



ISSN: 0975-833X

Available online at <http://www.journalcra.com>

International Journal of Current Research
Vol. 12, Issue, 03, pp.10771-10778, March, 2020

DOI: <https://doi.org/10.24941/ijcr.38166.03.2020>

**INTERNATIONAL JOURNAL
OF CURRENT RESEARCH**

RESEARCH ARTICLE

URBANIZATION AND LIVELIHOOD SUSTAINABILITY: AN EVIDENCE FROM THE PERI-URBAN ZONES OF WA MUNICIPALITY IN THE UPPER WEST REGION OF GHANA

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ARTICLE INFO

Article History:

Received 24th December, 2019

Received in revised form

10th January, 2020

Accepted 28th February, 2020

Published online 30th March, 2020

Key Words:

Rapid Urbanization,
Livelihood Sustainability,
Per-urban zones,
Wa Municipal, Ghana.

ABSTRACT

There is a broad and ongoing confab in our academic institutions about the effects of urbanization on livelihood of people living in the peri-urban fringes. Rapid urbanization, population burden and the government decisions, shelter, infrastructural, industrial and commercial needs of a fast-growing city have stretched the land delivery system in Wa Municipality to flouting point. Agricultural lands, which serves as the main source of livelihood, has been encroached by the process of urbanization in peri-urban zones. This study seeks to assess how rapid urbanization is impacting on farmers' livelihood in developing cities, drawing empirical evidence from Wa, Ghana. The focus was mainly to describe the conditions and current Situation on urbanization and livelihood sustainability in the peri-urban zones in the Wa Municipality. Findings about causes, effects, alternatives livelihoods and remedial measures on rapid urbanization in the peri-urban zones in the Wa Municipality has been presented in the form of narratives. A descriptive research design was adopted and data of 145 respondents or stakeholders were collected through a questionnaire survey and interview for analysis. The results of the survey revealed that 93 respondents constituting about 64.14% of the sample population were males while 52 representing 35.86% were females. Contrary to the mainstream view that, the polygamous nature of Upper west region is the main source of increment in the population and thus urbanization in the peri-urban zones, stakeholders' perception was different as responses indicated that, the rapid urbanization of WA is as a result of increased commercial activities, presence of tertiary institutions and its strategic location. The rapid urbanization of WA has sparked up a succession syndrome where prime agricultural lands have been converted to other land uses believed to be the highest and best use. The pressures of urbanization have negative implications on predominantly poor farming communities in the WA region. Policy focus should be geared towards the protection of prime agricultural lands that serves as main sources of livelihood. Urbanization is necessary but not to the extent of denying peri-urban zones of their main source of livelihood.

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Citation: Mintah Clement, Mohammed Sulamana, Blessing Dwumah Manu, Bright Archer and Ernest Amoako Atta. 2020. "Urbanization and Livelihood Sustainability: An Evidence from the Peri-Urban Zones of Wa Municipality in the Upper West Region of Ghana", *International Journal of Current Research*, 12, (03), 10771-10778.

INTRODUCTION

Urbanization is a social phenomenon and its impact is still manifesting greatly in both developed and developing world. Though the rate of urbanization in the developing world is showing at a fairly comparable rate as against that of the

industrial nations in the prime of their rapid urbanization, the rate of population growth of cities in developing countries as distinct from urbanization is rather unprecedented (Songsore, 2003a; Davis, 1967; Satterthwaite, 1996; Preston, 1979). In 2008, for the first time in history, more than half of the world's population, 3.3 billion people, are living in urban areas. This is projected to increase to some 5 billion by 2030 (UNFPA, 2007, p.1; UN-HABITAT, 2008a). "Over 80 per cent of this growth will accrue to Asia and Africa, with most of the rest to Latin America" (Martine, McGranahan, Montgomery and Fernandez-Castilla, 2008, p.1).

