PERSONS PER ROOM (PERCENTAGE OF TOTAL)

NUMBER OF ROOMS	CENTRAL KPAKUNGU	OPEN MARKET	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION
Person per room	35	5	28	1	12
Person per room	15	10	40	5	18
Person per room	31	20	30	10	48
Person per room	19	65	2	84	22

Another housing characteristic, which is of relevance, is the concern of physical feature of the dwellings themselves. Table 4.3 indicates five main combination of building materials that could be used in the area. It shows that, the vast majority of the dwellings are build of mud walls with galvanized or asbestos roofs. Few of the dwellings in the surveyor areas have cement rendered mud walls, while less than 3 percent are build of sand Crete block walls.

Most of the inhabitants build their houses during the pre-colonial or early colonial period with the materials they could lay hand upon.

An analysis of the age structure of the dwelling Units surveyed also indicates marketed differences on the one hand and markets, footrest etc, on the other hand. Table 4.4 shows over 30 percent of the dwellings are either thirty years or less years. The relatively old age of some of the dwelling is because such buildings were in existence as rural settlement before the town intruded and many newer building were added.

**TABLE 4.3 CONSTRUCTION MATERIALS OF DWELLING UNITS
(PERCENTAGE OF TOTAL)**

CONSTRUCTION MATERIALS DWELLINGS	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Sand-Crete block asbestos roof	11	1	2	4	5
Cement sand and wall and asbestos	23	20	2	45	5
Mud wall and asbestos	26	70	55	25	50
Mud wall/thatch roof	15	5	40	15	35
Wall/asbestos	20	30	1	10	4
Others	5	1	0	1	1
	100%	100%	100%		

**TABLE 4.4 AGE STRUCTURE OF DWELLING UNITS
(PERCENTAGE OF TOTAL)**

DWELLINGS UNITS		CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Between 5 years	5	40	25	36	28	20
Between 5-10 years	5-10	15	45	52	72	45
Between 11-30 years	11-30	20	15	10	-	25
Than 31-50 years	31-50	15	10	2	-	10
50 years		10	5	-	-	-

Houses located in the slum areas are known to be poorly ventilated. The survey indicates that there are many rooms in the dwellings, which do not even have one window. The vast majority of the rooms in the dwellings have one or two small windows.

**TABLE 4.5 VENTILATION CONDITION OF DWELLINGS UNITS
(PERCENTAGE OF TOTAL)**

VENTILATION CONDITION	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Rooms without windows	-	-	-	-	-
Rooms with one windows	32	42	37	36	25
Rooms with two windows	48	39	45	43	48
Rooms with four windows	12	14	11	12	16
Rooms with four and windows	8	6	7	9	11

Source: compiled by the author

5.2 RECONNAISSANCE SURVEY OF HOUSING FACILITIES

The survey attempted to examine the nature of basic facilities available in the study by investigation the availability or otherwise of certain basic facilities which are essential for a healthy residential environment.

Table 1.6 indicates that above 60 percent of the dwellings had kitchen, toilet or bathroom. It also indicates that only about 30 percent of the dwellings have the three facilities. While only 10 percent have either of them.

Table 4.6 availability of kitchen, toilet and bathroom (percentage in total)

HOUSE HOLD AMENITIES	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Has kitchen, toilet and bathroom	20	30	35	40	10
Has kitchen and toilet	40	40	45	25	60
Has kitchen and bathroom	20	10	10	15	18
Has toilet and bathroom	5	10	5	17	2
Has no kitchen, toilet and bathroom	15	10	5	3	10

Source: compiled by author

Table 4.8 type of water supply available in dwelling (percentage of total)

HOUSE HOLD AMENITIES	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Has kitchen, toilet and bathroom	20	30	35	40	10
Has kitchen and toilet	40	40	45	25	60
Has kitchen and bathroom	20	10	10	15	18
Has toilet and bathroom	5	10	5	17	2
Has no kitchen, toilet and bathroom	15	10	5	3	10

Source: compiled by author

An analysis of the type of sewage facilities used in those dwelling with any facilities indicates that in all the selected areas, the pit latrine is the commonest form of sewage disposal facilities. The septic tank accounts for

less than 20 percent of the dwellings, which have sewage facilities, as can be seen in, table 4.7.

