PLANNING FOR THE INTEGRATION OF RUGANGE SUB-URBAN AREA IN YOLA-SOUTH LOCAL GOVERNMENT AREA OF ADAMAWA STATE, NIGERIA

Ogwu, F. A. and Balami, H. A.
Department of Urban and Regional Planning Modibbo Adama University of Technology, Yola
fridayogwu@mautech.edu.ng

Abstract
The rapid population growth of urban centres has resulted in spatial expansion of the urban centres and also the sub-urban areas, hence, making the sub-urban areas dependent on certain facilities and services from the urban centres. This paper shows the level of strong relationship between accessibility and interaction within the urban centre. Socioeconomic characteristics were studied to determine the level of economic activities in the sub-urban area. To have clear picture of both physical and economic activities in Rugange sub-area, structured and unstructured questionnaires were administered to sample households in Rugange using random sampling technique, to obtain data on the availability of infrastructure and social service in the area. The analyzed data revealed that Rugange is physically and economically under-developed. This is attributed to poor provision and distribution of facilities, utilities and services by the government. Agriculture is the predominant activity of the sub-urban area as studied, other nonagricultural occupation include trading/businesses, canoe making, blacksmithing, civil servants and students. Work, school, hospital, business transactions, market, banking services amongst others are major reasons for the interaction between the sub-urban area and Yola. Whereas, seasonal farming, firewood collection, fish trading and sand collection for different purposes are reasons for interaction between Yola and the sub-urban area. Land is held mainly through customary system and largely acquired through inheritance; others are residential, commercial, educational, quarrying and grazing. Proposals are done based on integrating elements like education, market, access road, local service industries and a proposed layout for future growth and development of Rugange, so that the suburban area will gradually and eventually become part of the urban fabric. The paper recommends that integration strategy in provision of basic community facilities and services should be applied.

Keywords: Planning, Integration, sub-urban area, Yola, Nigeria

Introduction

In most parts of the world, urbanization has been accompanied by industrialization and economic developments as increase in productivity, manufacturing and services benefitted from proximity and concentration of activities and inputs. Africa is urbanizing fast and its rate of urbanization soared from 15 percent in 1960 to 40 percent in 2010 and is projected to reach 60 percent in 2050. It was further revealed that urban population in Africa is expected to triple in the next 50 years, changing the profile of the region and challenging policy makers to harness urbanization for sustainable and inclusive growth. Hence, urbanization processes always leads to unplanned and uncontrolled development (UN Habitat, 2010).

Africa's urban growth is in line with the trends observed in most emerging and developed countries. Long-run growth needs an efficient system of urban centers that produce industrial goods and high-value services, along with transportation networks to link national economies with regional and global markets. Urbanization can be a result of either a “push” from agricultural productivity growth or a “pull” from industrial productivity growth leading to “production cities” with a mix of workers in tradable and non-tradable sectors (World Bank, 2009). Urban management and planning needs to be strengthened to help cities plan ahead and to avoid congestion, pollution and the emergence of urban slums; but the track record of most African countries is poor so far, leaving the

issue of urban management at the core of the continent's development challenge (Freire et al., 2014). Jiboye (201la) stated specifically in Africa where there is high rate of overpopulation, congestion, pollution, inadequate shelter, squalor, under development and increasing incidence of poverty, the rapid urbanization has not produced any appreciable improvement in the national economy and welfare of the citizens. Rather, the uncontrolled and unplanned urbanization has brought severe socio-economic, cultural and environmental problems.

In Nigeria, the urbanization process is similar to what is obtainable in several other developing countries, as the growth and complexity of human settlements has been phenomenal. Nigeria has one of the highest urban growth rates, having cities ranked among the fastest growing in the world (United Nations, 2014).

Ujoh and Ifatimehin (2010) opined that urbanization is the process that refers to the growth both in size and numbers of urban centre.