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However, rapid urbanization, particularly the growth of large cities, and the associated problems of unemployment, poverty, poor sanitation, urban slums and environmental degradation pose a formidable challenge in many developing countries like Ghana and most especially peri-urban zones in Wa. Although urbanization is the driving force for modernization, economic growth and development, there is increasing concern about the effects of expanding cities, principally on livelihoods, human health and the environment. The dramatic effects of rapid urbanization are very clear in the cities and peri-urban areas. As the cities expand, the main zone of direct impact is the peri-urban area, and those living in the peri-urban interface most especially farmers face many new challenges and opportunities in meeting their needs and accommodating the by-products of the urban populations. While cities serve as 'engine' of growth in most developing countries by providing opportunities for employment, education, knowledge and technology transfer and ready markets for industrial and agricultural products, impedes farming at the peri-urban areas due to purchasing of prime agricultural land for residential or commercial purposes. The Upper West region is one of the smallest regions in terms of size with total land area of 18,478 square kilometers. This constitute about 12.7% of the total land area of Ghana which is increasingly being converted into residential and other purposes due to social, economic and political reasons (GSS, 2010). Historically, surrounding lands in the Wa Municipality were serving as growing centers for most food crops to feed the people in the city. However, is increasingly been converted into residential, educational and commercial purposes.

Many scholars have written extensively on urbanization in terms of geography and context. A typical example is Potter, R. 1995 (Urbanization and Development in the Caribbean. Geography 80(4):334-341). But its effects on people's farmlands and livelihood have not been extensively studied. However, this recent study is therefore uniquely positioned to address the effects on people's farmlands and livelihood in the peri-urban zones in the upper west region of Ghana.

Research Questions

- What are the causes of urbanization and how is affecting farming/food production in peri-urban communities?
- What are people's perceptions about peri-urban zones experiencing urbanization in Wa?
- What are the strategies for alternative livelihood?
- What are the remedial measures for livelihood sustainability?

Objectives of the study

Main objective: The basic aim and objectives of the study is to examine the effect of urbanization on people's farmlands and livelihood sustainability in the peri-urban zones in Wa Municipality in the upper west region of Ghana. In order to understand the causes and effects of urbanization, the following specific objectives were relevant to the study;

- To find out the causes of urbanization and how is affecting farming/food production in peri-urban communities.
- To find out people's perception about peri-urban zones experiencing urbanization in Wa.
- To find out their strategies for alternative livelihood sources.

- To find out the remedial measures for livelihood sustainability

RELATED LITERATURE

Available statistics show that more than half of the world's 6.6 billion people live in urban areas, crowded into 3 percent of the earth's land area (Angotti, 1993; UNFPA, 1993). The proportion of the world's population living in urban areas, which was less than 5 percent in 1800 increased to 47 percent in 2000 and is expected to reach 65 percent in 2030 (United Nations, 1990; 1991). However, more than 90 percent of future population growth will be concentrated in cities in developing countries and a large percentage of this population will be poor. In Africa and Asia where urbanization is still considerably lower (40 percent), both are expected to be 54 percent urban by 2025 (UN 1995; 2002). By 2010, approximately 400 million people will live in urban centers worldwide (Guidolti, 2001). It is estimated that, in 1900 about 95% of Africa's inhabitant, south of Sahara lived on the primary occupations of farming, hunting & gathering, cattle nomadism, and fishing (Aase, 2003:1) meaning that less than 5% were urban. In 1950 (the start of the independence period) 14.7% of Africa's inhabitants were urban, in 2000 it had risen to 37.2% and it is expected to rise to 45.3% in 2015, in effect 3.76% and 3.35% per year (UN, 2002). The urbanization of most of Africa is moving fast forward, especially south of the Sahara. Urbanization is occurring more rapidly in some parts of the developing world. The growing urban cities provide exceptional opportunities for creativity, generation of wealth. However, a host of problems often accompanies rapid urban growth.

