

SETTLEMENTS PATTERN DYNAMICS IN THE NORTHEAST REGION OF NIGERIA: IMPLICATIONS FOR LOCALITY IDENTIFICATION FOR NATIONAL POPULATION AND HOUSING CENSUS¹

A.BASHIR

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ABSTRACT

The paper examines the growth trend and changes in the spatial pattern of settlements in the northeast geopolitical zone and its implications for locality identification and demarcation for national population and housing census. The paper also examines the meaning of locality in the theoretical geographical context, and the problems that appear to be associated with its identification and demarcation. To achieve these aims the paper also attempts to show the importance of indigenous (or local) knowledge about local administration boundaries in the identification and demarcation of EA's. Since local government, administrators and community leaders are a repository of knowledge about local/community boundaries it is our hope that the paper will also serve to promote greater cooperation and participation of the grassroots people in ensuring reliable and acceptable national population and housing census.

KEYWORDS: Settlement, Dynamics, Census, Locality, Identification

INTRODUCTION

One of the vital preliminary works in organising and conducting National Population and Housing Census is the identification of localities, demarcation and mapping of Enumeration Areas (EA's) for field enumeration. This activity is also a prerequisite for good coverage of the field enumeration as it provides a comprehensive list of localities to be covered over the census period. It also serves as basic unit for organising and reporting census results as they form the building blocks for administrative divisions within the country.

Simply defined the EA generally refers to a compact area carved out of a settlement or group of localities with clearly defined and unambiguously identifiable boundaries. One of the fundamental problems in contemporary census planning and administration is the difficulty of identifying and delineating "localities", which other wise simply means settlement, in both rural and urban areas. Yet the distinction between rural and urban also varies contextually posing another kind of problem.

Settlement is a dynamic concept referring to a place where people have to live and make their homes. The pattern and processes of settlement development in any region is a function of the dynamics of the socio-economic, political, cultural, and ecological environment within which it is located. Over the past thirty years, (since around 1976) there have been significant and visible changes in the number, size and spatial pattern of settlements distribution in Nigeria. New towns and villages have either emerged or had their demographic, functional and physical characteristics substantially transformed as a result of the redefinition of their legal socio-economic and political status by the Government, which also resulted in enhanced population movement and relocation (i.e. rural-urban migration).

The aim of this paper is to examine the growth trend and changes in the spatial pattern of settlements in the northeast geopolitical zone and its implications for locality identification and demarcation for national population and housing census. The paper also examines the meaning of locality in the theoretical geographical context, and the problems that appear to be associated with its identification

and demarcation. To achieve these aims the paper also attempts to show the importance of indigenous (or local) knowledge about local administration boundaries in locality identification for EA demarcation. Since local government, administrators and community leaders are a repository of knowledge about local/community boundaries it is our hope that the paper will also serve to promote greater cooperation and participation of the grassroots people in ensuring reliable and acceptable national population and housing census.

The dynamics and growth trend of settlements in Northeastern Nigeria

The northeast geopolitical region of Nigeria is a land populated by numerous large and small ethnic groups of different historical, socio-cultural and economic backgrounds. Like in any African society a large majority of the people are peasant farmers, fishermen, livestock herders and to a small degree wood carvers. This typically rural socio-economic background of the people is also manifested in the structure and pattern of settlements in the region.

By 1963 the settlement system in the north-eastern region comprising the present day states of Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe, ubiquitously comprised of small villages, hamlets and a few small and relatively larger towns. For example Udo (1970) noted that in Gombe-Bauchi-Gongola basin sub-region of the northeast the Bura people of Biu Plateau lived in compounds scattered all over the rugged landscape of the area. Similarly, ethnic groups that lived in the Bauchi-Gombe plains lived in small villages located at or near the base of hills and in walled towns. The Fulanis who were particularly numerous in the area lived in small towns. Similarly the Gongola basin was also sparsely settled with only a few districts that had population densities exceeding 200/square mile (or 80/sq.km) by 1963, especially in areas southwest of Bauchi town and in the southern part of Biu District (Udo 1970). In fact before 1970 large settlements were very few and included the major district headquarters of Bauchi, Biu, and Gombe in this area. The situation was virtually the same in areas of the Benue valley and the hilly areas of the eastern boarder lands (i.e. most of present day Adamawa and Taraba States).