Table 4.7 type of sewage disposal facilities (percentage of total)

SEWAGE DISPOSAL FACILITIES	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Pit latrine	80	50	70	34	60
Septic tank	15	45	5	60	28
Others	5	5	25	6	12

Source: compiled by the author

The nature of water supply available in Kpakungu vary from one area to the other (table 4.8). At Kpakungu extension, along Bida road areas wells with untreated water provide the dominant source of water supply to the dwellings. Along Dutse Kura and open market public taps provided water twice a week for most dwellings.

The main trend in all area is that pipe borne water connected to individual dwellings have to use buckets to search for and collect water for their clarity needs.

Table 4.8 type of water supply available in dwelling (percentage of total)

WATER SUPPLY	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Pipe- borne water connected to dwelling	5	1	-	-	-
Public taps	20	55	40	35	55
Well	45	30	20	50	35
Rivers	25	4	30	5	5
Others	5	10	10	10	5

Source: compiled by author

Table 4.9 refuse collection points (percentage)

LOCATION/DISTANT	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Within 100 metres	5	1	-	-	-
Between 100-200m	10	55	40	35	55
Between 200-300m	30	30	20	50	35
Over 300 metres	54	4	30	5	5

Source: compiled by author

Finally, table 4.11 indicates that most pupils in the slum areas of the five location in Kpakungu walk longer distance before getting to a primary school which, in most cases, is located few away from them.

**TABLE 4.11 ACCESSIBILITY OF DWELLINGS UNITS TO
PRIMARY SCHOOLS**

LOCATION/DISTANCE	CENTRAL KPAKUNGU	ALONG DUTSE KURA ROAD	ALONG BIDA ROAD	KPAKUNGU EXTENSION	OPEN MARKET
Less than 1km	45	55	-	75	60
Between 1-3km	35	35	30	25	30
Between 3-5km	20	10	45	-	10
Above 5 m	-	-	25	-	-

Source: compiled by author

5.4 ANALYSIS

The data analysed here is derived from the questionnaire of the five selected points in the urban slum settlement areas of Kpakungu. The questionnaire survey was conducted by the author (see appendix 1). The questionnaire administered focused on the following social, economic and physical characteristics of the households and dwellings in which the inhabitants live;

- a) Land use structure
- b) Number of rooms per household
- c) Number of persons per room
- d) Construction materials of dwelling units
- e) Age structure of dwelling units
- f) Ventilation condition of dwelling units
- g) Availability of kitchen, toilet and bathroom
- h) Type of sewage disposal facilities
- i) Type of water supply available in dwelling
- j) Refuse collection points
- k) Accessibility to motorable roads
- l) Accessibility of dwellings unit to primary school

5.5 LAND USE STRUCTURE

Based on bar chart, significant proportion of land in the five selected point of Kpakungu is devoted to residential and the rest remaining percentage is devoted to the other land use.

In fact, reception and open space is non-existent in all the five selected station.

5.6 NUMBER OF ROOMS PER HOUSEHOLD

The graph measure the number of rooms per household as an indicator of the pressure on accommodation.

These appears to be relatively even distribution of household's among the three categories. This suggests that in the traditional slum areas, the pressures of accommodation space is not as serious in the modern ones.

This suggest that, significant proportion of one room per household is dominant. In which the graph indicate upward rise.

CHAPTER SIX

6.0 RECOMMENDATION

Comprehensive policy implications of the physical characteristics of the urban/slum areas of Kpakungu, Minna can not be provided until the overall social, economic, political and demographic of these areas are analysed. However, on the basis of results of the questionnaire survey coupled with other studies of the physical environmental in Nigeria, some policy issues can be identified. These policies can be divided into two categories. In the first category, are long term policy issue relating to the prevention of urban/slum areas, while in the second category are the short-term policy issues relating to the physical improvement of urban slum areas Kpakungu, Minna.