Generally, Kasarda and Pannel (1993) noted that, these problems include "high rates of unemployment and underemployment, rising urban poverty, insufficient shelter, poor sanitation, inadequate or contaminated water supply, serious air pollution and other forms of environmental degradation, congested streets overloaded public transportation systems and municipal budget crises." Similar view has been expressed by Tina Nanda (2001), on the effect of expanding cities in the peri-urban zones to include the following; loss of open space, increased cost of infrastructures, loss of rural character, farm and forest, urban population to non-urban areas, Urban decay and increased energy conservation, pollution of air, water, etc and more important, loss of sources of livelihood. Although, cities serve as 'engine' of growth in most developing countries by providing opportunities for employment, education, knowledge and technology transfer and ready markets for industrial and agricultural products, high urban populations place enormous stress on natural resources and imposes 'ecological footprints' on the peri-urban areas (Rees, 1992; Rees and Wackernagel, 1994). For example, urbanization leads to the outward expansion of cities and results in changes in land use whereby urban residents buy up prime agricultural land for residential or commercial purposes. The conversion of farm lands and watersheds for residential purposes have negative consequences on food security, water supply as well as the health of the people, both in the cities and in the peri-urban areas.

Profile of the study area: The study was conducted in Wa Municipal Assembly of the Upper West Region of Ghana.

Physical and natural environment: Wa Municipal Assembly is one of the eleven District/Municipal Assemblies that make

up the Upper West Region (U/WR) of Ghana. Wa Municipal Assembly was upgraded from the then Wa District in 2004 with Legislative instrument (L1) 1800 in pursuant of the policy of decentralization started in 1988. Under section 10 of the Local Government Act 1993 (Act 426), the Assembly exercises deliberative, legislative and executive functions in the Municipality. The Wa Municipal Assembly shares administrative boundaries with Nadowli District to the North, Wa East District to the East and South and the Wa West District to the West and South. It lies within latitudes 1°40'N to 2°45'N and longitudes 9°32' to 10°20'W (WMA-MTDP, 2010 – 2013). Wa Municipal Assembly has its capital as Wa which also serves as the regional capital of Upper West Region. It has a landmass area of approximately 234.74 square (kilo) meters, which is about 6.4% of the region (GSS, 2010).

The Assembly is empowered as the highest political and administrative body charged with the responsibility of facilitating the implementation of national policies. The implications of the location of the municipality for development include; Enhancing bilateral trade and commerce with the Franco phone countries. Wa town has the potential to grow and be upgraded into both an industrial and commercial hub for the North – Western corridor of Ghana.

The outward extension of cities into peri-urban areas in Ghana consequently changes the land use patterns in these areas (Owusu, 2008). To a large extent, this had severe consequences on peri-urban land use decisions (Duta, 2008; Kombe, 2005). The peri-urban areas have and will continue to experience continuous push and pull propensities from the cities and the rural areas due to their strategic locations, and multifunctional territorial nature (Ravetz, Fertner, & Nielsen, 2013, Krampah-Nkoom 2020). These areas also come about when urban residents buy up prime agricultural land outside the main cities for residential or commercial purposes (Samat, Hasni, Elhadary, & Abdalla, 2011; Mandere, Ness & Anderberg, 2010). According to Lawanson, Yadau, and Salako (2012) in their study of Lagos and Ibadan in Nigeria, the preference for the peri-urban areas for settlement and other commercial pursuits, is motivated by the fact that these fringes of cities have some of the relatively affordable rent in comparison to the main city and big towns (see also Acheampong & Anokye, 2013).

