

**TITLE PAGE**

**IMPACTS OF URBANIZATION ON AGRICULTURAL LAND USE IN GWAGWALADA  
AREA COUNCIL ABUJA, NIGERIA**

**BY**

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**NSU/SS/PGD/ERM/0040/16/17**

**A PROJECT SUBMITTED TO THE DEPARTMENT OF GEOGRAPHY IN PARTIAL  
FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF POSTGRADUATE  
DIPLOMA IN ENVIRONMENTAL RESOURCE MANAGEMENT OF THE SCHOOL OF  
POSTGRADUATE STUDIES OF NASARAWA STATE UNIVERSITY, KEFFI**

**NOVEMBER, 2017.**

## **DECLARATION**

I hereby declare that this project has been written by me and it is a report of my research work. It has not been presented in any previous application for the award of Postgraduate Diploma. All quotations are indicated and source of information specifically acknowledge by means of references.

Paul Patience Flora

## CERTIFICATION

This project “Urbanization Consequences on Agricultural Land Use in Gwagwalada Area Council Abuja, Nigeria” meets the regulations governing the award of postgraduate diploma, faculty of social science of Nasarawa State University, Keffi.

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## **DEDICATION**

This project is dedicated to Almighty God whose steadfast love, sufficient grace and strange acts empowered me with the strength in attaining this great feat in my career prospect. May Him alone receive all the glory.

## ACKNOWLEDGEMENTS

My profound gratitude goes to Almighty God whose love saw me through it all. I would like to thank all the people who contributed to my lifelong passion of environmental learning, without them this project would have been impossible.

A special thank you goes to my supervisor, Dr. A.T. Ogah (Post graduate Coordinator) who gave his time and patience to read through every stage of the research work, provided assistance and also made suitable corrections. Your environmental insight helped made this project a huge success.

Also, to my parents, Mr. and Mrs. Lydia Paul, my guardians, Mr. and Mrs. Mary John Ago, Engr. K. Wuyep and Mr. Francis Kalu Mba who through their passion for education propelled me to the right direction in my academics. You are all unique in my heart and it has enhanced my courage to keep standing tall.

I would also like to thank all the lecturers of Environmental Resource Management (PGD) 2016/2017 session, there is nothing more noble than an indebt knowledge of the environment. I applaud you all for your efforts and sound teaching which enhanced my knowledge. I also appreciate my folks for their prayers, unending love and support. I am most grateful.

Finally, I would like to appreciate Henry Ogbogu, Mariam M. Shaibu, Jummai Abah, and all the Environmental Resource Management (PGD) 2016/2017 session, especially Stella Aboh, Suzan Okpara, Nwaego Abutu, Pius, David, and Joshua for making it a remarkable one.

## ABSTRACT

*This work was to examine the consequences of Urbanization on Agricultural Land Use in Gwagwalada Area Council Abuja, Nigeria. Data for the study was obtained through administration of questionnaires, 150 respondents were administered, personal interview and field observation in the study area. The results obtained were quantified in percentage; the final result shows that agricultural land use in Gwagwalada is not only affected by rapid urbanization, but also by the level of soil fertility type of relief, labor and distances. Urbanization positively affects people's lives in Gwagwalada especially in terms of civilization and innovation. Some recommendations have been made today's tackling the negative effect of Agricultural land use changes in the area. An urban center is an agglomeration of people that are organized around non-agricultural activities and urban growth is the rate of growth of urban population. While urbanization is defined as the agglomeration of people in relatively large number at a particular spot of the earth surface. Urbanization in Nigeria and other developing countries have been very alarming over the past 10 years. This is as a result high rate of rural urban drift which has resulted to various problems like unemployment, poverty, flood, squatter settlements, pollution (Land , Air, Noise, Water and visual), slums over population , traffic congestion, crimes and food insecurity, in terms of infrastructural facilities, services, social amenities and heterogeneity economic activities in favor of urban centers. The attempt of this project is to examine the existing challenges and predict, future challenges or urbanization and urban growth in Nigeria, while measures to greatly minimize the challenges as suggested in order to ensure sustainable development in both the Nigerian urban centers and rural areas.*

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## **CHAPTER ONE**

### **1.1 INTRODUCTION OF THE STUDY**

There is no single definition of urban center and different disciplines such as demography, sociology, economics, public administration and geography defines urban area from the point of view of their disciplines. At the same time, there are also differences in the definition of urban area among difference countries reflecting the varying culture of the people in country concerned. In other words the criteria for defining urban center tend to differ from one discipline to another , from one nation to another and even from one discipline to another . However, united nation (2000) posted that urban center as an area with the population, which not below 20,000 people mostly engage in not agricultural activities and legally declare by law as urban center base on the criteria.

Urbanization is increasing in both the developed and developing countries. However, rapid urbanization particularly the growth of large cities and the associated problem of unemployment, poverty, poor sanitation, inadequate health, urban slums and environmental degradation pose a formidable challenge in many developing countries .Urbanization is a global phenomenon which is currently sweeping through developing countries like a wild fire. As a result of the magnitude and speed of urbanization in these countries many

governments appear over whelmed and unable to cope with its challenges. Consequently, basic infrastructure and services are rarely provided as urban growth proceeds haphazardly with severe threats to the well- being of the people and society. Available statistics show that more than half of the world's population of 6.6 billion people live in urban areas ,crowded into 3 percent of the earth's land area(Angotti,1993:UNFPA,1933).By 2050 it is predicted that 64.1% and 85.9% of developing and developed world respectively will be urbanized .Notably, the United Nations has also recently projected that nearly all global population growth from 2015 to 2030 will be absorbed by cities ,about 1.1 urbanites over the next 15 years. Urbanization is closely linked to modernization, industrialization, and sociological process of rationalization.The universal definition of urban center is hindered by the marked variation in the character of urban area in different part of the world. This fact is the reflected the wide national variation in urban –rural classifications. One implication of these has been to hinder international compassions of urban and rural population.

The term urbanization is defined as the process of moving from rural to urban area or better still, is the process of increase in the number of people living in an area. The driving force for modernization, economic growth and development (Gyabaah,2010). He simply defines

urbanization as a shift from a rural to urban society, which involve an increase in the number of people in urban areas. Urbanization is the outcome of the socio- economic and political development that lead to urban concentration and growth of large cities, changes in the land use and transformation from rural to metropolitan pattern of organization and guidance. What can be defining as urban area differs from one country to another, that is, what may be urban center in Nigeria may be rural in developed country like U.S.A.

The United Nation (2014) report that close to 50 percent of the world's population lives in urban areas. Urban population growth is in the rise in Asia, Africa, and Latin American because of immigration of agricultural labor from rural areas into urban areas in search of economic opportunities. One significant features of the urbanization process in Africa is that, unlike Asia and Europe, much of the growth is taking place in the absence of significant industrial expansion. Urbanization also finds expression principally in outward expansion of the built-up areas and conversion of prime agricultural land into residential and industrial use.

In the recent years there have been a remarkable number of people living in urban area. This is due to the abundant job opportunities in the urban center. Nigeria is one of the few countries in Tropical Africa where urbanism is not a recent phenomenon. Some Nigeria terms are

old as some of the world's ancient cities. In the northern part of the country for example cities such as Kano, Katsina and Sokoto participated vigorously in the world wide commercial activities that characterized the medieval period. Similarly, large settlement emerged in the south west part of the country where pre-colonial town such as Ibadan, Oyo, Ogbomosho, Ado- Ekiti and Benin are located. Although there is yet no conclusive evidence on the factor, which influenced the growth of towns in some part of Nigeria during this period, a number of explanations have been suggested in many literatures. In the first place the nature of environment in some areas was conclusive to the growth of population, particularly during a period when the rate of mortality was quite high (Bradshaw et al, 1998).

However, although agricultural production contribute to population growth in these area, it may not explain the concentration of people in certain towns, argued by some scholar, that a large population was a form of wealth, making it possible to create bigger market and armies.

Furthermore, urbanization rate is growing faster in the third world countries due to population growth and also high rate of rural-urban migration. Agriculture is generally recognized as life wire of any human society and the backbone of most developing countries economic development despite the fact that there is little output.