Generally however, we can identify three main hierarchies of settlements in the northeast zone. The first is the *Unguwa* (i.e. ward or dispersed compounds in rural areas or a group of compounds in an urban setting) usually with a ward head (*Mai Unguwa*). Next is the *Kauye* settlement (a hamlet or village) usually comprising of several compounds surrounded by cultivated plots. The third is the *Gari* (or town) usually made up of a compact nucleated settlement with a very large population.

Following the spatio-political devolution of governmental functions especially since the creation of new states and local governments in 1976, and the subsequent designation of some selected large and small towns either as state capitals or local government headquarters which became new growth centres, a new system of settlement hierarchy begun to emerge and modified the settlements pattern in the country. particular settlements that hitherto could best be classified as rural e.g. Girei, Mayo Belwa, Billiri, Mutumbiyu, Damboa, etc. acquired urban functions and status; the fairly larger towns e.g. Jalingo, Numan, Gombe, Potiskum etc. expanded both functionally and physically. Some of them expanded and colonised smaller settlements within their hinterlands. The twin towns of Jimeta and Yola have since engulfed or merged with Voniklang, Jambutu, WuroChekke, and Yolde Pate villages. While Jalingo has colonized the villages of Magami, Mayo-goyi, Bashin and Kantiyel, and it is about to merge with Kona village. By the same process some settlements may have declined or lost population in favour of the new growth centres. For example Garin Mallum in Ardo Kola Local Government area declined in population in favour of Sunkani the new local government headquarter. Jereng a hitherto a junction town along the Jalingo – Numan road continue to decline in population and economic activity in favour of new Maraba Kunin, and Lankaviri.

Provincial and Divisional Headquarters became state capitals providing higher order functions; District head quarters became the political seats of local government councils delivering second order functions in a hierarchy of central places. Thus the post 1976 geopolitical developments in Nigeria stimulated a wave of urbanisation and altered the spatial pattern of settlements in the northeast region. Several other reasons may be adduced to account for the spatial dynamics of the settlement systems in Nigeria. What ever may be the reasons however, the fact remains that the transformation in the settlement pattern may have serious implications for the planning, execution and presentation of results of national population and housing census in Nigeria.

One of the empirical evidences of settlement growth associated with boundary problems and the related difficulty of assigning people to places was the case of Uba town in former Adamawa Province (now Adamawa State), north-eastern Nigeria. The area (Uba) is inhabited predominantly by the Marghi people together with Fulani, Kilba, Higi and Gude people. Historically the Marghi people were believed to have migrated to the area around the 14th century to escape the threats of conquest and subjugations from the more powerful Sefawa Mais of Borno. The Marghis therefore inhabited mostly the hilly areas while the Fulani's (mainly cattle herders) occupied the plains especially areas around the plains of River Yedsaram. Thus while the Marghi lived in the hilly areas south of the Mubi – Maiduguri highway, the Fulani together with a reasonable population of the Marghi cohabited the northern part of the road taking advantage of the fertile Yedsaram river valley for both animal and crop farming. All the small and major towns in the area however, were almost independent of each other administratively before the advent of the Fulani hegemony during the Usman Danfodio jihad. Over time Uba grew to annex other smaller villages and almost merged with the Marghi dominated part of the settlements. Since the Jihad of Danfodio the whole area remained under the administrative control of the Adamawa Emirate with headquarters in Yola (under the Lamido).