Again, according to Simon (2008), peri-urban areas are increasingly attracting middle-class and higher-income people whose lives exhibit lifestyles reflective of inner-city dwellers in a predominantly rural setting. Allen, Dávila, and Hofmann (2006; 21), have explained that, the peri-urban interface comprises a 'heterogeneous mosaic' of environmental and productive ecosystems working in combination with the prevailing socio-economic peculiarities. This supports the view that peri-urban lands are used for multiple activities. Similarly, peri-urban areas may contain an un-organized cluster of residential, commercial, rural-residential, and often varied agricultural uses (Mandere, Ness & Anderberg, 2010). It is along this reasoning that, one can observe that from a progressively agrarian to a rapidly urbanizing Municipality, the Wa Municipality of the upper west region of Ghana exhibits appreciable traits of peri-urbanism, with its associated land use and land cover change decisions. Below is a conceptual framework in a form of problem tree, analyzing the situation of urbanization in the peri-urban zones in Wa. The work has been stratified or lay-out to show the whole process of urbanization which occur from a growing and expanding urban area. This

has been done through the use of problem tree analysis which is linked to each other in the process: Definition of urbanization, Cause of urbanization and its effects. This has been caused by rapid urban population growth through migration and internal growth, congestion in the center of the city, the increase in the income levels of people in the city, the high demand for building of residential houses and the rapid national economic development that have given rise to opportunities to assume acceptable standards of living for the urban people, and hence, the need to move. All these causes have given rise to many encroachments on farm lands at the peri-urban areas in the Wa Municipality, pressure on social amenities such as water, health center, among others. Other effects include lack of infrastructure, loss of farmlands and ownership and more importantly the loss of source of livelihood.

Research methodology and model specification

Research methodology: The study used qualitative (descriptive) research design. The selection of the design was based on the nature of the research problem or issue being addressed, the researcher's personal experiences and audience for the study (Creswell 2009:3). On the other hand, qualitative research is "an inquiry process of understanding" where the researcher develops a "complex holistic picture, analyses of words, report detailed views of informants and conduct of the study in a natural setting" (Creswell, 2005).

Sources of Data and Data collection instruments: Data was sourced from both primary and secondary sources. First hand information and qualitative data were obtained directly from key informants while Secondary data was also collected from books, news letters, organizations annual reports and the internet, using data tools such as semi-structured questionnaires and Semi-structured interview guide to give room for probing into the issue of urbanization, its causes and effects on livelihood in the peri-urban zones in the Wa Municipality in Ghana.

Sample frame: A list of possible respondents in this study were farmers in the peri-urban zones, land owners, Town and Country Planning Department, Lands commission, Ministry of Food and Agriculture in the Wa Municipality in Ghana.

Sample Size: According to Ahuja (2001), a sample is that part of the population which is studied in order to make inference about the entire population. Sampling can therefore be stated as taking any portion of a population or the universe as representative of that population or universe. This was adopted to estimate a sample of 145 respondents from the peri-urban areas in the Wa Municipality to represent a whole. The ultimate goal of sampling as stated by De Vaus (2002) is to mirror the total population it is designed to represent. In research, sampling saves resources, labor, time and permits higher overall level of accuracy than full enumeration (Moser & Kalton 1971, Huaisheng et al 2019).

Sampling techniques: The study adopted the purposive sampling technique under non-probability sampling method to help get responses on the subject matter. However, in purposive sampling, individuals, groups and settings are considered for selection if they are "information rich" (Patton 2002). Since the study aimed at finding out the causes and effect as well as remedial measures on urbanization and

livelihood sustainability in peri-urban zones in the Wa Municipality, it was prudent to select individuals and institutions that have in-depth knowledge on the subject matter.

Sampling procedure: In order to also get a fraction of the entire population of Wa Municipality (107,214) to represent a whole, it was ideal for the researcher to use the International Fund for Agricultural Development (IFAD, 2009) sample size determination formulae which is given as;

$$N = \frac{t^2 \times p}{M^2} (1-p)$$

Where n=desired population

T=confidence level set at 95% (standard value=1.96)

P=estimated proportion of the target population with similar characteristics.

M=margin of error set at 5% (standard value=0.05)

This is how a total of 145 respondents were sampled from the entire population of the Wa Municipality. Using the IFAD sample size formulae

$$n = \frac{t^2 \times p}{M^2} (1-p)$$

Given that n=?