Therefore, attracted a great deal of attention in national planning and international dissension on development. Yet this appearance rate is declining drastically from what it used to be. The relationship between urbanization and agricultural land use is very important and its study should be given much needed priority, as human being dwell and carry out their activities on land. Urbanization is the present phenomenon in the most developing countries including Nigeria that is affecting the land use system. The rapid increase in population growth rate which is accompanied by the expansion of building, construction of facilities such as road, recreation, industries and provision of other socio-economic service are the main cause of the recent phenomena in the country's land use act. There has been a great improvement of the agricultural sector Mechanization, introduction of improved varieties of crops and animals and intensive cultivation of land and also the use of fertilizer and chemicals to enhance agricultural productivity to meet the demand of the ever growing populace, yet the problem is not farfetched the problem of rapid urbanization accompany by acute shortage of farmland for agricultural production. This problem is clear in most urban center in the country especially Gwagwalada in FCT. The creation of FCT in 1976 accompanied by the immediate transfer of Federal Capital Territory headquarters ministries stimulated a drastic rapid population of people from different part of the country. The



resultant effect is the developmental problem caused by the urbanization. It is a known fact, that the level of technology and abundant agricultural land for efficient production usually accompany a successful agriculture development.

Urbanization is no doubt caused by two factors which are natural population increase (high birth than death) and migrations are significant factors in growth of cities in the developing countries e.g. Nigeria. The natural increase is fueled by improved medical care, better sanitation and improved food supplies, which reduce death rate and cause population to grow. In many developing countries, it is rural poverty that drives people from the rural area into the city in search of employment, food, shelter and education. In Africa most people move into the urban area because they are pushed out by factor such as poverty, environmental degradation, religious strife, political persecution, food insecurity, lack of basic infrastructure and services in the rural area or because they are “pulled” into the urban areas by the advantage and opportunity of the city including education, electricity, water etc. Even though in many African countries the urban areas offer few job for the youth, they are often attracted there by the amenities of urban life (Tarver, 1996). The phenomena has resulted to some negative effect on the land use (agricultural land use) and consequently on the populace. With respect to the problem associated with

urbanization on the agricultural land use, individual scholars in many part of the country are concerned by local loss of farmland, and the problem of the land act reform embarked upon in (1978) by then president Obasanjo which vested all lands in the hand of government that is very rare in socialist country. That in turn encourages government expansion of boundary and cities through development project.

The motivation of this program called public concern for increased agricultural production and food security. Preservation of a rural life style, environmental production and the preservation of urban sprawl. Despite the effort to all sectors to preserve farm land and enhance food production, the continuous enrichment of urban areas into agricultural land area creating tension between the new habitants and the agricultural producers that struggle to survive in the location. However, not all effect of urbanization drastically increases land valley, raising the valley of farmland asset and providing potential income to farmers. In addition, marketing opportunities and access to labor may provide economic benefit to agricultural producers. This over view focusing on farmland preservation program and the potential legal issue that may arise as agricultural land become urbanize.

## **1.2 Statement of Problem**

Urbanization is the phenomena threatening most urban centers worldwide. The creation of new federal capital territory of Nigeria in Abuja and the transfer of headquarters of ministries from Lagos have attracted migrants from different part of the country. The high rate of migration combines with birth and death rate caused population increase and pave way for rapid urbanization in the territory generally, in addition, the presence of good transport network, adequate water supply; electricity, schools and place for recreation and entertainment in the city have been responsible for rapid population increase in the area.

Gwagwalada is the oldest and the biggest satellite town in the FCT for long, the area has been witnessing a series of process associated with urbanization, such as expansion in built-up areas and increase in population. They are also renowned for the role they play in food provision in the territory. In fact, its market is perhaps the largest farms producing market in the territory. Since urban expansion in agrarian societies usually competes for land with agricultural sector, it is expected that urbanization process will have some effect on the agricultural sector. The nature and extent of such effect have so far remained unknown in view of inadequate research coverage. For sound land management practices, information on the nature and extent of

such changes is needed, and the need for such constitutes the problem of interest to this study.

### **1.3 Aim and Objectives of the Study**

This research is aimed at examining the effect of urbanization on agricultural land use in Gwagwalada. The specific objectives of the study are to:

1. Identify the pattern of urbanization and agricultural land use in the area.
2. Identify the effect of urbanization on agricultural land tenure system in the area.
3. Identify area where intervention is required in agricultural development in the area.

### **1.4 Justification**

The research is justified because the area of study is an agricultural area with suitable climatic condition and fertile soil which is currently confronting serious land problem as the result of rapid population increase.

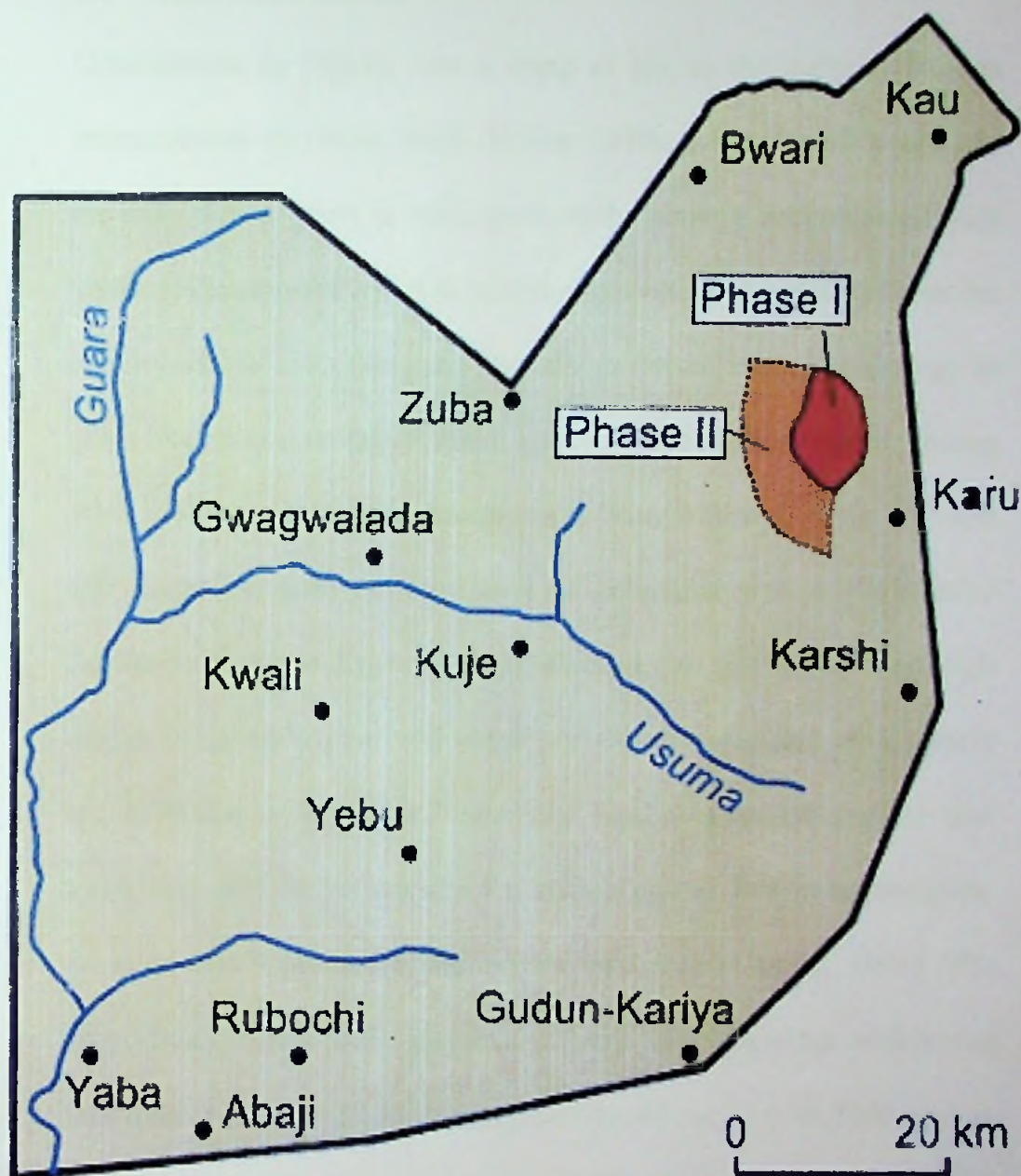
There is a need to investigate the causes, pattern and effect of migration in the area. The result obtained will provide insight for useful and meaningful guide for the land use plan and management law in planning wisely with much priority given to agricultural use.