However, in 1976 following the creation of states by the military government and the imposition of an arbitrary boundary on the area, Uba town and all the surrounding villages were excised from Adamawa province and merged to Borno province to become part of the new Borno state. This did not go down well with the people especially the Fulani's because they felt removed from their homeland and separated from their brethren on the Adamawa (now Gongola) side from where they derive their political strength. This problem almost resulted in crises that necessitated the setting up of the Mamman Nasir Boundary Panel in 1976 by the Federal Military Government. Consequently the Fulani-dominated area located east of the Mubi-Maiduguri highway was carved to Gongola state while the predominantly Marghi communities located west of the highway remained in Borno state. By this development therefore the trunk A road from Mubi to Maiduguri that dissected Uba town into two became a political boundary placing the hitherto friendly communities into different and rival sections. While the Marghi's living on the Fulani side of the boundary did not feel comfortable living with the Fulani's on the eastern side, the Fulani's on the western side also abandoned their homes and resettled on the eastern side to join their Fulani brethren. Part of the reasons was because people did not wish to be registered for political elections, or to be enumerated during national population censuses on the side of the boundary where their people were in the minority. While this problem encouraged movement/local shift in residential locations, it also created some difficulty in associating census results to specific localities. Though this problem has been settled over time there are other boundary related problems of development that still remain to be resolved.

Boundary problems associated with settlement dynamics also emerged in the recent (2006) population census in parts of Taraba state in the northeast region. Settlements of some archival migrant communities (the Tivs, Jukuns and Kutebs) who for along time have been having disputes over land and local government boundaries around Takum and Ussa local government areas in southern part of the state were labelled as "orphans land" by the National Population Commission, just allow counting to take place during the 2006 census.

Before 1976, the settlement system in most of the northeast geopolitical zone was monotonously rural in nature. For example based on projections from the 1963 population census there were seven settlements in the Adamawa sub-region in 1976 that could be described as urban because they had population approaching or slightly exceeding 10,000 (Bashir, 1999). In comparison over 90% of the settlements had population less than 500. However by 1996 adopting the same criteria and based on projections from the 1991 population census 20 towns in Adamawa qualified as urban. This represents only about 0.83% of the 2417 localities identified for the 1991 population census in the state, and containing 29.8% of the states' population. In fact each of these 20 towns today is a local government headquarter. On the other hand if we adopt a population threshold of 20,000 and above as the minimum to define an urban place (Falade, 1999) then only 11 settlements would qualify as urban by 1996.

An analysis of the settlement pattern in the Adamawa subsection of the northeastern region (table 1) reveals a very low urban primacy factor (0.63) measured by the four-city primacy index (Bashir, 1999). The implication is that the size of the largest town (in this case Jimeta) was only about 0.63 times the size of the next three-largest settlements in the area. However, if the population of the twin towns of Yola and Jimeta is added the primacy index rises to about 0.95 suggesting that

there are very few large cities among several other small settlements on the terrain.

Further analysis of the spatial pattern of settlement reveals that the distribution lies between random and dispersed, with a nearest-neighbour index (n) of about 1.7. One of the implications of this settlement distribution pattern,

especially with so many localities having population below 500 is that census administration becomes a little more difficult especially for the movement of enumerators and supervisors. However, what is probably more important for the Population and housing census may be the issue of defining, identifying and correctly delineating and mapping out the boundaries of what truly constitute localities for EA demarcation.

Table 1: Number and category of settlements in Adamawa State 1996

L. G. A.	Settlement Size (population)						Total No. of Settlements	As % of State Total
	<500	500 - 999	1000-4999	5000-9999	10000-19000	20,000+		
Fufore	149	74	25	2	2	0	252	10.4
Ganye	60	109	14	0	0	1	184	7.6
Gombi	71	34	8	1	0	1	115	4.8
Guyuk	41	23	20	0	1	0	90	3.7
Hong	46	52	23	2	0	1	124	5.1
Jada	145	82	15	0	1	0	243	10.1
Madagali	82	44	16	1	1	0	144	6.0
Numan	93	101	43	2	1	1	241	10.0
Maiha	39	57	14	0	1	0	111	4.6
Mubi N/S	18	61	46	0	0	1	126	5.2
Yola N/S	76	36	12	0	1	2	127	5.3
M/Belwa	138	90	8	0	1	0	237	9.8
Michika	65	50	27	1	0	1	144	6.0
Shelleng	37	23	10	1	0	0	71	2.9
Song	49	98	58	0	3	0	208	8.6
Total	1114	934	339	10	12	8	2417	100.00

Source: National Population Census results 1991, and projections for 1996.