This process, as explained by Adesina and cited in Jiboye (2011 a), has been responsible for transforming towns, cities and metropolitan areas, while at the same time depopulating the rural setting through a process of direct rural-urban migration. He describes the level of urbanization as the share of a country's total population that lives in urban areas.

Toyobo (1992) defined a sub-urban area as "an area with distinctive characteristics which is only partly assimilated into the growing urban complex, which is partly rural and where many of the residents live in the country, but are not socially and economically of it".

Abiodun (1997) opined that as the population of sub-urban settlements increases, the need for infrastructure such as transportation, water, sewage and facilities such as housing, commerce, health, schools, recreation and other increases, hence, there is need for massive rehabilitation and expansion of infrastructure to upgrade the settlements. Therefore, the increasing population in Yola has brought about the spatial growth of sub-urban areas in Yola. Yola, experiencing urbanization and sub-urbanization has led to the transformation of the town from spatial expansion of the urban area and the sub-urban areas, the physical expansion of Yola has spread across it's sub-urban areas such as Lelewaji, Madumari, Wuro-Dole, Yolde-Pate, Wauru-Jabbe, Lakare, Mbamba, Mbamba Kwaji, Mbamba Ardo, Dochochi, Rugange, Wuro-Modibbo, Runde-Jabbi, Runde-Waziri, Runde-Doma, Bugawo, Runde-Gomba, Bole and Sebore.

Urbanization is the outcome of social, economic and political development that leads to urban concentration and growth of large cities, changes in the land use and transformation from rural to metropolitan pattern of organization and governance. Although urbanization is the driving force for modernization, economic growth and development, there is increasing concern about the effect of expanding cities, particularly on human health, livelihood and environment. Urbanization sometimes referred to urban drift is the physical growth of urban area as a result of migration and even sub-urban concentration into cities particularly the very largest ones (Isibor, 2013).

The Local Government reform in 1976 resulted to the emergence of a new set of rural growth centres which form nuclei for socio-economic change and population concentration in urban centres. Therefore, in order to safeguard the development of urban centres and their sub-urban communities, diverse and constant strategies need to be design, implement, monitor and review progressively.

Preliminary investigation reveals that increasing population has brought about the spatial growth of sub-urban areas in Yola. The sub-urban areas are growing into Yola and at the same time Yola is spreading out its development into the sub-urban areas, resulting to some of the sub-urban areas growing without planning guide in ordering the use of space and the high level of interaction between them. Thus, the need for physical planning is required for the development of the sub-urban areas as unguided growth, lack of basic community facilities, services and expansion takes place within Yola.

This paper assesses the spatial and socio-economic potentials of Rugange sub-urban area with a view to planning for the integration into Yola through:

i. Identification of major sub-urban settlements and their various spatial and socio-economic potentials.
ii. Examination of the physical and socio-economic characteristics of Rugange sub-urban area.

iii. Evaluation of the processes of rapid growth and development of the sub-urban area identified.

iv. Proposal of planning strategy and design plans for integrating the sub-urban area.