T=confidence level set at 95% (standard value=1.96)

P=estimated proportion of the target population with similar characteristics (0.90%)

M=margin of error set at 5% (standard value=0.05)

$$n = 3.45744(0.1)$$

$$0.0025$$

$$n=138.2976$$

Therefore 5% of 138.2976

=6.91488 (non-responses)

Total Sample size=138.2976+6.91488

n=145 respondents

Data Presentation and Analysis: In research, normally different approaches are used to analyze the data collected by different methods. The quantitative data which were collected through the distributed self-administered questionnaires were analyzed by coding the responses. The data gathered from the field were coded. However, not all qualitative data were given numeric values. Coding is important because it facilitates the retrieval of information (Johnson et al 2007, Bazely 2004). According to Twumesi (2001), SPSS is the best tool for summarizing data, create tables, graphs and establish relationships among variables. The SPSS version 16.0 was applied in the study. Although there are current versions, however I am more conversant with the version 16.0 but in order to get nice and colorful charts I then supported it by the Microsoft-excel. The data was analysed using descriptive modules. The focus was mainly to describe the conditions and current situation on urbanization and livelihood sustainability in the peri-urban zones in the Wa Municipality. Findings about causes, effects, alternatives livelihoods and remedial measures on rapid urbanization in the peri-urban zones in the Wa Municipality has been presented in the form of narratives.

Objective 1: Causes of urbanization in the peri-urban zones of Wa Municipality

The above diagram (figure 4.2) revealed that, 35 respondents who represent 24.1% are of the view that, establishment of

more businesses in the peri-urban zones has contributed to urbanization, 43 respondents (29.9%) suggested that, urbanization occurs through establishment of more schools. Besides, 21 respondents (14.5%) shared their view that, the causes of urbanization takes shape through in-migration whiles 46 respondents (31.7%) believed that, the incidents of high – birth rate is what is leading to urbanization in the peri-urban zones that were studied. The above factors have contributed to urbanism in the peri-urban zones in the Wa Municipality. This field data gathered is consistent with the view of Mills and Becker (1986). They pointed out that "urbanization is an inevitable process experienced by all nations in their transition from agrarian to industrial and service societies and it is a necessary factor behind the economic growth". Capital accumulation, technological change and the growth of socioeconomic infrastructure seem to be the most important determinants of this change (Kundu, 2004,Manu et al, 2019).

Objective 2: The perception of people on peri-urban areas which are experiencing the effects of urbanization:

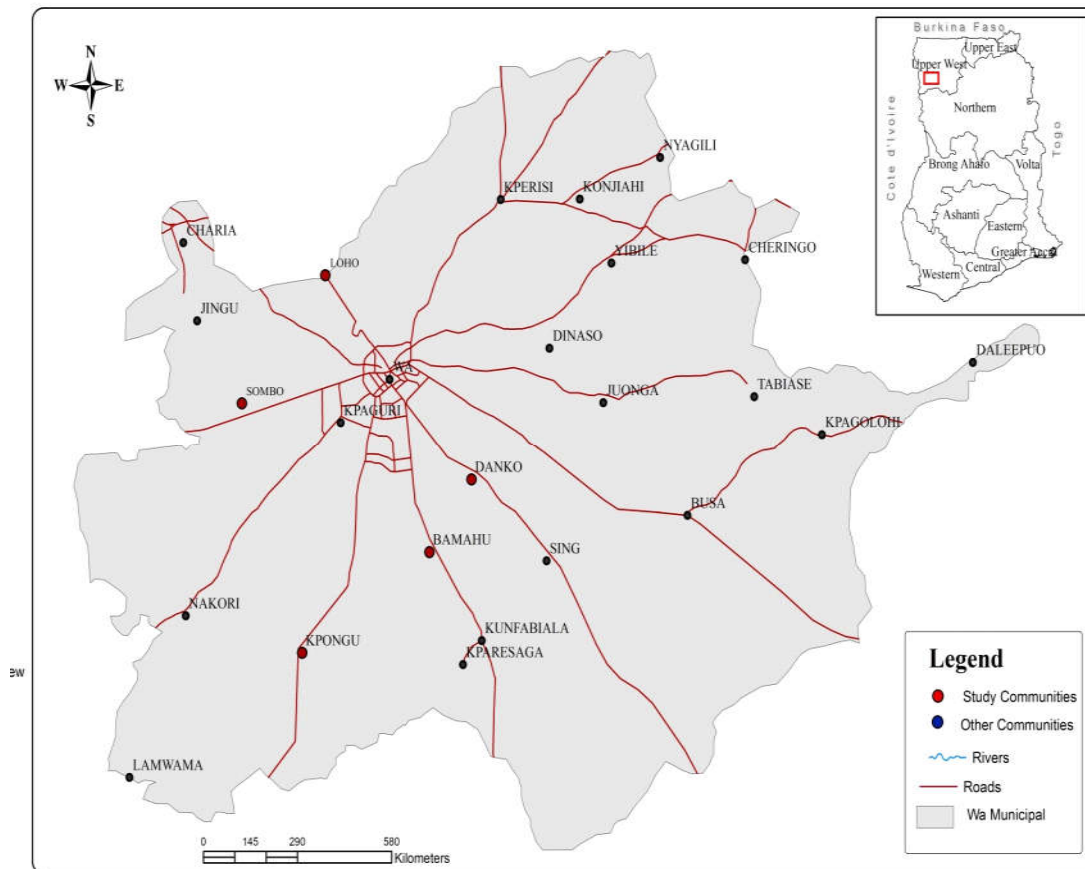
The intensity of urbanization varies across locations. It was observed that, the rate of urbanization increase with nearness to the Wa Township. Respondents' have confirmed that, peri-urban zones such as Bamahu, Sombo, Kpong, Loho and Danko are experiencing rapid urbanization. The distribution on people's perception is shown in Table 1. It is clearly shown on the table that, Bamahu and Sombo are the fastest growing peri-urban areas which are experiencing the effects of urbanization, probably because of the establishment of UDS (University for Development Studies) campuses in those peri-urban zones. People (most especially students) are forced to settle around these areas to access services from the university. In as much as students' population keeps on increasing, it become necessary for both private and owners to expand residential facilities to accommodate the growing population, when this happen, the poor farmers in these areas have to move further to occupy available open space in order to continuously farm to sustain them. The results also imply that, farmers in these peri-urban zones will have little access to available land for farming purposes.

Development activities in the peri-urban zones in Wa Municipality, Ghana:

Various development activities have taken place in the peri-urban zones in the Wa municipality. Key findings among them include residential activities, commercial and educational development activities. The data gathered shows that, about 56.6% of respondents identified residential development in the peri-urban zones in the Wa Municipality as major factor influencing urbanization, 25.5% of the respondents suggested that, commercial development is the main activity whiles 17.9% of the respondents are of the view that, development in term of education in the Wa Municipality is the most influential factor.

Objective 3: Strategies for Alternative Livelihood Sources in the peri-urban zones:

Since in every situation there are alternatives, people living in the peri-urban areas are engaged in income generating activities as other livelihood strategies to augment their main economic activities. Other livelihood alternatives of the people in the peri-urban zones include pito brewing, charcoal burning and investment opportunities such as DKM, Diamond winners, Line paradise, western investment, global merchant (All are financial companies) etc which were later discovered as fraudulent. The distribution is shown in Figure 4.8.