Another difficulty in hierarchical classification of settlements is the problem of defining and distinguishing between rural and urban on one hand and what constitutes a locality on the other hand. In fact settlement geographers have identified what is simply called "settlement continuum" in which there are no clearly defined limits between one level of the settlement hierarchy and the next. Yet a distinction has to be made any way for planning and administrative purposes.

THE URBAN/RURAL DICHOTOMY

The concepts of space and location are fundamental demographic variables. We have always recognised *place* or *location* where people live and work as relevant factors in population and demographic analysis. Other variables we employ in demographic analysis include socio-economic status, class, economic well-being, status of women etc. However unlike these socio-economic variables our definition or categorisation of space or location (which means settlement either rural or urban) has continued to differ and is some times subjective. Most often different countries adopt different criteria in classifying settlements especially in dichotomising between rural and urban for the purpose of demographic analysis, public administration etc.

Although the terms rural and urban are important concepts in human geography, there is no universally agreed definition of the two terms (Hugo, Champion and Lattes, 2001). In Nigeria like it is in most other countries settlements are mainly classified either as urban or rural based on population threshold criterion. However, the settlement system in Nigeria has increased in complexity especially since 1976 in terms of functions, size, density and spatial distribution such that the single criterion used for classifying urban-rural may not be very relevant. Moreover Hugo et, al (2001) have argued that the *urbanness/ruralness* of an area on the earth's surface is only one of the spatial dimensions of human settlement which is of interest in the analysis of demographic processes. It is also arguable whether the population and sometimes functionality criteria adopted for distinguishing urban from rural are

sufficient. For example, one may curiously ask if population density and remoteness rather than functional and/or mere population size should not be better criteria for measuring and differentiating urban and rural. This is because of the fact that developments in transportation and the adoption of 'urban' ways of life by 'rural' dwellers and the location of urban functions in non-urban places, are part of the complexities imposed on our settlements system by forces of modernization and globalisation. Fortunately, contemporary developments in the geo-coding of census and other demographic survey data and in the technology and methodology of Geographic Information Systems (GIS) provide for us the necessary toolbox to operationalise more complicated conceptualisations and measurement of human settlement systems.

The simple urban/rural dichotomy has long been recognised as an over simplification of the complexity of human settlement systems especially because these systems are constantly changing. Indeed it was argued that the rural/urban dichotomy should be replaced with a rural/urban continuum.

Although the classification of population into rural and urban is an accepted demographic practice, the criteria adopted for the recognition of units as urban at censuses differ from country to country. In recognition of this difference, the ECAFE seminar on planning for Urban and Regional Development held in Tokyo in October, 1966, acknowledged the need for census authorities to evolve a simplified and standardised definition. Generally, a place with local administration of its own such as a city municipality etc. is automatically treated as urban. For some countries, a minimum limit of population size is recognised for qualifying a place as urban. It is 5000 in some countries and in some others it may be as little as 1500-2000. A minimum density of population is also laid down as a criterion to qualify a place as urban. For example in Canada, places with population concentration of at least 1000 per sq. mile (or about 400/km²) are urban and anything outside this is rural. A third criterion applied is the predominance of non-agricultural population to qualify a place as urban.