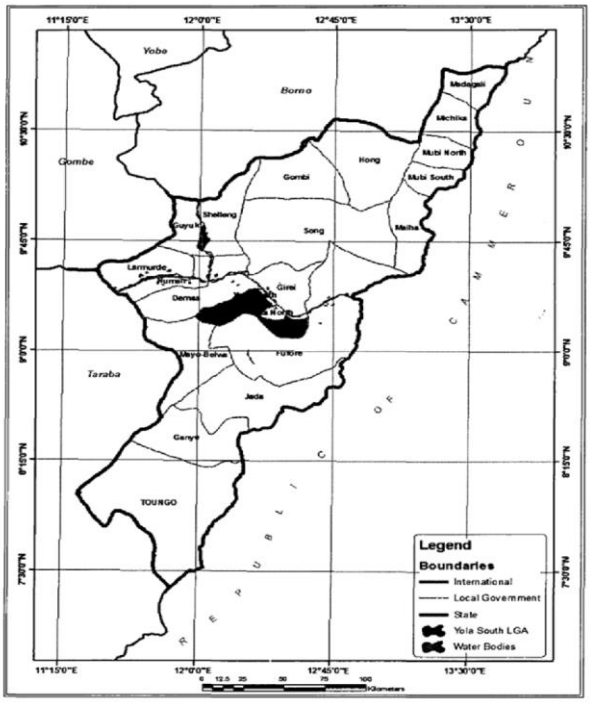


Figure 1: Map of Adamawa showing Yola-South Local Government Areaource: Adamawa State Ministry of Lands and Survey (2006)

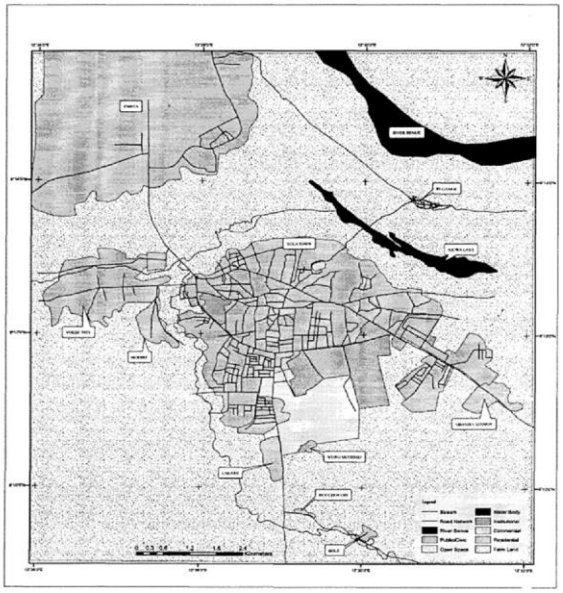


Figure 2: Map of Yola-South Showing Sub-urban Areas. Source: Digitized from Google Earth Image (2015)

The Background

Sub-urbanization is the growth of areas on the fringes of cities. It is one of the many causes of the increase in urban sprawl. A sub-urban area is a residential area or a mixed use area, either existing as part of a city or urban area or as a separate residential community within commuting distance of a city. In most English-speaking regions, sub-urban areas are defined in contrast to central or inner city areas. Sub-urban first emerged on a large scale in the 19th and 20th centuries as a result of improved rail and road transport, which led to an increase in commuting. In general, they have lower population densities than inner city neighborhoods within a metropolitan area, and most residents commute to central cities or other business districts; however, there are many exceptions, including industrial suburban, planned communities, and satellite cities. Sub-urban tend to grow around cities that have an abundance of adjacent flat land (David, 2009).

Toyobo (1992) noted that the rapid population growth has resulted in spatial expansion of urban centers and sub-urban centers resulting to loss of agricultural lands, threatening the existence of rural settlements in the immediate urban surroundings. Furthermore, he identified sub-urban area as a zone of mixed land uses elements and characteristics in which rural activities and modes of life are in rapid retreat and into which not only residential but also commercial, educational, recreational, public services and others are largely extensive uses of land are intruding. He argued further in a land use and also in an administrative sense too, the area is only partially assimilated into the growing urban complex.

Adedipe (2002) defined physical planning as the spatial arrangement of man-made structures and activities so as to create healthy environment for living, working, circulation and recreation. When physical planning is applied in an environment it can give aesthetics to a town or village thereby, preventing growth of shanty settlements around urban fringe. The earliest appearance of sub-urban coincided with the spread of the first urban settlements. Large walled towns tended to be the focus around which smaller villages grew up in a symbiotic relationship with the market town. As populations grew during the Early Modern Period in Europe, urban towns swelled with a steady influx of people from the countryside. In some places, nearby settlements were swallowed up as the main city expanded. The peripheral areas on the outskirts of the city were generally inhabited by the very poorest. Due to the rapid migration of the rural poor to the industrializing cities of England in the late 18th century, a trend in the opposite direction began to develop; newly rich members of the middle classes began to purchase estates and villas on the outskirts of London. This trend accelerated