As agriculture is the back bone of our national economy, is essential to study the effect of urban precisely on agricultural land use. This will enable us to effectively address the problem wisely and minimize the menace of growing population.

### **1.5 Scope of the Study**

The scope of this research work is restricted to the urban center in Gwagwalada town. As several hectares of fertile agricultural land have been taken over from farmer for residential, industrial and other socio-economic development, by government or individual or corporate bodies.

The research is also restricted to Gwagwalada town only, which is the study area. There is also the limitation of time to investigate important issue regarding the annual proportion of immigration in the area.





# Gwagwalada



Gwagwala, FCT, Nigeria



## CHAPTER TWO

### 2.1 Literature Review

Urbanization in Nigeria was a thing of joy in the early of Nigeria independence in 1960s. Until the late 1970s, when the oil boom and the operation of ports in some parts of the country accompanied with physical developments, led to massive movement of populace from the countryside to the cities, and various problems began to emerge in cities like crimes, unemployment, insecurity, poverty and slums among other problems. Extensive development being a feature of the 19<sup>th</sup> and 20<sup>th</sup> centuries, with concentration of economic and administrative decision-making in Lagos, Ibadan, Kaduna. Jos and Enugu and high degree of specialization and larger population associated with greater specialization of goods and services, 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). 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). Projectons suggest that the number of people living in Nigeria urban centres will reach 100 million by 2020. Although the urban population growth rate decline from 5.7% in 1985 to the rate of 4.0% in 1994 (Onokerhoraye and Omuta, 1994), but the rate increased to 5.8% in



2004 (Agbola, 2004). In the literature, two schools of thoughts have emerged on the consequences of urbanization. The first school of thought welcomes and emphasizes urbanization as essential ingredients to economic development, modernization, physical development, human resources development and all forms of societal growth (Arthur, 1991 and Kassides, 2005). The second school of thought believes that slum development, high flood incidence, high social crimes, poverty and pollution, traffic congestion and squatter settlements *inter alia* (Olotuah and Adesiji, 2005; Jinadu and Isumonah, 2005; Aluko, 2010; Adetunji and Oyeleye, 2013). The paper stands aloof from the two schools of thoughts, but the point of emphasis of this paper is that, the various problems that emanate from urbanization especially in the developing countries, is because of the high population involved in their urbanization process. Reducing fertility may be a better policy response to high population growth than reducing migration (Cgen, et al. 1998). Conversely, the major factor that brings about various problems that usually result from the urbanization is rural-urban drift especially in the developing countries. At a point, migration from countryside to urban centers makes carrying capacity of the urban centers to be exceeded, which also results to poor housing condition, congestion, pollution, unemployment, overstressed facilities and services, as well as crimes among other

problems. Urban centres with poor planning are diseased by such provision, general environmental deterioration, confused transport systems, incessant flooding and fire disaster (Egunjobi, 1999 and Adetunji and Oyeleye , 2013). Planning which take place at various spatial levels can help to minimize the impact of urbanization on the environment. As Egunjobi (1999) argues, planning and management are twin requisites for controlling the growth of urbanization and achieving good quality of life for urban dwellers, both permanent and temporary.

Egunjobi (1999) believes that, urbanization and environmental problems in Nigeria are consequences of irresponsible political leadership. From the point of view of Egunjobi (op cit), Nigeria government should wake from the slumber and endeavor to always put round pegs in round holes and not in squared holes. Many of the political leaders especially at the Federal level do not have professional experience in relation to the portfolios given to them. A situation where someone in charge of Housing , Urban Development and Physical Planning is a political scientist or an Accountant, there is no way urbanization will generate various degree of problems in this type of governance. From the study of Arrow K. et al (1995), village culture is characterized by the common bloodlines, intimate relationships, and communal

behavior, whereas urban culture is characterized by distant bloodlines, unfamiliar relations and competitive behaviours.

## **2.2 Migration and Urbanization in Nigeria**

Migration is considered as the movement of people from one geographical region to another which may be on temporary or permanent basis (Adewale G.J, 2005). This movement can be from rural to urban, rural , urban to rural, urban to urban and across international boundaries. In this research of Jibowo (1992), the factor influencing people to migrate to rural areas from Urban centers might be as a result of city congestion, traffic , dams , sanitation problems, increasing urban unemployment , increased crime rate and housing problem. The fact still remains that, the prevailing , migration pattern in Nigeria is rural to urban migration, which makes population growth in major Nigeria cities like Lagos, Ibadan, Kano and Port Harcourt among others to be very alarming on annual basis. Immigration accounts for a larger share of the growth of urban areas and cities . Adepoju (1976) shows in Nigeria, net migration (considering both national and international migration) is more important than national increase of cities. Zachariah and Conde (1980) also shows that nearly half of the growth rate of urban areas was contributed by migrants. Migration within Nigeria settlements in the past was majorly due to the

effort to seek safety of lives, arable land for farming, education opportunities and to assess health facilities. The major factor for migration in Nigeria nowadays is majorly for economic purpose. Many studies have been carried to determine the economic effect of rural – urban drift on the migrant, the point of the origin and the destinations (Todaro, 1969; Aworemi Joshua et al, 2011; Braunvan, 2004; Celia V. Sanidad-Leones, 2006; and Joseph Yaro 2007). The study of Adamu (2009) reveals that internal migration has some negative impact on the quality of rural life, because it reduces the number of individuals in rural areas. The agricultural activities are depleting as vibrant youth migrant to the urban centers, thereby result to dis-economic in the countryside. Ijere (1994) reveals that rural urban migration has some positive impact on urban growth and social development and this helps generate employment, educational facilities and transportation infrastructure for the migrants. Conversely, the model of Harris-Todoro emerged in the late 1960s was pessimistic about urbanization, arguing that rural urban migration was counter-productive because migrants moved for the wrong reasons, and so on a continual basis. Rural –urban wage gaps reflected not only productivity differences but also artificially high wages that attracted too many migrants. Rather than offering economic benefits, migration to cities and eventual closing of the wage merely resulted in more workers waiting through

unproductive spells of unemployment or under employment in a bloated service sector (Joseph Yaro, op cit).

There is high rate of rural urban movement in Nigeria because of three major factors. Firstly rural areas in Nigeria are regions of backward and depressed homogeneous economic with little or no formal activities but dominated with low scale agricultural activities. Secondly, the high rate of inadequate social amenities , facilities and infrastructures like ; No or epileptic power supply poor health services, deplorable road conditions, inadequate educational facilities, poor housing conditions and zero social life *inter alia*. Thirdly, people migrate from rural areas based on the change of their knowledge attitude and perception (KAP) about life in rural and urban areas.

### **2.3 Challenges of Urbanization**

Urbanization in the developing countries has affected the structure and functions of the various social institutions, which include the family, economic, religion, health and education. Industrialization and modernization which are intertwined with urbanization have led to the diminished functions of the various institutions in Nigeria urban centers. Urbanization has increased the poverty level in cities due to the alarming rapid growth of urban centers, and this is further aggravated by overemployment, underemployment and decreased in real

wages due to persistent inflation and uncontrolled migration (Celia V. Sanidad-Leaones, 2006). The challenges of urbanization are felt in almost all the aspects of urban centers. Some of these challenges are discussed below;

### **2.3.1 Housing and Urbanization**

Many researchers have described the conditions of the housing where over 60% of urban dwellers live in Nigeria as highly deplorable (Onokerha=oraye, 1976, Wahab, et al 1990; Olotuak and Adesiji, 2005). High rate of over- crowding, sub- standard building and infrastructural inadequacies have been reported in all the urban centers in Nigeria (Adedibu, 1985 and Onibokun, 1987). Over 75% pf the dwelling units in Nigeria's urban centers are substandard and dwellings are sited in slums. Thus, over 60% of the urban dwellers live in slums characterized with over- crowding poor sanitary conditions, lack of inadequate basic facilities and amenities, crimes and poverty among other things. While some urban dwellers still struggle to live in deplorable slums that are nothing but objects of visual pollutants to the western world, some are even homeless thereby sleeping around in different abandoned vehicles and buildings, under bridges, in stores and so on. This is as a result of high housing rent and cost of land in urban centers which the rural migrants cannot afford. Urbanization

tends to increase the number of unoccupied housing in the countryside, while the housing occupancy rate in urban centers is at the extreme to the extents that people live in any available uncompleted structures and slums. From the study of Olotoh (2005), the average occupancy rate of Akure, the capital city of Ondo state Nigeria is 4.42, while the world health organization (WHO) stipulates between 1.8 and 3.1, while the Nigeria government is of the opinion of 2.0 per room (okoko, 2001). Building collapse is alarming in Nigeria urban centers, and the incidence is minimal in the countryside. Urbanization influences building collapse, as the demand for more commercial, industrial and residential activities is very high due to the population growth of urban centers.