Ajaegbu (1976) and Ayeni (1978) have recognized settlements with population 5000 and above as urban. For planning purposes the threshold population for urban areas in Nigeria is at least 10,000 persons. Urban areas according to the US definition are essentially densely settled territories as it may appear from the air. However it recognises two types of urban areas, which are described as *urbanized areas* and *urban clusters* both identical in the criteria used to delineate them but differ in size. Urbanized areas here refer to places with urban nucleus of 50,000 or more people and they may or may not contain any individual cities of 50,000 or more inhabitants. However they must have a core with a population density of 1000 per square mile and may contain adjoining territory with at least 500 persons per square mile (URS/USDA, www.ers.usda.gov.htm). Applying the same criteria, an urban cluster is defined as a place with at least 2500 but less than 50,000 persons. According to this system of classification, rural areas consist of all territories located outside the

urbanized areas and urban clusters. Generally however, the fundamental distinction between urban and rural places is in terms of population density, continuous built up areas as well as economic and political functions carried out in those areas.

Whatever criteria we accept and apply it is desirable to have definition of urban units so that data may be comparable within the same country and international. The definitions usually recognise one or a combination of at least six criteria to designate building blocks areas such as census localities as urban or rural. These include:

- a. A population size threshold,
- b. Population density,
- c. Contiguity of built-up areas,
- d. Political status,
- e. Proportion of non-agricultural occupations, and
- f. Presence of particular services or activities.

Hugo, et al, 1987 identified about nine widely accepted traditional stereotypes used in differentiating between urban and rural populations (see table 2).

Table 2: Widely accepted stereotypes in differentiating between urban and rural characteristics of areas.

S/No.	Dimension	Urban	Rural
1.	Economy	Dominated by secondary and tertiary activities	Predominantly primary industry and activities supporting it.
2.	Occupational structure	Manufacturing, construction, administration and service activities	Agriculture and other primary industry occupations
3.	Educational levels and provision	Higher than National average	Lower than national average
4.	Accessibility to services	High	Low
5.	Accessibility to information	High	Low
6.	Demography	Low fertility and mortality	High fertility and mortality
7.	Politics	Greater representation of liberal and radical elements	Conservative, resistance to change
8.	Ethnicity	Varied	More homogeneous
9.	Migration	High and generally net in-migration.	Low and generally net out-migration

(Adopted from Hugo, et al, 1987)

In any case attempt to apply these criteria suggest that there are quantitative limits (thresholds) of these variables that a place must score to qualify as urban which again would vary from country to country. The United Nations (1976) has also pointed out in their *Principles and Recommendations for Censuses* that "because of national differences in the characteristics which distinguish urban from rural areas, the distinction between urban and rural population is not yet amenable to a single definition which would be applicable to all countries. For this reason each country should decide for itself which areas are urban and which are rural".

It is not the intention of this paper to engage in the difficult task of providing alternative definition to distinguish between urban and rural for this country. Whatever stereotype may be recognized the important thing is to appreciate the fact that a good knowledge about the dynamics and pattern of our settlements system has implications for locality identification and delineation for the forthcoming national population census. The relationship between settlement dynamics/pattern and population census may be viewed in at least four respects viz:

1. Places that were identified in the previous census as isolated rural localities may no longer be so and the boundary between them and their neighbouring settlements or localities may have been lost. In this case the assistance of indigenous knowledge of such localities becomes imperative in order to demarcate the localities for EA identification and mapping.

2. Urbanization in the northeast region is generally associated with absence of any serious town planning efforts. Consequently poor layout development, haphazard location of buildings and facilities and the associated congestion pose serious problems locality and EA boundary demarcation. Thanks to GIS and GPS Technology. Other wise the problems of overlap and or omission, will continue to cause the problem of acceptability or even litigations.
3. The dynamic nature of our settlement system that is always associated with changes in the settlement hierarchy calls for regular updating of locality lists and EA's perhaps as the NPC regularly updates the population information for this country through its regular surveys like the sentinel survey etc.
4. The dispersed nature of our settlements in the northeast poses the problem of logistics not only for EA identification and mapping but also for the enumeration proper thereby raising the problem of logistics and by implication, time and finance budgeting. In other words the wide distance between built-up area and the low population densities may raise the cost (in time and money) of census administration for the NPC.
5. The overall effect of our settlement system would therefore have implications for Census Coverage.