through the 19th century, especially in cities like London and Manchester that were experiencing tremendous growth, and the first suburban districts sprung up around the city centre to accommodate those who wanted to escape the squalid conditions of the industrial town. Toward the end of the century, with the development of public transit systems such as the underground railways, trams and buses, it became possible for the majority of the city's population to reside outside the city and to commute into the centre for work. By the mid 19th century, the first major sub-urban areas were springing up around London as the city (then the largest in the world) became more overcrowded and unsanitary. A major catalyst in sub-urban growth came from the opening of the Metropolitan Railway in the 1 860s. The line joined the capital's financial heart in the City to what were to become the suburbs of Middlesex. Unlike other railway companies, which were required to dispose of surplus land, the Met was allowed to retain such land that it believed was necessary for future railway use. In 1912, it was suggested that a specially formed company should take over from the Surplus Lands Committee and develop suburban estates near the railway (David, 2009).

Sub-urbanization in the interwar period was heavily influenced by the garden city movement, the creation of the first garden sub-urban at the turn of the 20th century. The first garden sub-urban was developed through the efforts of Ebenezer Howard (the garden city). His desire to protect part of Hampstead Heath from development, he established trusts in 1904 which bought 243 acres of land along the newly opened Northern line extension to Golders Green and created the Hampstead Garden Sub-urban (Anonymous, 2009).

In many parts of the developed world, sub-urban area can be economically distressed areas, inhabited by higher proportions of recent immigrants, with higher delinquency rates and social problems. Sometimes the notion of sub- urban may even refer to people in real misery, who are kept at the limit of the city borders for economic, social, and sometimes ethnic reasons. An example in the developed world would be the Banlieues of France, or the concrete sub-urban of Sweden, even if the sub-urban areas of these countries also include middle-class and upper-class neighborhoods that often consist of single-family houses. The growth in the use of trains, and later automobiles and highways, increased the ease with which workers could have a job in the city while commuting in from the suburban. In the United Kingdom, railways stimulated the first mass exodus to the sub-urban area. The Australian and New Zealand usage came about as outer areas were quickly surrounded in fast-growing cities, but retained the appellation sub-urban; the term was eventually applied to the original core as well. Due to the rapid migration of the rural poor to the industrializing cities of England in the late 18th century, a trend in the opposite direction began to develop; - newly rich members of the middle classes began to purchase estates and villas on the outskirts of London. This trend accelerated through the 19th century, especially in cities like London and Manchester that were experiencing tremendous growth, and the first sub-urban districts sprung up around the city centre to accommodate those who wanted to escape the squalid conditions of the industrial town.

Towards the end of the century, with the development of public transit systems such as the underground railways, trams and buses, it became possible for the majority of the city's population to reside outside the city and to commute into the centre for work (David, 2009).

In Africa, since the beginning of the 1990s, the development of middle-class sub-urban boomed. Due to the industrialization of many African countries, particularly in cities such as Cairo, Johannesburg and Lagos, the middle class has grown. In Soweto, many houses are
smaller, and often consist of a kitchen and living room, two or three bedrooms, and a bathroom. However, there are more affluent neighborhoods, more comparable to American sub-urban (Paul, 2006).

In Rome, Italy, in the 1 920s and 1930s, sub-urban area were intentionally created ex novo in order to give lower classes a destination, in consideration of the actual and foreseen massive arrival of poor people from other areas of the country. Many critics have seen in this development pattern, which was circularly distributed in every direction. Also, a quick solution to a problem of public order in keeping the unwelcome poorest classes together with the criminals, in this way better controlled, comfortably remote from the elegant “official” town. On the other hand, the expected huge expansion of the town soon effectively covered the distance from the central town, and now those sub-urban are completely engulfed by the main territory of the town. Other newer sub-urban (called exurbs) were created at a further distance from them. Elsewhere processes of suburbanization seemed dominant, but their pace differed according to housing shortages, available finance, preferences and the degree of 'permitted' informality (David, 2009).