### **2.3.2 Poverty and Urbanization**

World Bank (1996) defines poverty as hunger, lack of shelter, being sick and not being able to see a doctor, not having access to school and not knowing how to read. Aluko (1975) refers to poverty as a lack of command over basic consumption needs. Poverty is also having fear for tomorrow, the state of hopelessness and to be jobless. Nigeria is among the countries working to achieve the eight (8) Millennium Development Goals (MDGs) by 2015. It is not a surprise for the

President of Nigeria to declare in live broadcast in mid July of 2013, that Nigeria may not achieve any of the MDGs by 2015. The second MDGs, is to eradicate the extreme poverty and hunger. More than 70 million Nigerians live poverty (Ayedun, et al, 2011). Poverty is high in Nigeria due to the inadequate job opportunities, infrastructural facilities and services that do not meet demands of urban populace. The depth of poverty declined from 19% to 16% in rural areas, while it increased in urban areas from 9% to 12% . In 1985-1992, total extreme poverty in Nigeria increased from 10.1 million to 13.9 million with a near three- fold increase in the urban extreme poor from 1.5 million to 4.3 million people (World Bank, 1995).

### **2.3.3 Crimes and Insecurity**

The incidence of crime tends to increase in any region, where we have high population of people. And such incidence is reduced in a region with low population of people. Celia V. Sanidad-Leones (2006) opines that rapid organization, industrialization , and migration to the cities are major factors that contribute to higher crime rate in Philippine urban centers, this is not in contrast to the organization challenges as regards crimes in Nigeria urban centers. The prevailing crimes in Nigerian urban centers include robbery, rape, kidnapping, murder,



child trafficking, political violence, suicide, fraud, and prostitution among other crimes which are the resultant factors of urbanization. All these crimes are urban affairs and not rural affairs because many inhabitants of the countryside are related in one way or the other. The Nigeria numerical strength is commensurate with the total population, as one police to 5,000 Nigerians: on like the developed countries with one policeman to about 400 hundred people (Agbola, 1997). Moreover, with the disproportion between the security strength and population in Nigeria, the study by Robert (2007) shows that in Nigeria urban centers, a number of army soldiers and police officers have been sentenced to death for armed robbery involvement in Nigeria urban centers. In many urban centers of Nigeria today, criminal activities and violence are assumed dangerous tendencies as they threaten lives and properties, the national sense of well-being and coherence, peace, social order and security, thus, reducing the quality of lives of the citizens (Ahmed, 2010). At least, one of these crimes is committed on daily basis in Nigeria urban centers, while in some cases the culprit are always at large, due to the exploded population growth of urban centers with millions of people. Out of all the crimes in Nigeria, robbery incidence is the highest with 27.3% (Robert, 2007). Small arms survey (2007) shows that 1.6% of household own a fire arm in Nigeria. It is unlawful for any person in Nigeria, apart from the

government security agent to own or carry fire arm. But the number of person with fire arms continue to increase as robbery incidence has become an order of the day in many urban centers in developing countries. Rapid urban expansion in Africa is connected to a crisis in urban governance fueling unemployment and the inability of public police forces and the security sector of many countries to provide adequate protection (Robert, 2007).

#### **2.3.4 Food Insecurity and Urbanization**

The high rate of rural urban migration in developing countries threatens food security in both urban centers and rural areas. High number of people involved in agricultural activities in rural areas, have abandoned agricultural activities as they migrate to the urban centers to seek jobs in manufacturing and processing industries and some into informal activities. Lesser number of people are into agriculture in Nigeria , as more agricultural land in the suburbs have given way for sub-urban development and large expanse of land in rural areas are left uncultivated, as rural areas are more dominated with the aged people who have not strength for agricultural activities . This justifies why importation of food (especially rice, the major Nigeria food) is very high. The prices of all types of food are very high which makes it

difficult for many poor in the society to afford a three square in a day, as recognized in Nigeria society.

### **2.3.5 Environmental Problems and Urbanization**

The major challenge of urbanization in Nigeria urban centers are environmental problems. In Nigeria, Mba et al (2004) identifies several types of environmental problems classified as ecological, poaching and habitat loss, increasing desertification and soil-erosion. This are further sub divided into pollution(water, land, visual and noise),deforestation, global warming and slum development etc. Nigerians coastal regions are currently experiencing wide spread, contamination from petroleum exploration (gas flaring, oil spillage) while the general poor living conditions in urban areas in the country constitute an affront to human dignity (Adedeji and Ezeyi, 2010). Environmental problems in the urban centers have resulted to many health problems in Nigeria, and they also have a negative effecton the overall economy of the country apart from the general health implication of environmentalproblems, they are tendencies of the problems affecting the psyche of the people. For instance residents of urban slums are known to show deviance attitude, apathy to governmentprogrammes and anti-social values like prostitution, crimes, and juvenile delinquency (Adedeji and Ezeyi, 2010). Improper

wastes management has made the societal fabric of many modern centers in Nigeria to be very unsightly. Traffic congestion which increases the degeneration of the cars exhaust due to the traffic delay is another major environment problem in Nigeria urban centers. Slums development in urban centers also depletes the physical environment, increases crimes and violence. The environmental problem in urban centers out- weigh the experience in the country side, as the environmental are seen as the result of human activities which are higher in the urban centers.

#### **2.3.6 Climate change and Urbanization**

Man's activities relating to were in lives, works and his movement from place to place, consumption as well as the usage of technologies, all affects heat emissions in a city (Olaleye 2013). According to Odjugo (2011), Nigeria is experiencing global warming at the rate higher than the global mean temperature. In Nigeria the mean increase in temperature from 1971 to 2008 is 1.780C, compared to the global main increase in temperature of 0.740C since instrumental global temperature measurement started in 1860 Odjugo (2011). The sharp increase in temperature between 1971 and 2005 in Nigeria could be linked to the effect of climate change and its associated global

warming earlier reported (Mabo, 2006) and Odjugo (2011). Climate change in urban result from the high rate of industrial and commercial activities in the urban centers, with little consideration for the environmental implications of the activities. The climate change result to the incessant flood occurrence, harsh temperature, poor agricultural productivity and human health diseases (skin reaction and respiratory diseases) among other challenges.

#### **2.4 Future Challenges of Urbanization in Nigeria**

In the study of Jelili (2012), the future of the population of the developed world will stop growing and the population of the rural areas of the development world will soon stop growing as well. That means the next three billion people added to the planet are mostly going to live in the urban centers of the developing countries where Nigeria is not excluded. As more people are predicted to inhabit urban centers majorly in developing countries in the next decades. The following in Nigeria and other developing countries, if proper measures are not put in place starting from now;

1. As more people will inhabit cities in few decades to come, the by – product of photosynthesis which is the major source of human life will be greatly depleted. More green will give watt for physical development, thereby reduces the quality of the already polluted air in major Nigeria urban centers, due to industrialization and other city-related activities. This condition may likely increase incidence of Chronic Obstructive Pulmonary diseases; chronic bronchitis asthma, and cardiopulmonary diseases among others.

2. Carrying capacity may collapse in the next decade, if the population continues to increase sporadically in the urbanization process, whereby the available resources in the future may not sustain the population of urban centers in the next decades. Lagos in Nigeria for example, the population of Lagos was 665, 246 in 1970 (Ajaegbu, 1976), 10.3 million in 1995 (United Nations, 1995) estimated to be 12.09 million in 2013 (Demography World Urban Areas , 2013 and 24.4 million by 2015 (United Nations, 1995). The population increase in manyurban centers is mainly caused by rural urban drift and not by natural increase which is impeded by death. The resources available may not sustain the future generation, as the resources are reducing, the population is increasing. There is imbalance in the proportion of the change in resources and change in population. There is danger of high

competition in the future to access the limited resources that will be available, which may tend to an extent of killing one another.