One of the issue in the first category relates to the reduction of the rate of urban population growth. It is inevitable that a reduction in fertility is a necessary condition for solving the population resource processors of the urban centres (Minna). Generally, the only proved method for inducing a lasting and significant lowering of the birth rate has been to raise substantially a population's level of living, and aspiration for further gains. This process requires the generation and input of considerable capital and consumes much valuable time. Also, there is an immediate need to retared

population growth substantially by perfecting the implementation of family planning programmes and to consider even more direct effective measures.

With respect to the control of rural-urban immigration, it is obvious that the rate of rural-urban immigration will continue to increase, except an effort is made to improve condition in the rural areas. Since one of the factors impelling young rural inhabitants to move to the urban areas is desentiment of the traditional system of social and economic control exerted by the family and village elders, the provision of independence economic opportunities which are not subject to the control of elders will reduce feelings of resentment towards them. In this regard, an integrate rural development programmes should be adopted and implemented. One is the encouraging the development to medium -size towns in rural areas to facilities the distribution of social amenities to rural dwellers. Secondly, is the need of improving the income of rural dwellers major investments in agricultural modernization.

However, the long-term policy issues that relates to the generation of urban employment opportunities. The quality of life and urban environment cannot be significantly improved in Minna without increasing employment opportunities for urban dwellers. Measure, which could help to accomplish this objectives can be envisaged, but problem of application in practice are

significantly more complex. Employment policy measure usually demand extensive structural adjustments such as agdasian reform, more appropriate predomination techniques, modifications in labour legislation and policies to deal with population and immigration issues. Three major avenue where public must focus attention is the industrial development, infrastructure development and the informal sectors.

Furthermore, long-term policy issues relate to developing a sense of belonging and commitment to urban life among the vast majority of urban dwellers. Providing job opportunities and improving the skills of urban dwellers are important ways of assimilating immigrants into urban life as well as improving the quality of life of low-income households. However, there is the important issue of fostering the commitment of immigrants to the improvement of urban areas in which they live rather than focusing attention on their home villages despite the fact that they spend most of their life time in the urban areas.

As far as short-term selections are concerned, these relate largely to a programme of selective development of the squatter/slim areas. A large proportion of the housing in the identified urban/slum areas can be improved by re-roofing, enlarging windows, painting, landscaping and introducing

better air circulation and sanitation. The worst parts of the urban/slum could be cleared to provide space for roads, schools, open spaces etc.

6.1 CONCLUSION

However, the most significant source of environmental change in uncontrolled environment/slum settlement is migratory and natural population growth. Kpankungu Minna provides a useful illustration of this point. Rapid population growth in the slum region has had two streams of environmental impacts.

The growth of their population helped build and expand a number of small scale business in and around the region that emit a range of pollutants, for example many restaurants for gernerisers etc. The second set of impacts stem from the resource requirements of the growing number of city dwellers themselves. Often environmental services and infrastructure cannot be adequately provided by the public sectors and the substitutes provided by the private sector may not be ecologically sound. On the more positive side Kpakungu development has reduced pressure on rural resources and possibly lessened the degree of human infringement on ecologically fragiles lands. Family planning can have an important effect on such rapid population growth. For example women know about contraception methods while a

lower numbers use modern techniques because of problems of access and affordability.

The water supply and its distribution are environmental service. How they are provided has had imported effects. The supply of pipe water to Kpakungu is inadequate, forcing many people to seek costly and often unsanitary alternatives. In most part of the town, small scale industrial growth coupled with dumping of refuse or waste and the absence of conservation measure is having a range of environmental impacts:

- a) Overexploitation and contamination of ground water reserves.
- b) Growing competition for water between farmers and the consumers.
- c) Increasing costs of additional increments of water supply.

The most common forms of human waste disposal are pit, bucket latrines and open defecation. These are slums in the entire areas, where more than half of the children and adult used sewage ditches, and open spaces, and more than half of the population. Did not live in facilities with a private toilet.

The combination of poor management and a low level of services to the poor is that inadequate sanitation can have negative health effects. The neighborhoods in streams areas with high level of inadequate human waste disposal have higher incidences of water disease. Kpakungu solid disposal is generally not well handled, considerable amounts of waste are disposal of in an uncontrolled way by being buried, burnt, thrown on open land, or dumped in drains, canals, and rivers. The land suffer from some leaching that pollutes the aquifers, and methane gas generated by biochemical degradation may constitute an explosion risk.