Analysis

From the physical data analyzed, the paper believes that there is a great spatial in balance in Rugange sub-urban area, especially in terms of facilities, social service, such as education, source of power, water and health, despite the benefits derived from the area by dwellers of Yola Town. This can be interpreted to mean that the area is physically underdeveloped compared to Shagari, Yolde-Pate, Wauru-Jabbe as examples, amongst others and considering the fact that those facilities mentioned above form part of an area for its development, therefore its absence or inadequacy has made these area Rugange dependent on Yola Town. It should not be forgotten that no region can
develop without Education, portable drinking water and good Health. Unfortunately, such facilities are found to be lacking and inadequate in Rugange sub-urban area.

Taking the socio-economic aspect from the data analyzed, the area is characterized by poor economic activities attributed to inadequate facilities and social service that would have served as incentives to increased production and commercial activities in the region. This also interprets to mean majority of the inhabitants of the Rugange sub-urban area are low income earners, they live in sub-standard dwelling units and engage in manual practice of farming.

Uyanga (1990) stated that rural-urban interactions in the Yola region revolve around daily, seasonal and regular movements between Yola and the rural settlements for the purpose of exchange of agricultural, manufactured commodities and services. Yola obtains most of its food requirements from the immediate environments. In return Yola offers educational, social and economic opportunities for them and also makes demands on them particularly in respect of food, perishable goods and fuel wood.

The characteristics of the sub-urban area revealed by the data are as follows;

The data revealed that Rugange sub-urban area depends on the Yola Town for most of its facilities and services such clinic/primary health care about 77% of the sample population depend on Yola Town, secondary school about 95% of the sample population their children depend on Yola Town for secondary education, market about 81% of the sample population depend on Yola Town, 62% of the sample population depend on Yola in transaction of business. Thus, showing the frequency level of interaction between the suburban area and Yola Town, hence, there is need for integration of Rugange sub-urban area by provision of basic community facilities and services so as to
promote development and reduce pressure on Yola Town.

The data also shows that the rate of development is growing fast and unplanned. Due to the mode of land acquisition, 58% of the sample population inherited their land and 42% of the sample population acquired land through customary land acquisition. The developers in the sub-urban areas after acquiring land, develop their land with no formal procedure for in acquiring building permit or any form of development control, as a result encouraging haphazard development.

Based on the survey, the data reveals that the basic facilities and services such as pipe borne water/borehole, road and electricity are lacking in the sub-urban area. The hand pump borehole that are supposed to serve the people with portable drinking water in Rugange sub-urban area are all broken down. Therefore, 90% of the sample populations get water from the well and 10% from the stream/river.

The nature of occupation in the sub-urban areas which shows that farming, civil servants, students and few artisans the data revealed that the level of economic activities is poor as they depend only on Yola Town market for selling of their farm products, 62% of the sample population they pay transport to Yola market in order to sell their farm products and the bad nature of road network makes them pay more for transportation of goods.

The survey reveals that despite the challenges of the sub-urban area in dependency, due to lack of basic community facilities, services, unplanned development and poor socioeconomic status the sub-urban areas have shown potentials in supporting agricultural farm produces. The farm produce when harvested in the sub-urban area are taken to Yola Town. This also shows that Yola Town depends on Rugange for agricultural produce. By integrating the area, there will be improvement on the use of modern agricultural machineries to boost productive.

From the above data interpretation on both the physical and socio-economic characteristics in the study area, it has proven that despite the agricultural benefits derived from the area, Rugange is under-developed because it lacks certain basic facilities and services like water, schools, road network, power supply, small-scale industry that are absent in the sub-urban area which when available the area will integrate into Yola Town urban fabric.