3. The rate of unemployment will be extremely high. Though, the rate is high already, but surprisingly the population employed now may be underemployed in the future, and some will be put of employment because of the technological developments which may reduce human labor in decades to come. As more people are migrating from rural areas to cities, jobs will be very scarce due to high rate of population growth.

4. Insecurity and crime will also be a major characteristic of urbanization in Nigeria. The available security personnel in cities may not be able to control the crime rate in cities. Crimes may take new dimensions like family members selling one another; marriage of the same sex in Nigeria, high rate of car snatching, kidnapping of both the young and the old, and fake currency printing among other crimes. Most of these crimes are plaguing Nigeria cities already, but they shall be more prevailing in the future, if certain measures are not put in place.

5. There will be a spontaneous change in climate. Sun radiation may be more threatening to human body, and many new skin diseases may herald the future urbanization . From the studies of (Adetunji and

Oyeleeye, 2013), excessive floods may claim more lives in the future due to the climate change that increases the rainfall. Other problems and new diseases that are not known now, herald the next decades due to the climate change as a resultant factor of uncontrolled due to the unplanned population growth in many urban centers.

6. Environmental problems that will result from the future urbanization can never be over emphasized. It will be very difficult to manage wastes of the high population and the urban fabric of major cities will be highly jeopardized as the waste dumps may become a substance of visual pollution from the major highways in cities. Increase in traffic congestion and air pollution as more cars will ply roads in cities. Slums development may be proliferated in some respected areas of the urban centers, due to the pressure of where to stay by the migrants in the urban centers. More diseases may emerge due to the environmental challenges of the future urbanization.

7. Food insecurity as a threat to human life is another problem of urbanization, which will be prominent in few decades to come. This problem will not only concern urban centers, but also the countryside. The strong and vibrant youths are leaving rural areas for the urban centers, leaving those who are aged that are weak in the rural areas, those that cannot practice farming as such again. Agricultural



production of the rural areas in Nigeria determines the cost of food in the urban centers. It is a known fact that the prices of food had increased in Nigeria by 100% in the last 10 years (2003-2013). Foods that can only be accessed by the bourgeoisie and the proletariat may struggle to have just a meal per day. As popularly said that “An hungry person is angry person” more atrocities may be committed in the cities by people who cannot afford their daily meals. More processed foods that can be produced in Nigeria are now imported from other nations of the world. If people who migrate from rural areas to urban centers have been coming to join the few that practice agriculture in the cities, the prices of food would not have escalated by 100% in the last ten (10) years. But instead, the rural migrants come to the cities to chase away the few that practice agriculture in the cities by living in the urban suburbs and resulting to slum development.

8. The problem of urbanization in the future will be a great challenge to the professionals concerned with the environmental issues (Urban planners, Architects, Geographers, Social Scientists, Economists, Engineer and others) and all Health workers. There will be complex environmental maladies with uncontrolled physical development and population growth. Urbanization may likely increase the burden of researchers across the disciplines in the future. There

may be needs for new directions in the area of research in Nigeria and other developing countries, due to the problems that may emanate from urbanization in the future. Natural disasters like tremors, earthquakes, landslides, tornadoes and other that are strange to Nigeria may be the subject of the research in the future. As the trends of developments may likely go underground in Nigeria and other developing countries for railway constructions, roads, buildings, car garage and all other forms of developments, these trends of developments (beneath, on and above the ground) in urban centers may likely result to alien attacks in Nigeria, which include; tremors, earthquakes, landslides, and tornadoes, if proper management measures are not put in place.

## **CHAPTER THREE**

### **3.1 The Study Area**

#### **3.1.1 Historical development of Gwagwalada**

Gwagwalada existed as a small town before 1976; it was created on the 15<sup>th</sup> of October 1984. The Bassa people who founded it named it Gwagwalada, and subsequent Hausa sellers due to their inability to pronounce the Bassa given name corrected it to Gwagwalada (Balogun, 2001). The town structured into two, the traditional and the planned, the traditional is the pre-1976 section, and the planned is the post -1976 with impetus of FCDA in accordance with the Abuja master plan. As a result of the final relocation of FCT from Lagos to Abuja in 1991, the town has and is still witnessing a massive influx of people and structural transformation.

#### **3.1.2 Location**

Gwagwalada is located in the Federal Capital Territory of Nigeria, it lies within latitude 8°55'N and 9°1' North of equator and longitude 6°55' E and 7°3' E in the FCT Gwagwalada master plan, 1980). The town is strategically located close to the heart land of the FCT and

exists as a model town within the nation's regional and local roads network. It is located along route at (Kaduna-Lokoja Express way), it is about sixty kilometers west of the Federal Capital City, twenty five minutes' drive to the capital city from the Gwagwalada by road. The town also has a boundary with Kuje in the East, Kwali to the South, Suleja to the North and the Border town of Izom in the North-East part (Balogun,2001)

### **3.1.3 Population and Size**

The population of Gwagwalada has been fast increasing as a result of natural (high fertility) and immigration especially with its status as a satellite town in FCT. Thus, in 1991 as a result of the final relocation of the seat of Federal Capital from Lagos to Abuja, its official population figures was 80,841 people as it increased from 2,750 people in 1980, accounting for about 21.3% of the total population of the FCT (NPC, 1991). The population has grown astronomically and can be estimated at 150,000 people as at present (Uke et al 2005).

Gwagwalada is the second largest town in the FCT, after the Capital City Abuja with a total landmass of about 65 square kilometers. It is located at a center of a very fertile agricultural area with abundant clay deposit to its North-East and South-West (Mundi, 2000). Gwagwalada is also the name of the main town in the Local Government Area,

which has an area of 1,043km<sup>2</sup> and a population of 158,618 at the 2006 census. The population projection of Gwagwalada from 2011 is 252,520 with an area of 1069.589km<sup>2</sup>.

#### **3.1.4 Topography**

The topography of gwagwalada is ranged with numerous valleys and few hills. The town is located within Iku-Gurara plain, which lies south west of Zuba hills at the north west of the territory (Chup, 2000). It is part of the most extensive plain consisting of mainly monotonously flat land deserted by streams (River Usuma). The elevation lies between 150m and 250m with relative relief between 50m and 2000m. The slope are generally long and gentle than average slope of 150.

#### **3.1.5 Climate**

Gwagwalada experiences both wet and dry seasons. The wet (rainy) season begins from April and last till the end of October and dry (sunny) season begins in November and ends in the middle of March (Balogun, 2001).

#### **3.1.6 Rainfall**

Gwagwalada designated study area in terms of rainfall exhibits transnational character as between the zone of double maximum rainfall to the south and zone of single maximum to the north (Balogun, 2001).

### **3.1.7 Temperature**

The designated study area Gwagwalada records the highest temperature during the dry season month, which is generally cloudless. The maximum temperature occurs in the month of March with amounts varying from 37 degree in the southwest to 30 degree in the northeast (Adakayi, 2000). This is also the period of high diurnal ranges of temperature when drops of as much 170 degrees may be recorded. By July to August diurnal range rarely exceed 7 degree centigrade accordingly (Adakayi, 2000).

### **3.1.8 Vegetation**

The study area of composed of shrub and savanna woodland that is characterized by short and scattered trees and tall grasses. Trees appear as emergent with foliage crowns scattered at considerable distance from one another (Balogun, 2001).

### **3.1.9 Economic Activities**

The economic activities in Gwagwalada are made of formal and informal economic activities. The informal economic activities can be divided into technical services for instance: Motor vehicle mechanics, tailoring, photographing, vulcanizing etc. fabricating for instance metal work, cement/brick blocks, furniture making and so on forms the first category of informal activities.

While the second category of informal activities are commercial activities which include import trade and internal trade. Import trade involves the sale of manufactured goods such as textile provision and the internal trade involves the flow of Agricultural produce within the urban cents in the FCT and other neighbouring states and transportation.