The Concept of Universal Coverage and Locality in Census Administration

In organising a population census the main objective is to ensure full coverage of the entire area in a great territory without omission or overlap. Therefore a fundamental task in preparing for a population and housing census involves the location of every local area and building up of a suitable organisation to adequately cover it.

Census aims at enumerating every person or individual in the country. Census works depend on availability of suitable base maps and the spatial delineation of administrative areas (localities and sub-areas). The household dwelling are basic units of census, and are related to a holding or property typically inhabited by one or more households. The general linkage between population data and geographic space is given through the following natural sequence using the principles of sets theory (Haldrup, 2001):

$$\{Individual\} \in \{Household\} \in \{Dwelling/Property\} \in \{Enumeration\} \in \{Administrative\ unit/locality\}$$

However, the operational unit is usually the physical entity of the household, which is generally understood to refer to a group of individuals commonly living together, and partaking of food from the same kitchen. A household may occupy an entire house, or more than one household may share a house. In organising a census, every house and household should be located. This is normally achieved by a clear delimitation of territory by which every single household is accounted for. It is the responsibility of the population commission to decide (*a priori*), what constitutes the smallest territorial unit for organising population and housing census, and the jurisdiction for which the data will be consolidated and presented. For example, we have to decide whether the primary census data will be provided for every village, or groups of villages, which are sometimes needed for the purpose of local administration. The idea is that in making up the census organisation and demarcating jurisdictions at various levels of hierarchy it is necessary to make them correspond with the pattern of areas for which data will be ultimately presented.

Nigeria is divided into states, local government areas, development areas, and districts or chiefdoms etc. as administrative units. These administrative levels of jurisdiction are usually known to have identifiable and enduring boundaries that are clearly known to local/community leaders unlike electoral constituencies that may change with population size. In fact, the adoption of electoral constituency as spatial units for organising census may be a potential source of controversy that could mar the success of the census exercise.

The smallest spatial unit for the presentation of census data in Nigeria is so far the village or town (also called rural or urban locality). Though this may appear simple, yet there is a need to clearly define what these terms (locality, village and town) mean. Locality consists of villages, hamlets, farmsteads and cattle posts in rural areas, and towns or cities in urban settings. For the rural areas a locality would be a complete settlement while in the case of urban areas localities are subsets of towns and cities or in a few instances, complete towns. A locality may not be just any cluster of houses with a local name. It may be made up of the chief area of habitation and the surrounding area falling within certain demarcated boundaries. Hamlets or scattered farmhouses within such areas will have to be assigned to defined villages. Although the ward may seem to be a good level in the settlement hierarchy for organizing census data, it may have its own difficulty. Although the NPC have already adopted a concept that regards the ward as a natural sub-unit of a locality (Nigeria NPC, July 2004) it would appear that the ward may be a better spatial threshold area for organizing the census than the locality since it has the following characteristics among others:

1. The ward has universal application in all parts of Nigeria and therefore data organized on that basis through the demarcation of EA's can be amenable to comparability at both national and local levels;
2. The ward has contiguity of land mass with clearly known boundaries at least by the local/community leaders since its existence predates colonial rule in this country;
3. The ward legally recognized leadership for the purposes of tax collection, location of political pooling stations, and other supports for local administration. In fact people in both urban and rural areas identify the location of their residential houses with reference to their respective wards;
4. Census data disaggregated up to the ward level make public policy intervention in the development process through planned facility location easier even for local government authorities;

However, one of the problems that may arise from the use of wards is likelihood of having several multi-ward EA's, which is already a known issue even with the present scheme.

ROLE OF LOCAL/TRADITIONAL LEADERSHIP

When the various hierarchies of territorial units according to which the census is organised are determined, it is then essential to secure detailed maps on which the boundaries of each of these units are clearly delineated. The maps therefore serve as instruments to clearly demarcate the boundaries of the country as well as its division into smaller spatial units up to the level of the smallest enumeration areas of villages and towns. To ensure that these maps and the associated subdivisions are accurate and up to date representation of the administrative jurisdictions, the collaboration of local authorities and community leaders is necessary. This is because even if such maps exist for some areas, they may not be up-to-date since it is not unusual for governments to effect administrative changes of territory for various reasons. For example, villages may be clubbed to form a large unit or a village may be split up and each part recognised as an independent unit; or the boundaries of a municipal town may get extended to cover a whole or part of an adjoining village etc. In Nigeria there were cases of creation of new local governments out of existing towns, development areas, districts and chiefdoms etc. that the national census may have to taken into account.

