



The Impact of Urban Development on Food Security in Peri-Urban Areas of Minna, Niger State, Nigeria

Musa Dalil¹, Usman Mohammad Yamman²

¹Department of Urban and Regional Planning, Federal University of Technology, Minna

²Department of Urban and Regional Planning, The Federal Polytechnic, Bida

ARTICLE INFO

Article history:

Received: 21 November 2012;

Received in revised form:

18 April 2013;

Accepted: 24 April 2013;

Keywords

Food,
Rural-urban,
Environment.

ABSTRACT

One of the major problems confronting cities and towns of the third world countries today is that of population explosion leading to uncontrolled urban growth. This, aside the fact that it leads to the conversion of agricultural land into other uses (residential especially), also affects negatively, the general well-being of the urban dwellers as well as the environment as a result of rural-urban migration. It was on this basis that this paper set out to assess the impact of the expansion of Minna, along the Minna-Bida road on agricultural land. In order to effectively achieve this, both the primary and secondary sources of data collection were employed. The primary data was obtained through the administration of 60 questionnaires on the natives of the communities under study, while the secondary data was obtained from sources like internet materials and journals. The result of the study revealed that the quantity of farm produce being evacuated from the communities to Minna has been on steady decline owing to the selling of agricultural land by the natives. The result also confirmed that the development activities now taking place in the study areas are not guided by any policy guideline (as a result of the obsolescence of the Minna master plan), thus the haphazard development of the communities. Owing to this therefore, the paper recommended that there should be a paradigm shift in physical planning, where all stakeholders would deliberate and find solutions to the problems confronting the communities in terms of their agricultural and socio-economic activities. It was also recommended that government should show more commitment to the economic, physical and social development of people through the review of the Minna.

© 2013 Elixir All rights reserved.

Introduction

The growth and development of human settlements, especially urban areas of the developing countries have been on the increase as a result of high birth rate and rural-urban migration; thus making the urbanization process of settlements an unprecedented and inevitable phenomenon. It was in view of this that McKeegan (2007) cited a United Nations report as stating "that for the first time in history, more people now live in cities than rural areas". The report further revealed that urban population is expected to surge from the 3 billion people as at July, 2007 to over 9 billion by the year 2050, with Asia and Africa leading the growth. In the same vein, a study by the Population Reference Bureau (2012) stated that only 3 percent of the world's population lived in urban areas as at 1800. According to the study, the figure further rose to 14 percent in 1900 and 30 percent in 1950, and it is expected to grow to 70 percent by year 2050. This therefore poses a serious challenge to man and his environment due to the associated problems of population explosion like high youth unemployment and restiveness, poverty, environmental degradation, and increased concern for food security.

The urbanization process has therefore, led to the outward expansion of cities and resulted in changes in land use, whereby urban residents buy up prime agricultural land at the periphery for residential or commercial purposes. At the present rate of urban population growth, along with its attendant consequences, there is therefore the need for professionals in the built

environment to articulate policies that would ensure the sustainable development of the environment as well guaranteeing the economic, social, physical and cultural development of urban residents. It was on this basis that this paper was premised; to develop a policy frame work that would ensure that the growth and development of Minna does not affect negatively, agricultural activities taking place at its periphery.

Aim and Objectives

The aim of this study is to assess the impact of the expansion of Minna, along the Minna-Bida road on the agricultural activities of the communities in the area. The specific objectives are to:

- i. Assess the socio-economic level of the farmers at the periphery of Minna;
- ii. Assess the effects of the outward expansion of Minna on agricultural output and;
- iii. Assess development control activities in the study area.

Scope of the Study

The concept of food security cannot be effectively exhausted because it is as diverse as the challenges it poses to a nation; thus www.toronto.ca (n.d.) cited Hoddinott (1999) as stating that "there are approximately 200 definitions and 450 indicators of food security". In view of this, the study focused on the conversion of agricultural land into other uses as it relates to the on-going developmental activities at the peri-urban of Minna.