The Central Place Theory is perhaps the most widely recognized of all the spatial theories and requires that the settlements are examined not in isolation, but as part of a total system of such places. This means that major urban centre and their immediate rural hinterlands, the mother settlements and their offspring villages, large rural centres and their surrounding hamlets cannot be planned in isolation. The Central Place Theory emphasizes provision of services at each level of settlements. Large urban settlements have higher order services activities but the same services are being performed at the village level although on small scale basis (Adedipe, 2002). The provision of these services will improve the standards of living of the rural dwellers and reduce rural-urban migration. Obateru (2005), noting that city does not exist in isolation, consequently, its outline or strategic growth plan must relate to and cover all its proximate socio-economic region which is closely and functionally related to it.

Conclusion

This research has shown that Rugange area is under developed after identifying factors (causes) that limit it general development which includes over dependency on Yola Town for basic community facilities, utilities and services, the perception of distance from Yola Town and the bad nature of the state of access road. The integration strategy involves the physical integration of the sub-urban with its

host urban area Yola Town, therefore improving the existing condition and use of planning standards with the ultimate aim of integrating the sub-urban area into Yola Town by providing basic community facilities and services and a layout plan for its future growth and development. However, having employed some regional development strategies, infrastructural and social services, market and local service industries to serve as boost for socio-economic development in Rugange. It is hoped that this will integrate the sub-urban and improve the living condition of the inhabitants of Rugange. One of the major constraints for plan implementation is finance, all the recommendations made cannot be adequately implemented without a strong financial support. In view of this, it is necessary to specify the sources of fund to be used in the implementation of the proposals. The local government will also be involved at different stages where necessary so as to support integration of Rugange sub-urban area.

According to Obateru (2005), noting the future growth patterns of cities will therefore largely depend on governmental decisions regarding their design strategies. Good urban forms will reasonably solve urban problems (urban problems are entirely unsolvable) and created efficient environments of living, working, recreation and circulation while unplanned growth or poor growth strategies will aggravate their functional problems and thereby increase cost of living, human misery and frustration as well as visual chaos.

The study has identified high level of interdependency between the sub-urban areas within Yola Town and Jimeta, thus, the need to integrate Rugange sub-urban area is important so as to limit the level of dependency on Yola Town for certain facilities and services like clinic, schools, mart, electricity and road network which, if provided within the sub-urban area, it will integrate it into the urban fabric and a layout plan

for its future development. Growth poles, Central Place Theory, Restricted outward growth, peripheral growth, peripheral community growth, Corridor growth, satellite urban growth and independent city growth were viewed from forms of urban growth, where the Central Place Theory is relevance in regional planning was more considered in trickling down development in the provision of some facilities, utilities and services which can be offered on small scale basis to achieve in developing the region. Based on the above conclusion, the paper makes the following recommendations:

Construction of access road and a bridge between Rugange and Yola Town.

Creating a refuse dumping site that would improve the sanitary condition of the area. Government should upgrade the existing dispensary to a clinic/primary health care facility to attain Rugange health issues.

Existing hand pumps should be rehabilitated by the Government and provision for borehole should also be made, so as to provide portable drinking water in Rugange.

Implementation of the proposed layout design plan will assist in guiding the future growth and development, as all the necessary basic facilities and services are all been proposed with relation to population threshold for provision of utilities, facilities and services.

Government should make provision for a secondary school to take care for the need of a secondary education of the present population.

Government should reconnect electricity of Rugange sub-urban area.

For proper implementation of plan for integrating Rugange sub-urban area into Yola Town, there should be proper collaboration among the Federal, State and Local Governments funding at all the different stages where necessary.

Also adequate public awareness and community participation should be paramount.

Similar integration projects should be considered for other sub-urban areas especially Bole I, Bole II and others.

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