But we do know that it may be obviously difficult even for the National Population Commission to keep track of the territorial changes, if they were to take place till the very date of census taking. It is therefore also desirable to seek the cooperation of the local authorities in charge of the districts or its sub-divisions to certify to the correctness of the boundaries of all local units that constitute the larger territory as indicated in the map. The exercise may be cumbersome but it is desirable in the end.

There may be areas within a country that may not have been surveyed and there may be no maps for such areas. This lack of maps may pose a problem. Even then, there may be some locally accepted dividing lines between one local area and another. In this case the census authority has the duty to prepare a list of such areas and define limits as locally accepted and even roughly mark them out on an outline map, which should show all the localities even if they are only approximately demarcated. In fact, Kadeh (1999) has shown that indigenous knowledge about local administration boundaries should be an integral part of the locality and enumeration areas identification and demarcation as well as for increased utilisation of the results in the provision of services for local communities. This is important in ensuring that during actual census enumeration, no area is left out and all habitations are counted and no overlaps.

Demarcation and Listing of Visit Points

The processes of demarcation and listing are closely related. While demarcation divides the country into small

geographic areas with clearly distinguishable boundaries, called Enumeration areas (EA's), listing on the other hand takes place within each demarcated EA. It involves making list of all visit points within that particular EA, and indicating where to find each visit point.

A visit point could be defined as a distinctive site, stand, premises or property containing one or more dwellings. It is a clearly distinguishable place that the enumerator is required to visit in order to administer or deliver census questionnaires. Each dwelling at a visit point can contain one or more households. For example in a given property, there might be a household divided and occupied by two families, one of which employs a domestic worker living in a backyard room. In this case there are three households in two dwellings at one visit point.

In a formal urban area, visit points are often associated with a specific street address. In a non-urban area the visit points are unlikely to have specified addresses. Such visit points have to be identified by a route description, or the householder's name. In remote non-urban areas, the help of local leaders or local authorities would be required.

Conventionally an EA consists of 250-500 households, the size of the EA being determined by whether its location is in a densely or sparsely populated area. The underlying principle in the demarcation of EA's is that all parts of an EA should be within comfortable reach of an enumerator.

Essence and Purpose of National Population and Housing Census in Nigeria

The population and housing census is one of the most extensive, complicated and expensive statistical operations that need careful planning to avoid defects, inefficiency and the risk of rejection. Careful planning is vital to the successful operation of the census. In order to ensure full utility of population count, the NPC tries to collect information on various socio-economic and demographic characteristics of the entire population. In fact it is the responsibility of government to identify and acknowledge the existence of the citizens of this country, to make and implement plans for the development of the country's human and environmental resources. There are several ways the government can approach the matter of human numbers for planning purposes. Some of these methods include sample survey (sentinel surveys, demographic and health surveys, vital registration and total head counts (census). The effort to generate reliable demographic data has included the conduct of numerous sample surveys such as the 1965/66 Rural Development Sample Survey and the 1980 National Demographic Sample Survey (NDSS) conducted by the Federal Office of Statistics and the then National Population Bureau, respectively.

While both sample survey and vital registration techniques could provide useful information on population numbers and health they have their serious limitations. Some of the limitations include narrow spatial coverage, temporal inconsistency, and unreliability of sampling and data capture method, among others. In particular, the fact that the vital registration system is neither strictly compulsory nor universal, or in any way understood and appreciated by the Nigerian public means that much less than 50% of all babies born in Nigeria get registered at birth. Of course when death occurs the same process of registration is followed and with same implications as in the registration of births. Moreover, the 1991 census figures are currently only partially relevant to the segment of the population that is about 14 years old and above. In other words for those children born after the 1991 census, the 1991 figures by today world have excluded about 40% of the population present in Nigeria, since they have not

been validly enumerated at any census. Since the 1991 census, commendable population-related activities have been going on under the National Population Commission to update the 1991 figures.