Definition of Key Terms

Food Security- according to the United State Agency for International Development {USAID (1992)}, the term food security has been conceptualised differently by some international organisations thus:

- "Access by all people at all times to enough food for an active, healthy life." (World Bank)
- "All people at all times have both physical and economic access to the basic food they need." (FAO Committee on World Food Security)
- "Access by all people at all times to sufficient food and nutrition for a healthy and productive life." (The Agricultural Trade Development and Assistance Act of 1990 {P.L.480})
- "When all people at all times have access to sufficient food to meet their dietary needs for a productive and healthy life." (USAID Bureau for Africa, 1986)

Urban Development- this can be conceptualised as the conscious or unconscious improvement in the circulatory and transportation, residential, commercial and economic functions of a settlement as a result of an increase in human population. It can also be viewed as the growth of a settlement into areas that were hitherto inhabited in order to accommodate growth human population.

Peri-urban- according to the Microsoft Encarta Dictionary (2009), the word 'peri' means 'around, surrounding or near'. Therefore, peri-urban can be conceptualised as the geographical area or unit that is near or around an urban area; in other words, the outskirts of a city or a town.

The Study Area

Minna got its name from the *Gwari* word '*mina*' which means to 'spread fire', the origin of which was an annual festival performed by the *Gwari* founders of the town to observe the beginning of the New Year. The town has experienced four major transformational phases thus far. The first was in 1905 when the construction work of the rail line got to the area, the second was in 1908 when an *Alkali* (a Judge) was drafted to the camps in the area. The third phase was in 1910 when the inhabitants decided to move from the hill top to settle down at the area of the present Paida (one of the wards of Minna), and the fourth phase was in February 1976, when the town was made the capital of the then newly created Niger State.

According to the 2006 census result, Minna had a population of 309,951 as at 2006 and had a projected population of about 340,529 in 2010 using the national growth rate of 2.38%. The mean annual rainfall of Minna is 1334mm with August and September recording the highest monthly rainfall of about 300mm. The highest monthly temperature is recorded in March with an average daily temperature of 30°C and the lowest daily temperature is recorded in August at about 22°C. The dry (harmattan) season is brought about by tropical continental air mass (north-east trade wind), and it lasts from October/November to March/April every year.

Research Methodology

This section contains a series of logical steps used in achieving the aim of the research, which involved all the processes of data collection, their sources, and the methods by which they were analyzed. The steps were taken in order to obtain relevant information that is essential to achieving the aim of the study.

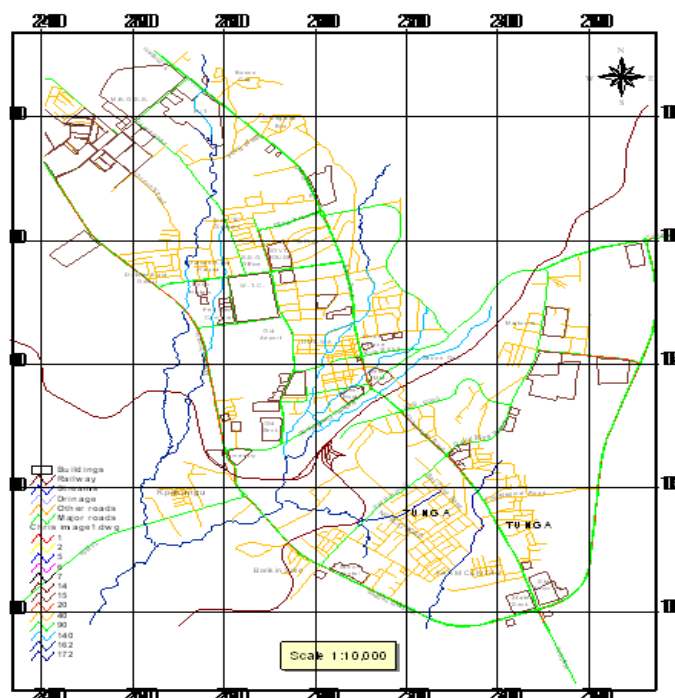


Fig. 1: Street Guide Map of Minna

Source: Richy Concept, 2011.