The third category of informal economic activities involves agriculture activities which cropping and livestock farming, the cropping involves the cultivation of land mainly for crops such as maize, groundnut, guinea corn. The farmlands are normally located in the out skirts of the town or undeveloped plots adjacent to road (Balogun, 2001).

The livestock farming includes cattle, sheep, goat, pig and poultry among others. The inconclusive data available reveals the cattle in

Gwagwalawa was 619, 275, that of sheep was 510,012 that of goats was 45, 801 and poultry was 3, 0705,221 in 1995 (Garba, 2000).

The other category of economic activities in Gwagwalada is the formal economic activities, which comprises of the trained, education and specialized sector of the economy. It includes bankers, medical doctors, legal practitioners, surveyors and numerous other working in various Organizations and Institutions.

### **3.2 Research Methodology**

#### **3.3 Introduction**

This research deals with strategies adapted for accomplishing the aim and objectives of this research. It consists of methods and procedures employed to collect data, sampling techniques, tools of data analysis and problem of data collection.

#### **3.4 Study Population**

A study of population is a set of individual object or management, which have some common observable characteristics (Karimu, 2004). It could be seen as people or object targeted by the researcher for this study. They may be people living in the area: farmers, traders or government workers etc. However, in this study, effects of



urbanization on agricultural land use in Gwagwalada consider the conversion of fertile agricultural land to residential, commercial or recreational uses.

### **3.5 Sample Size**

A reconnaissance survey was conducted, where by the area is delineated and plots of land in the area were enumerated. A total of 150 questionnaires were distributed to the study population after the instrument was protested effectively in a pilot survey. One out of every 5 plots was surveyed in every street covered in the area to capture the very view of the area.

### **3.6 Sampling Techniques**

To reduce biasness and enhance a reasonable level of objectivity, one out of every 5 plot of land on each street was surveyed. The street guide was well mapped during the reconnaissance survey, in order to obtain useful direction.

### **3.7 Data Needs**

Data collected was emphasized on the land use pattern, income of the people, land use change or conversion, major agricultural activities of

the people, rate of population increase with regard to both natural and human factors and the condition of social amenities in the study area.

### **3.8 Data Gathering Methods**

Data collection is an indispensable activity in the research process. Data in general terms are facts and pieces of information which constitute the raw material of the subject to which they relate. Some are numerical which give quantitative rather than qualitative information on the phenomenon under study (Karimu, 2004). In this study, most qualitative and quantitative data were required. Data being it qualitative or quantitative still fall into two categories of both primary and secondary data. Primary data are those data collected directly from the field in their original state or form, collected as raw data: the researcher process the data into usable form and uses such for analysis. To generate these data, the data requires the use of questionnaires, physical measurement, interview and personal observation. It can also be sensed using sophisticated instrument.

On the other hand, secondary is that which is generated for one purpose other than the research work at hand but which can be utilized by the research to active his research goal. For this study, only primary source of data requires survey instrument such as the questionnaires, interview and personal observation would also be used.

### **3.8.1 Questionnaire**

The questionnaire is shared into two parts A and B only.

#### **PART A**

This focused on such detail of the respondents as family sizes, occupation, age of the respondents and educational status.

#### **PART B**

This captures area of land use pattern, types of crops grown in the area, number of individual plots owned, and impact of urban growth on the line of the people.

### **3.8.2 Oral Interview**

This is adopted to enhance efficiency for the fact that group of people surveyed involved both literate and illiterate. They have phobia for paper but answer the same questions when put to them orally in form of a discussion.

## **3.9 Method of Data Presentation/Analysis**

Data analysis looks critically at the various statistical tools employed in analyzing the data collected. 150 people were administered, and about

148 were entrained question recovered, the exercise involves the respondents ticking the appropriate option and expressing his/her personal opinion were necessary. Therefore, all the data collected were tabulated and presented in percentage score, which was used to analyze the respondents' response, which also helped the researcher to establish his findings.

## **CHAPTER FOUR**

### **4.1 Data Presentation and Analysis**

The main aim of this study is to examine the effects of urbanization on agricultural land use in Gwagwalada town and to achieve this; data was

collected from the field. This chapter therefore, deals with the presentation and analysis of collected data. The data was organized and presented in a tabular form. Expressing the responses made to the various questions asked in the questionnaires and these are computed and quantified in percentage. For instance, change in land use, as a result population growth, agricultural system in the study area also decrease which consequently resulted in food shortage and insecurity, which further decrease the types of crops cultivated by the people in the study area. The effect of urbanization on agricultural activities and socio-economic live of the people in Gwagwalada town, all they were entertained in tabular form.

The second points are the comparism of the changes in the variable to determine their change in percentage with the past. Pie chart and bar chart were used for easy illustrations of these changes that have taken place in the study area and the third point focuses on general factors that affect agricultural land use in the study area.

The table 4.2 below reveals that the sex of the respondents is dominated by female, as 98 representing 65.3 percent, while 39 representing 26.3 percent of the total respondents are male, from the table above the study area assumed still maintains its agricultural potential as for the local people, females are needed by farmers to

assist in agricultural activities. The relevance of the table is that, it shows the size of the family in the study area.

**Table 4.1 Sex Distribution of the Respondents**

S/N	Sex	Respondents	Percentages (%)
1	Male	39	26.3
2	Female	98	65.6
3	None	13	8.4
	Total	150	100

*Source: Field Survey 2017*

**Table 4.2 Marital Status of the Respondents**

S/N	Marital Status	Respondents	Percentages (%)
1	Single	44	29.3
2	Married	85	56.3
3	Divorce	1.3	8.4
4	Widow	9	6.2
5	None	10	6.6
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

Table 4.2 above indicate that about 44 respondents representing 29.3 percent are single , 85 representing 86.6 percentage of the respondents were married people, 2 representing 1.3 percent of the total population are divorced, the total number of widow are 9 representing 6.2 percent.

The number of married people clearly shows that,familypeople dominate the area. The difference in the various figure shows married people as it is highest figure that people who depend on food for their survival, largely dominate the population. Therefore, due to the conversion of numerous agricultural lands into other use, such as residential, commercial etc. large number of low income family cannot afford to live in the area.

**Table 4.3 Age structure of the respondents**

S/N	Age	Respondents	Percentages (%)
1	20-29	80	53.3
2	30-39	20	13.3
3	40-49	26	17.3
4	50-59	19	12.7
5	60 above	5	3.4
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

Table 4.3 indicates the age distribution of the people. These data reveals that, people between the age of 20-29 and 40-49 are the

majority in the area, followed by 30-39. The data also showed decrease in the number of people with increased age.

The general trends of decrease could be attributed to the fact that most people who age fall between 20-29 are likely to be immigrants who were stimulated by some of the opportunities available due to the transfer of the Federal Capital territory from Lagos, which stimulated the establishment of secretariat in Gwagwalada and other establishment such as specialist hospital which were converted to University of Abuja Teaching Hospital, Abuja University and Gwagwalada Area Council Secretariat among others.

**Table 4.4 The Number and years of Migration**

S/N	Year of Migration	Responses	Percentages (%)
1	1980-1989	7	4.7
2	1990-1999	32	21.3
3	2000-2009	64	42.7
4	None of the above	47	31.3
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

Table 4.4 revealed that a greater percentage of an area migrated from a different part of the country. For instance, the proportion of migrant



between 1980 and 1989 was only 7 representing 4.7 percent of the total migrant. As the areas subsequently witness a remarkable urban development in the good road network, communication, electricity, water supply and other social services, the number of migrant recorded were approximately 64 representing 42.6 percent. This is explicit that the processes of urbanization growth are due to easy access to the area, availability of social amenities has promoted migration. There is rise in demand for food and house for the better living for the populace.

From the chart and table below, one can easily observe that the dominant occupation of the people in the study area is civil servant, having the highest percentage of responses. The data in table 4.6 shows that the dominant occupation of the people in the study area are civil servants having the proportion of 55 representing 37.1% of the total population , following by students which are 34 representing approximately 22.2% of the total population.

The number of farmers and traders are 20 and 14 representing 13.3 and 9.3 percent respectively.