The nature of transportation and telecommunication system also has important environmental consequences. The un-motorized fleet is growing at a faster rate than the population or the road capacity. In Kpakungu, the numbers of motor vehicles has increased, consequently, air pollution from mobil source has become a growing problem. One particularly downfall aspect of this growth is the becoming of fossil fuel. Ingestion of fuel in the air water and food was the town environmental health problem.

The variables that link Housing and environmental quality appears to be density, location and quality of construction. Crowding can worsen existing environmental problems in human settlement. Kpakungu's high occupancy rate of about 5 person per room puts heavy pressures on some

facilities like kitchens, toilet and bathing areas: these areas often have poor drainage so water accumulates, providing a breeding ground for mosquitoes. Crowding has been associated with an increase in communicable diseases. Low-quality zones so the fragile hill sides are vulnerable to natural hazards.

Substandard construction and houses located in unhealthy area can also be a source of environmental ills. Environmental health problems linked to poor quality housing include:-

- a) Bronchial illness, colds, influenza and pneumonia from doughty, dampness and lack of ventilation
- b) Diarrha and dehydration from inadequate plumbing,
- c) Bites and the transmission of disease from rats, ticks, spinner's and ideas and diarrhea, dehydration, worms and skill diseases from a lack of sanitation facilities,
- d) The key observation is that, there is a strong link. between unplanned/uncontrolled environmental and health case systems. Most of significant disease are associated with poor housing and ventilation, and lack of facilities low waste disposal.

6-2

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QUESTIONNAIRE ON RUBAN SQUATTER SELEMENT AND THE

ENVIROMENT (CASE STUDY ON KPAKUNGU)

SECTION A (PERSONNAL)

1. NAME OF LANDLORD, LANDLADY AND TENENT
2. LOCATION OF TENEMENT
3. OCCUPATION NATIONALITY
4. STATE OF ORIGIN RELIGION
5. DO YOU WORK IN MINNA AND RESIDENT / SETTLED IN KPAKUNGU

DELETE YES / NO

SECTION B (TECHNICAL)

6. HOW LONG HAVE YOU SETTLED IN THIS AREA
7. HAVE YOU WITHNESSED ANY ECOLOGICAL PROBLEM IN THIS
AREAIF YES WHAT TYPE OF HAZARD / PROBLEM
.....AND WHEN DOES IT OCCURRED
.....,WHAT ARE THE DEGREE OF IT/S
SEVERITY DELETE (SERIOUS , LESS SERIOUS AND NOT SERIOUS)

WHAT ARE THE SOURCE OF WATER SUPPLYWHE
MONITOR THE PURITY OF IT
IDENTIFY ANY HEALTH CENTRE AROUND AND ESTIMATE THE
DISTANCE TO YOUR HOUSE OR RESIDENTIAL AREA.....
AND INDICATE WHETHER QUALIFIEDMEDICAL PERSONNEL ARE
AVAILABLE.....

0. WHAT ARE THE MEANS OF REFUSE DISPOSAL METHOD.....

1. WHO MONITOR SUCH DISPOSAL UNIT/POINT
WHAT IS THE DISTANCE OF REDUSE COLLECTION POINT TO YOUR
HOUSE.....

2. HOW MANY NUMBER OF PEOPLE PER ROOM.....
HOW MANY WINDOW PER ROOM

HOW MANY NUMBER OF ROOM PER HOUSE HOLD

3. WHAT FORM OF LANDUSE STRUCTURE ARE IN PLACE DELETE
(RESIDENTIAL, COMMERCIAL,TRANSPORT, RECREATION/OPEN
SPACE, INDUSTRIAL AND OTHER).

SECTION C. ADMINISTRATIVE)

1. SHOULD THE GOVERNMENT-REMODIFY THE SETTLEMENT PATTERN

IN KPAKUNGU..... YES/NO. AND WHAT FORM OF

MODIFICATION WILL YOU SUGGEST.....

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