Data Collection

Primary Sources of Data- these were the data collected directly from the field, and the following methods were used:

➤ **Reconnaissance Survey:** this was the general survey carried out on the study area in order to get familiarized with the neighbourhoods of study and as well, observe the general state of the environment and activities taking place in the neighbourhoods.

➤ **Questionnaires:** questionnaires were designed and administered on the respondents so as to elicit vital information from them as relates to the aim and objectives of the study.

Secondary Sources of Data- apart from the reconnaissance survey and questionnaires, data was also collected from secondary sources such as the internet materials, journals and textbooks.

Sampling Methods

Stratified and Simple Random Sampling Method: for the purpose of this study, all the villages of that made up the study area were designated as stratum, and questionnaires were thereafter administered on 10% of each stratum using the simple random sampling. Therefore, a total of 60 questionnaires were administered in whole on household heads or their representatives in all the settlements of study. The random sampling was effectively achieved with the aid of raffle draw, which thus eliminated the problem of biasness and ensured that every other building had an equal chance of being selected.

Method of Data Analysis/Presentation

The data collected was analyzed using descriptive statistics and bar charts.

Data Analysis And Presentation

The Socio-Economic status of the farmers

The outward expansion of Minna along the Minna-Bida axis has resulted in the subdivision and sales of the large expanse of land along the route; though a greater part is yet to be developed. Presently, the route has become 'Mecca of a sort' for construction workers who ply it on daily basis in search of a developer that would require their services. Notable among the

structures in the area include the main campus of the Federal University of Technology, Minna, the Headquarter of the National Examination Council (NECO), proposed Zonal and State offices of National Emergency Management Agency (NEMA), the Talba housing estate, and many other residential, educational and commercial buildings, amongst others. Therefore, the farmers along this route that hitherto depended largely on farming activities stated that their parents, rather than leaving behind “a generational asset”, passed onto them “a generational burden”. This is because their parents sold out a great percentage of the large expanse of land they would have ordinarily bequeathed to the future generation. Thus, this generation and by extension the future generation of the *Gwari* natives would have to abandoned agricultural activities that they have been renowned for from time immemorial. The present generation of farmers is now moving into the interior to hire land from their relations living in the hinterland for agricultural activities, and this is also bedevilled with the problem of farm produce evacuation owing to bad road network and rugged terrain. This has therefore resulted in the poor economic conditions of the farmers who are as well educationally backward. Owing to this, 87% of the respondents believe that their socio-economic status has fallen drastically compared to what was obtainable before now, and also stated that, their socio-economic status is non-commensurable with the residents of Minna. But the remaining 13% had a slightly different opinion as they stated that their standard of living has not changed significantly.

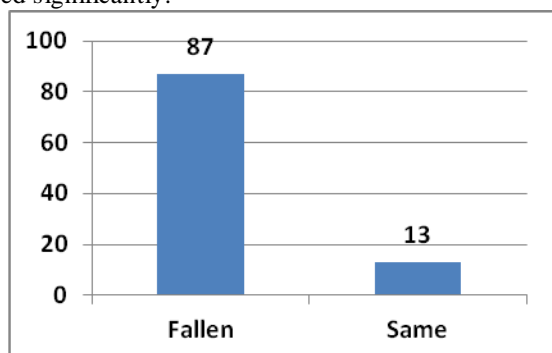


Fig. 2: The Socio-economic status of the farmers (%)

Effects of the Outward Expansion of Minna on Agricultural Output

In farming practice, with other factors held constant, the size of farmland determines the quantity of farm produce. Thus, based on the responses obtained from the field, 85% of the respondents stated that they carry out their farming activities on an area of less than two hectares, 15% stated that they farm on an area of between 2-3 hectares, while the remaining 2% said that they farm on an area of less than four hectares. The respondents stated that the problems of land tenure system (which resulted in land fragmentation) and the sale of plots of land are the main factors responsible for the reduction of the sizes of their farmland. These problems have therefore made the younger generation of farmers to pursue life of “modernity” in the core area of Minna, thereby overcrowding the city centre and putting facilities and services under stress.