Table 4.5 Major Occupation

S/N	Occupation	Respondents	Percentages (%)
1	Civil Servant	55	37.1
2	Students	34	22.2

3	Farmers	20	13.2
4	Traders	14	9.3
5	Others	27	18.0
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

This indicates that the study area is undergoing the process of urbanization from agricultural to commercial and administrative function. Historically, the study area was small village inhabited by farmer, but recently, phenomenon that is associated with urbanization has drastically changed the economic activities dominating the area. The consequences of this change are the general decline of food production, which initiates the persistent rise in the price of food items in the market.

The implication is the malnutrition that characterized most rural families around the study area especially among the low income earners.

Since the study area according to history started as a small agricultural settlement with way few people vast land for agricultural practice. The table above signifies the reality of the problem on ground.

There are various types of crops growing in the country; however, spatial distribution of crops in Nigeria is influenced by weather.

Therefore, the table below shows the various crops grown in the study area and their percentage according to the response made by the people.

**Table 4.6 Types of Crop Grown**

S/N	Crops	No. of Responses	Percentages (%)
1	Yam	89	59.3
2	Melon	17	11.33
3	Maize	15	10.3
4	G/Corn	10	6.3
5	Rice	12	8.3
6	Others	7	5
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

Table 4.6 reveals that almost half of the farmers in Gwagwalada town are producers of yam followed by melon since they have the highest percentage of 59.33 and 11.33 respectively. The production of yam is attributed to the adaptic and climatic condition of the study area. Yam in a clear point is the major source of income of the farmers in Gwagwalada town. Maize has 10 percent of farmers engaging in farming it, these may relate to the cultural value attached to this crop as it is the common food among the Gwari andBassapeople. However, with influx of people from different parts of the country, the difference

socio-cultural background other food crops have been introduced. Few people engage in the production of guinea corn giving the percentage of approximately 6% .Rice is another crop commonly farmed by the people especially in the swampy area of the study area. However, the production is not commercially pronounced.

**Table 4.7 Farms Plots owned per famer**

S/N	No. of Plots	No. of Responses	Percentages (%)
1	One	46	30.6
2	Two	53	35.3
3	Three	24	16.3
4	Four	14	9.3
5	None	12	8.6
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

The table above indicates the percentage of farm land owned 90 by each individual farmer in the study area. The numbers of people with two plots of land are the highest with approximately 35.3% followed by 30.6% of the total number of plot of farm land. Only 9% of the total farmers own 4 piece of farm land and 8.6% of the population

doesnot possess farm land. These clearly show that there was an increase in population, which necessitate the high value of and expression of building and other construction works. This has consequently changed the pattern of land use in the study area, changing most agricultural land to other uses such as commercial, residential, recreational among others, thereby leading to an acute decline in amount of farmland for agricultural production. The change in land use has also altered to the occupation of most people in study area from agricultural to commercial activities. As land are fragmented and scare, subsequently the desire for agricultural production die-off, causing decline in the food supply. The negative effect is the general rise in cost of food stuff.

**Table 4.8 Causes of Change in Food Production**

S/N	Factor	No of Responses	Percentages (%)
1	Increases in population	85	57.0
2	Changing in agricultural	5	3.3
3	Shortage of farmland	40	27.3
4	None of above	20	13.3
	<b>Total</b>	<b>150</b>	<b>100</b>

*Source: Field Survey 2017*

The table above revealed that majority of the respondents agreed with the fact that urbanization is responsible for the change in land use, from agricultural to industrial and residential in the study area, with the percentage of responses of 85 at 57.0 percent. While about 3.3 percent of the people are of the view that change agricultural system is motivated by the factor that indicated these change in land use. 27.0 percent are in the opinion that shortage of farmland is response for change in agricultural land use.

**Table 4.9 Impact of Urban growth on the Live of the People**

S/N	Impact	No. of Responses	Percentages (%)
1	Increase price of agricultural products	32	54.6
2	Decrease Price of farm product	20	13.3
3	Reduced the desire to produce more goods	42	28.3
4	Increase agricultural production	6	4
	<b>Total</b>	<b>100</b>	<b>100</b>

*Source: Field Survey 2017*

From further analysis a majority of the responses (54.6 percent) are in support that urbanization bring positive development to the area by accelerating the prices of farm products, while 28.3 percent of the respondent admitted the fact that urbanization despite it positive

impact on the life of the people have absolutely reduced the desire to farm thus causing more harm than good to them and their environment. The analysis also revealed that 13.3 per cent are in the opinion that urbanization has resulted to total decrease in their general income as most of their farmland are now use for other function.

It is clear from the above that urbanization has effect the life of the dwellers of Gwagwalada town both socials economically and automatically as above 14 responses representing 62.66 percent of the populace of the study area are in the view that urbanization as a phenomena bring positive impact in term of provision of infrastructure , creation of job opportunity and other social service whereas only 49 people representing 32.6 percent are in support that urbanization cause more harm rather than good. These according to the research show that urbanization has raised the general cost of living in the study area.

#### **4.11 Other factors that affect Agricultural Land Use**

Nature and cause of the effect of reduction in land use in Gwagwalada town gas been subjected to further analysis, and is revealed from empirical investigation and the nature and effect of urbanization is not only the factor responsible for decline in agricultural land use.

These factors are generally categorized into climate or environmental factors, socio economic factors and other factors like government policies.

Environmental factors such as soil erosion and nature of topography had exerted considerable influence not only on the distribution of crops grown in a particular region, but also on the pattern of agricultural land use in that region as a whole (Clemenson, 2004). The fertility of a soil is the crucial factors which also influence the extent and pattern of agricultural land use as well as the system adopted by farmers. Where the soil fertility is high, farmer tend to cultivate more of the area in order to enjoy the advantage of the soil. In the study area, in some cases, the effect of soil fertility may obscure the effect of distance. That is to say, "no matter how far the fertile soil is located, farmers will still move their work as long as long as it will yield high return. Soil fertility to some extent determines the land fragmentation of an area. The larger they are of the fertile soil available to a settlement, the less the land fragmentation, and the more agricultural production.

The relief in Gwagwalada area is generally a plain type. As earlier mentioned, rugged area can only be found at the eastern side of the area. Rock out crops is also found along the riverside valley. These



features of the relief play a tremendous role in the availability of agricultural land Gwagwalada. For instance, they set limits to the extent farmers in the study area could make best use of nearest land to their settlement in the rugged area are not cultivable. The farmers could expand their farms beyond their boundary without encountering problem. However the rest of the area is low lying and most of the agricultural practice is carried out in these areas.

Labour may be seen as both manual and mechanical for agricultural purposes, labour is seen as employees on farms either full time or part time workers. They could also be self-employed farmers, partner and member of the family who work on the land as well as hired labor. But what are essential in labor are the efficiency and the cost of labor itself. The more efficient the labour, the more the agricultural output and vice versa.

Labor depends on the time and energy spent in working on the farms. Mechanical labor is more efficient than the manual. But only few farmers can afford it, either because of financial constraints or due to their conservative attitudes. In the study area, out of total population of farms less 13 percent used mechanical, thereby not cultivating the available land.

The pattern of agricultural land used and the extent of agricultural production can also be determined by the population concentration (Clemenson, 2004). Whether or not the piece of land is to be used for agricultural purpose, residential sites, recreational center etc. depends largely on the population density of that area. As population changes, land use for both economic and social activities also changes. In the study area, most of the land observed having been buying fallow for quite a long time without cultivation. This is the evident of observation made in the field during the field surveying. This has been due to the sparse population of the area price to 1980's.

The effect of distance on agricultural land use can be seen from various perspectives generally, transportation and distance cannot be separated from each other. Therefore both the distance and the farm transportation available to a particular agricultural region strongly affect the pattern of agricultural land use of such region (Rodrigue, 2009).

The major forms of transportation in Gwagwalada town were roads and footpath. The footpaths are perhaps the most significant one they link the settlement with farms as well as farms to farms makes it easy accessibility for farmers to utilize every cultivable land in the area effectively.

In the case of Gwagwalada in general, the intensity of land use increase with distance away from the town. Along the roads tractors are used to cultivate the land and fertilizers are easily transported to the farms. This increases agricultural land use as one move way word from the main town.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary**

The study was carried out, on the effect of urbanization on agricultural land use. Urbanization is perceived as an initial even in human history. It is agglomeration of people in relatively small size, dense and heterogeneous group of people, things and activities. It is generally comprehended that the gloomy picture of organized in development societies as high cost of living in terms of accommodation, lack of access to basic amenities and high cost of food stuff which consequently result to mal-nutrition. Data for the study was obtained through administration of questionnaires of 150 respondents, personal interviews and field observation in the study area.