Source: Adapted and modified from Wa Municipal Profile (2013)

Fig. 1. Map of Wa Municipality indicating some key communities that were studied

Table 1. The perception of people in peri-urban areas which are experiencing the effects of rapid urbanization

| Peri-urban zones experiencing the effects of urbanization | Frequency | Percent |
|-----------------------------------------------------------|-----------|---------|
| Bamahu | 45 | 31.03 |
| Kpongu | 26 | 17.93 |
| Sombo | 34 | 23.45 |
| Loho | 20 | 13.79 |
| Danko | 20 | 13.79 |
| Total | 145 | 100 |

Source: Field Survey (2015)

Table 2. Remedial measures for livelihood sustainability

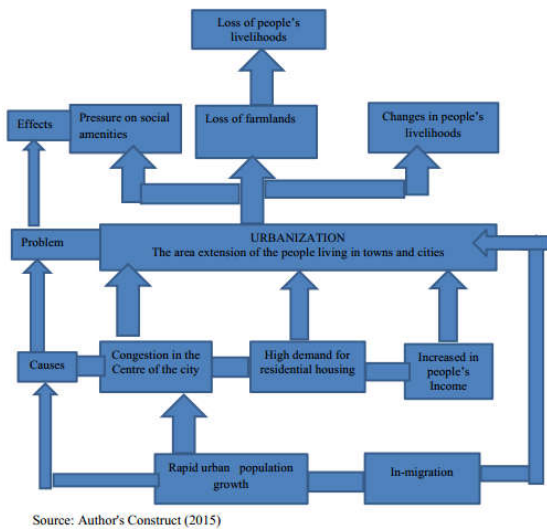
| Measures | Frequency | Percent |
|-------------------------------------------|-----------|---------|
| Reserved land areas for future use | 8 | 5.5 |
| Allocation of land for residential use | 37 | 25.5 |
| Acres of land for farming purposes | 95 | 65.5 |
| Allocation of land for community projects | 5 | 3.4 |
| Total | 145 | 100.0 |

Source: Field Survey (2015)

From Figure 4.8, majority (51.0%) of the respondents are engaged in Pito-brewing, 10.3% of the respondents are actively engaged in charcoal burning whereas 38.6% of them were resorting to available investment opportunities in the Wa Municipality to augment their main economic activities. This shows that, despite farming being the main occupation for the people living in the peri-urban zones, many of them have resorted to alternative livelihoods to augment their income sources.

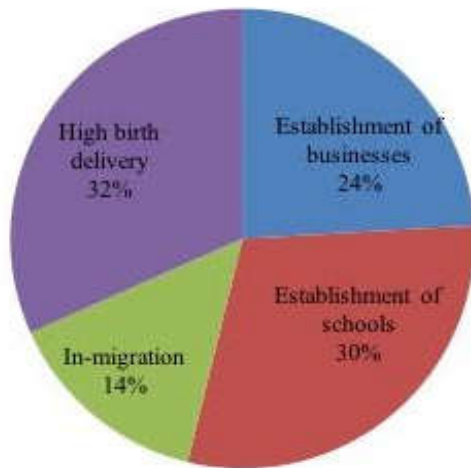
Objective 4: Measures to Ensure Livelihood Sustainability in peri-urban zones: Respondents have shared their opinions on effective measures that could aid livelihood sustainability due to massive effects of urbanization on farming in the peri-urban zones.

Available data gathered shows 5.5% of respondents who maintained that, there should be reserved land areas for future use, 25.5% indicated that, there should be allocation of land for residential use, 65.5% of them indicated that, there should be acres of land for farming purposes and 5% indicated that, there should be allocation of land for community projects in the Municipality. The distribution is shown in Table 2. This confirmed what Coleman (1969) said while developing the general land use model, and divided the area around the cities into three landscapes that is, wilds cape, farms cape and townscape, together with the relatively unstable fringe territories between them: the marginal fringe and the urban fringe. She has emphasized that sprawl is related to modern transport and is almost entirely a modern concept.