The other dimension as far as development planning is concerned is that government itself needs to know the age

and sex composition, the level of educational attainment, marital status, the type of work people are engaged in, the extent of joblessness, the residential status, the extent of morbidity and other health status of the citizens, type and extent of human migration, the spatial distribution (location) of the people across the land etc.

Availability of these type of information about the characteristics of the population is necessary for government to claim to be aware of how many we are, where we are, the type of life we live, how well or bad is our living condition and how to plan for our future. These and many more reasons therefore underscore the need for full-blown national census.

Population has always been a contentious issue in Nigeria even though it needs not be so as far as the needs for development planning is concerned. There are other issues that are more basic to the population of this country. These include the high dependency ratio and rapid and increasing migration from rural to urban areas. These and other demographic and health issues of the population such as family planning, HIV/AIDS and other STI's, nutritional status of children, housing etc., are of great interest to policy makers. In fact these issues are very crucial today if the new federal government's Development Paradigm enunciated in the NEEDS document is to be realised. But any successful census exercise must rely on dependable, accurate and acceptable locality and enumeration area identification and democratic which also requires the support, understanding and collaboration of local authorities, community leaders and the National Boundary Commission and all other relevant stakeholders.

CONCLUSION

The main purpose of a complete national population and housing census is to obtain data on population and its characteristics by sex, socio-economic status, and living conditions by administrative areas (i.e. village, town, district, local government area, state and country) for planning purpose with the village being the smallest administrative unit. It is therefore important to understand that:

1. Settlements are dynamic and the pattern of change in the system always has serious implications for census planning and execution.
2. Every population and housing census depends upon updated base maps suitable for operations;
3. Census relates to the household as a basic entity, and depend on administrative boundaries at all levels from region to district, municipality, localities and communities;
4. Censuses of population and housing are increasingly seeking to improve the quality of base maps and the spatial definition of administrative boundaries and enumeration areas to improve the quality of the data being collected. A good understanding of what constitutes a locality and the changing pattern of the settlement system is necessary.
5. We need to understand and appreciate the importance of Administrative Boundaries and Community Boundaries, which may be understood to mean important delimitations of land managed under different legal-administrative regimes. This understanding is necessary to eliminate or check any potential threat to peace that could arise from conflicts associated with land matters.

6. In determining administrative and community boundaries census managers usually recognise the importance and involvement of local leaders as repositories of indigenous knowledge. Boundaries have to be agreed upon by the concerned parties through local negotiations and formalised procedure. This is because in many cases, the greatest difficulty in clarifying community rights is associated with common boundaries.
7. The availability of data on housing and households disaggregated on smallest spatial unit, E.A's well defined and enclosed within administrative territories, would facilitate planning of development projects and reduce the problems of implementation.

We have pointed out that the smallest spatial unit of census data is the Enumeration Area (EA) as sub-units of administrative territories. According to the UN-Handbook for census mapping, 2000, the size of EA's vary in order to fit with the number of households one enumeration team can cover during duration of the census, taking into account operational aspects like terrain and transport. Thus, census data usually should have high spatial resolution and should be well suited for a range of planning purposes, when used at a disaggregated level. In fact one of the preconditions for optimal use of census data on the EA level is that the EA's are well defined in the field and on the base map of suitable quality, whereby the EA-delimitation can be overlaid with digital base maps.

The delimitation of administrative areas and localities is of great importance for several purposes including cadastre and law/administration. Administrative boundaries are usually boundaries of different jurisdiction, so conflicts within administrative boundaries can be resolved at a lower level of administration. In these regards the importance and need for collaboration, cooperation and support of local government chairmen and traditional/communities leaders become imperative.

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