The study revealed that, urbanization greatly affects the pattern and the extent of agricultural land use in the study and consequently resulted to a drastic rise in food price. This indicate that most fertile lands which were formally used for agriculture have been taken for residential,

commercial, administrative and other uses, hence revisiting to an acute shortage of agricultural farmland in the study area.

However, investigation and analysis of both primary and secondary data have revealed that urbanization is not only on the factor that affect and limit agricultural land use in area. Other factor such as soil fertility, relief population labor and distance from the farm lands also affect agricultural land use in the study area.

Any researcher is award that the key to any problem solving is to identify what is the cause of the problem. Therefore, the objective of this studying are to identified, analyze and provide solution or give recommendation to the present agricultural land use problem associate with rapid growth of urbanization in Gwagwalada town. Through the use of primary and secondary data, it has been revealed that the predictable increase in population growth rate. The phenomenon was stimulated by the transfer of the Federal Capital Territory from Lagos to Abuja, followed by the establishment of Gwagwalada secretariat accompanies social amenities.

This unpredictable rise in population resulted to several socio-economic cultural problem such as high cost of living, shortage and poor housing condition, prostitution, arm robbery, scarcity and high cost of food stuff which consequently result to malnutrition especially

among the low income earner. However, it is not all the effect of urbanization may cause land value to drastically increase, thus raising the value of farm assets and providing potential retirement income to farmer. In addition, market opportunities and access to labor may provide economic benefit to agricultural producers

## **5.2 Conclusion**

From the result of this study, it is concluded that Gwagwalada town has expired remarkable change in population and abundant agricultural land that is left fallow and uncultivated. Therefore since the area has experience this tremendous increase in population, it has greatly affect the available agricultural lands, hence a shift in the farmers and in general standard of living of people on the study area.

Urbanization in Nigeria urban centers has brought about varying degree of problems ranging from economy, climatic, environmental, housing, socio-cultural, traffic, food-insecurity among other problems. It is good to know that everyone in urban centers is affected with one or more of these problems, which shows that we are not safe from the existing and predicted urban problems. It is pertinent at this point for Nigerian government to adopt the recommendations in this paper, in order to control the urbanization process in Nigeria, and to ensure sustainable developments in both urban centers and rural areas.

### 5.3 Recommendation

As the existing and possible future challenges of urbanization in Gwagwalada have been succinctly examined in this project, the actions suggested to tackle these challenges, in order to ensure sustainable development, will focus on renewing the urban centers and integrating rural areas.

Based on the findings of the research work, the study offers the following as the measure that should be taken into consideration in the area.

- 1) Rural-urban migration is the major problem of urbanization in Nigeria. Rural-urban drift should be addressed more at the local level that is closer to the members of the country side, by making them to know the environmental and economy implications of their migration to the urban centers through various public enlightenment programs.
- 2) The major factor that leads to rural-urban drift in Nigeria is regional inequalities. To halt rural-urban drift to a great extent, government at the state (regional) level supported to the federal (national) level, should embark on various physical developments and provision of basic infrastructural facilities, services and social amenities (equipped schools, water supply,

good roads, health facilities, stable electricity, relaxation centers etc) in rural areas. This will reduce the level of inequalities between the urban centers and rural areas, and this will naturally control the rural-urban drift.

- 3) The major economic activity in Gwagwalada is agriculture (farming). Government should provide necessary incentives to promote agricultural activities in Gwagwalada through zero-interest loan to farmers, low cost agricultural tools, good market for agricultural produce and other incentives.
- 4) To ensure environmental sustainability in cities, planting of trees (evergreen trees and not deciduous trees that shed leaves) is imperative. Government should embark on massive tree planting and encourage citizens to plant trees by providing free seedlings and citizens.
- 5) There is a need to review various laws in charge of environmental management in Nigeria like NESREA (National Environmental Standard Regulation Enforcement Agency), FEPA (Federal Environmental Protection Agency) and other legislations that are concerned with the environmental monitoring . The laws should be more effective in terms of Compliance Enforcement and Penalty.



- 6) There is a need to encourage mass transit in urban centers. The exhaust generated by vehicles is a serious threat to the environment. Government should mandate “Kiss-and Ride” or “Park-and-Ride” system while approaching some business districts in urban centers to reduce traffic congestion, noise, accident rate, crimes and air pollution. Government and private investors can invest in building car parks in district centers in cities, where car owners pay charges per time spent.
- 7) Government should demolish all slums in urban centers and make these areas return back to green zones, by planting areas. The evicted slum dwellers should be encouraged with little fund by the government, and they should reconcile them back to the communities they migrated from, which are mainly the rural areas. Government should endeavor to provide low cost housing that are affordable for some of the slum dwellers evicted from the slums.
- 8) Comprehensive development plans should be developed with citizen participation, and adopted by the local government councils. This will guide the physical developments in the country side as recommended by this paper to integrate infrastructural facilities, services and economic activities in the

county side. This will guide against environmental threats that may result from the rural integration schemes in the future as the current experience in urban centers.

9) More enlightenment programs should be available for the members of the public on the implication of natural increase. The awareness should start from the religion centers, community and media.

10) A national land use policy suitability base on the outcome of national land capacity classification scheme is urgently required, such scheme would provide a systematic frame work for assignment of most appropriate land uses across the states, and thus, serves as a framework for integration within over all national physical development plan.

11) The Federal Capital Development Authority (FCDA) and other planning agencies should plan appropriately with much priority to agricultural land use and ensure proper implementation of the master plan; this would reduce land use distortion and hence promote efficient agriculture production. To tackle the problem of scarcity that characterizes most urban centers.

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## **APPENDIX I**

**NASARAWA STATE UNIVERSITY, KEFFI**

**FACULTY OF SOCIAL SCIENCE**

QUESTIONNAIRE:IMPACTS OF URBANIZATION ON  
AGRICULTURAL LAND USE IN GWAGWALADA AREA  
COUNCIL, FCT ABUJA, NIGERIA.

I am Paul Patience Flora, a postgraduate study of Geography Department. I am undertaking a research in Impacts of Urbanization on Agricultural land use in Gwagwalada Area Council, this is with the view to identity the problem and see if pro-active solution can ne proffered. It is not a government document in anyway; neither will it be used for the purpose of taxation; please co-operate with sincere response. Thank you.

## SECTION A

Please tick the options that are applicable to you.

1. Sex of respondent: Male ☐ Female ☐
2. Marital status: Single ☐ Married ☐ Divorce ☐
3. Age of respondents, 20-29 ☐ 30-39 ☐ 40-49 ☐  
Others.....
4. Occupation: Student ☐ , Business ☐ Civil servant ☐  
Farmer ☐ Others.....
5. Educational qualification : non-formal ☐ Secondary ☐  
Tertiary ☐ Others (specify).....

## SECTION B

6. Are you a migrant: Yes ☐ No ☐
7. If yes how long: <6 years ☐ , 7-10 years ☐ 11-15 years ☐  
16-20 years ☐ >20 years ☐
8. Where do you reside.....

9. Do you engage in farming as a means of livelihood: Yes ☐  
No ☐
10. What type of crops do you cultivate : Rice ☐ Yam ☐  
Melon ☐ Maize ☐ Guinea corn ☐ others  
(specify).....
11. How many pieces of Farmlands are you farming on before the creation of FCT Abuja? One ☐ Two ☐ Three ☐ Four ☐  
More ☐
12. Are your farmland(s) closer to your place of resident? Compare to what happened before the creation of FCT . Yes ☐ No ☐
13. Do you think the availability of farmland is decreasing? Yes ☐  
No ☐
14. What are the causes of this change? If yes above; Population increase ☐ Size of farmland ☐ Change in Agricultural system ☐
15. In what way has urban growth affected market situation?  
Increase in price of Agricultural products ☐ Decrease in price of farm products ☐ Transportation of farm products in market ☐  
Reduction in the desire to produce more goods ☐  
Increase in the purchasing power among the populace. ☐

16. Do you see urbanization as a threat to agricultural land use? Yes ☐

No. ☐

If yes please state.....