Source: Author's Construct (2015)

Fig. 2. The Conceptual Framework



Source: Field survey (2015)

Fig. 3 Objective 1. Causes of urbanization in the peri-urban zones of Wa Municipality

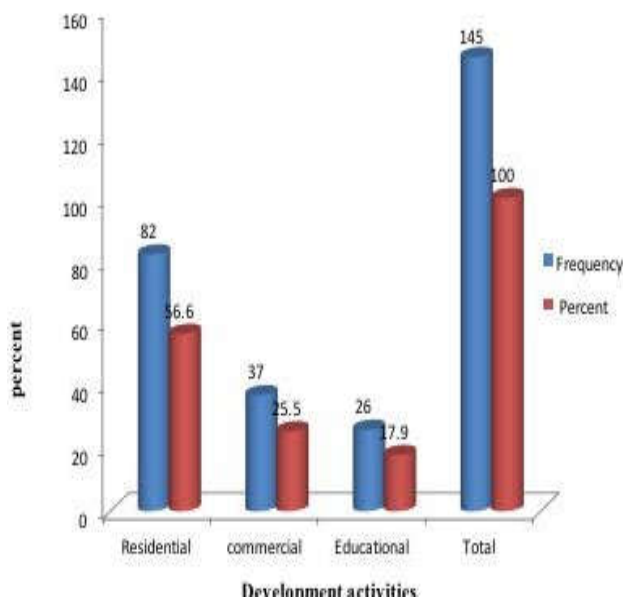


Fig. 4. Developmental Activities in the Municipality

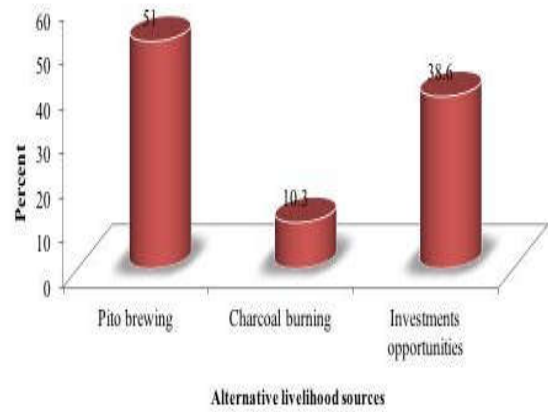


Figure 5. Other Alternative livelihood activities

Therefore, as much as population increases, land will be put to other usages rather than agricultural use. Besides, this goes to buttress the 58th American assembly policy recommendations to the state and federal governments about various ways to make living in the country less appealing and therefore protect the countries food supply. Some of these recommendations include, altering the tax structure so it is more economical to live in the city, preserve farmland, and revitalize cities. If not, as productive farmland is being converted into residential areas so quickly that some feel that California may have trouble feeding itself let alone the country in the near future. For instance, the population in the Central Valley is estimated to be triple what it is now by 2040. Ghana and for that matter Wa Municipal is no exception as population is expected to increase with its demand for land for residential purposes will impact negatively on farmlands resulting in low farm produce and hunger as well.

Recommendation

The study identified various causes, effects and remedial measures on urbanization and livelihood sustainability in Wa Municipality in Upper West Region of Ghana. However, in such phenomenon, people tend to share blame on MMDAs Planning Officer, Town and Country Planning Department, Assembly men, Traditional Authorities (TAs) and Lands Commission who are expected to work as a team to enhance livelihood sustainability in Ghana as a whole.

Recommendations were given based on the findings presented as stated below. It is recommended that individuals, Government, Ministries and NGO's, to strictly adhere to the following as a stringent measure to sustain livelihoods in Ghana.

- Town and Country Planning Department should ensure proper zoning and resident's land owners should as well partition their land use.
- Ghanaians should be more proactive in developing other livelihood alternatives as urban population growth goes with no equivalent growth in land supply. Land is fixed in supply and does not increase with increasing population growth. Hence, the need to plan for an increase in population to curtail its threatening effects principally on livelihood.
- Birth control policies and strict immigration measures should be enforced in order to check population growth since it is a contributing factor to population increase as

outlined by respondents in (Figure 4.2) which has been rated 32%.

- We therefore suggest the re-enforcement of land regulations in Ghana (The 1992 Constitution of Ghana, Amendment Act, 1996 chapter 21, clause 258b) fully to ensure farmers livelihood sustainability in the Wa Municipality and Ghana as a whole. Since massive residential development activities are gradually taking over viable agricultural lands in peri-urban zones.

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