Fig. 3: Sizes of farmland (%)



Plate I: an example of a farm land occupied by New Building



Plate II: NECO permanent site, one the main agent of land use change

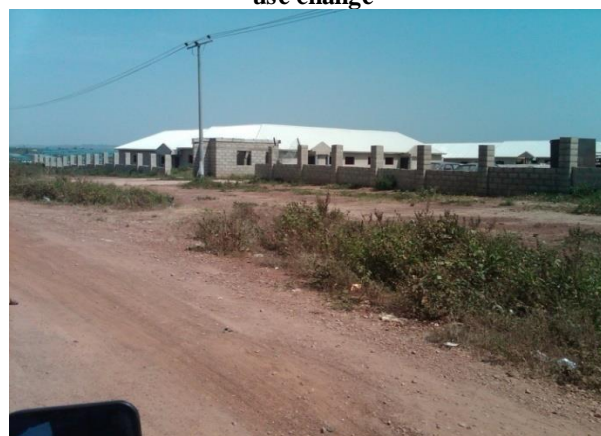


Plate III: Ongoing construction opposite NECO Head Office, Minna

State of Development Control Activities in the Study Area

According to the NUDB, planning activities in Minna is at its ebb owing to some problems, notably amongst which are the non-operation and obsolescence of the Minna master plan and the lack of political will in development control, thereby

crippling the activities of the NUDB. Owing to these problems, haphazard developmental activities are currently on-going in the study area, which if not tackled in earnest, would fast track the process of the degeneration of the area into slum. But according to the NUDB, it is practically impossible for it to effectively order land uses in the area because of lack of a policy framework, and also, as a result of the lingering court cases between the State government and the natives due to the former's interest in land matters. It was in this vein that an official of NUDB called it a "toothless barking dog" because of its seemingly lack of power to exercise enforcement in the farming communities at the periphery of Minna.



Plate IV: some of the recently built houses in the study area

Conclusion

The major findings of this research revealed that the impact of the growth and outward expansion of Minna is also being felt in the agricultural sector of the economy, as the quantity of farm produce from these areas is on the decline. This is owing to the fact that agricultural lands are continually being wasted through unsustainable land use conversion, which has thus made some farmers jobless and as well threatening the age long tradition and culture of the *Gwaris* along Minna-Bida road. Therefore, all hands must be on deck because as much as the growth and

expansion of Minna cannot be halted, it must be achieved on a sustainable basis, where all sectors of the economy would not be affected negatively.

Recommendations

As more human settlements grow in size as well as in complexity, the tripartite of government, the traditional institution and the general public need to find a common platform on which ideas would be exchanged in order to ensure that cities do not deteriorate into centres of human disasters as a result of human activities. In light of this, the following measures have been proposed to control the haphazard expansion of Minna and also to address further encroachment into productive agricultural lands:

- The review of Minna Master Plan to accommodate the demographic dynamics of the town;
- The development and strict adherence to layout development plans by the NUDB;
- The need to promote urban agriculture in order to boost food production and;
- The strengthening of planning agencies in order to checkmate the excesses of land speculators and developers.

References

- McKeegan, N. (2007). Over half the world now live in cities. Retrieved from: www.gizmag.com/go/7613 Microsoft® Encarta® 2009 © 1993-2008 Microsoft Corporation, 2008.
- Population Reference Bureau (2012). Human Population: Urbanization Largest Urban Agglomerations, 1975, 2000, 2025. Retrieved from: www.prb.org/Educators/TeachersGuides/Human.pdf
- USAID (1992). Policy Determination on Food Security. Retrieved from: www.transition.usaid.gov/policy/ads/200/pd19.pdf
- www.toronto.ca (n.d.) Chapter One: Definitions of Food Security. Retrieved from: www.toronto.ca/health/children/pdf/fsbp_ch1