

**AN ASSESSMENT OF GOVERNMENT EFFORT ON THE PROVISION OF
PORTABLE WATER SUPPLY IN BIDA LOCAL GOVERNMENT AREA OF NIGER
STATE**

BY

SHEHU MUAZU BABANGIDA

ADM.NO 1011206033

**THIS RESEARCH WORK IS SUBMITTED TO THE DEPARTMENT OF
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DECLARATION PAGE

I Shehu Muazu Babangida hereby declare that this project is an independent work carried out by me.

Students signature

Admission No 1011206033

Date:

CERTIFICATION

This is to certify that, this research was carried out by me and it is hereby submitted for assessment for the award of degree in the Department of geography, Usman Danfodiyo University, Sokoto.

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Mallam S. U wali

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Date

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Dr. I. A. Adamu

.....

Date

{Head of Department}

.....

External Examiner

.....

Date

DEDICATION

I dedicate this work to almighty Allah (S W A), Prophet Muhammad (S.A.W), my late father in person of shehu Abubakar Malami and my late head of Department Prof. Abdulrahim Marufudeen

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ABSTRACT

In this study attempt was made to asses government effort in the provision of portable water water supply in Bida local government area. The study investigates the extent and condition of water supply as well as source of portable water in the study area. However, in the course of the study, questionnaire was developed and used to generate data. The data obtain from the administration of questionnaire was presented and analyzed using both descriptive and influential statistics. The study found that large proportion of the house hold in bida local government relies on public water sources. The hypothesis formatted was rejected was rejected in favor of H1 hypothesis

CHAPTER ONE

1.0 INTRODUCTION

Nigeria has enormous quantity of water resources, surface and underground, that requires a well-articulated administrative structure that can manage the resources effectively. The present position of water supply in Nigeria is grossly inadequate. The Federal, States and Local Governments have over the years been intervening from time to time in terms of the provision of potable water to the people through the Federal Ministry of Water Resources, Petroleum Trust Fund (PTF), River Basin Authorities, DFRRI, National Water Supply Rehabilitation Project, National Borehole programme and of course, the present government's Legislative Boreholes. Despite these efforts, potable water supply is still poor and grossly inadequate. In reality, the problem of water supply in Nigeria is enormous and can only be solved through properly coordinated approach so as to overcome the problem.

According to Babatola (1997), Offodile (2003, 2006), Nwankwoala & Mmom (2008), water supply lies at the heart of development whether it is urban or rural. Water supply and development of any nation are continuing long-term process which requires careful planning and implementation geared towards achieving improved conditions of life. Consequently, there should be an overhaul/review of the existing water policy or a new national water policy that would involve a comprehensive hydro geological mapping of the country. The exercise must be based on known groundwater and surface water sources (Mobogunje, 1975).

According to Uwais, (2004) man cannot survive longer without food than water. But because water is freely available through rainfall, man has until fairly recently, taken this unique resources for granted.

Although more than 70% of the earth surface is water, water has become a scarce commodity in many part of the world. The threat of a world water crisis becoming increasingly real in the face of increase demand, relatively statistic supply and deteriorating

quality due to over exploitation. It is universally accepted that an adequate supply of water for drinking, personal hygiene and other domestic purposes is essential to public health and wellbeing. It is well known fact that large number of people in Nigeria mostly those in rural area lack safe portable drinking water, in about 90% of the rural communities in Nigeria are lacking portable for their domestic activities. (uwais, 2004)

As stakeholders in water and sanitation business converged on the Hague, Netherland on march 22 to mark the 2013 edition of the world water day, the authorities at Niger State ministry of water resources dedicate the day to takes stocks of it achievement and to marshal out ways of improving on it effort of tackling the challenges of supplying portable water to the 4.5 million people spread across the 25 Local Government Area of the state.

The ministry also embarks on other semi-urban water supply schemes in the state and introducing mini water scheme in Kuta, Madaka, Mashegu, Agwara, Lemu and Kata eregi. It produces several borehole rigs for drilling of borehole in communities and trains some of it staff on water related issues both locally and abroad. The state has also brought several water supply vehicles and distributed some to the 25 Local Government Areas for distribution of water to communities known to be facing water shortages which has aimed to reduce the problem of water scarcity in these communities.

At the global scene, there has been continuing efforts in respect of sustainable management of water resources. The Earth Summit, the World Water Commission, the World Water Forum as well as other water related projects of Global Water Partnership, such as World Bank, WHO, UNESCO, FAO, UNICEF and UNDP, have been at the forefront in the timely efforts of water resources management, especially in the provision of safe drinking water and basic sanitation which is within the frameworks of the United Nations Millennium Development Goals (MDGs). In the early 1950s, government's has attempted to develop groundwater by exploring the ground water potentials across the country. This led to

construction of hand dug shallow wells especially in rural areas. The Nigerian government's major intervention in water resources development came during the first National Development Plan (1962 – 1968) which saw the establishment of the River Niger and Lake Chad Basin Commissions. In 1973 and 1974, the Sokoto-Rima and Chad Basin Authorities were established. In 1976, the river basin authorities were increased to eleven (11) to cover the whole country. But, before then in 1975, the Federal Ministry of Water Resources (FMWR) was created. Following the creation of the ministry, extensive water resources development (both surface and groundwater) was embarked upon to boost economic activities such as irrigation, fisheries as well as hydropower generation. More importantly, all these giant strides were aimed at improving water supply delivery in line with the United Nation's International Drinking Water Supply and Sanitation Decade (IDWSSD, 1981 – 1990). Beside these noble efforts, the Federal Government embarked upon other numerous intervention programs in the water sector, including the National Borehole Project (1980), Department of Food, Roads, and Rural Infrastructure (DFRRI) in 1986 -1994, The Petroleum (Special) Trust Fund (PTF) Rural Water Supply Project (1995-1999), Improved National Access to Water Supply (1999) and lastly the Senate Constituency Water Projects (2001 to date) (Nwankwoala, 2010).

Drinking water or potable water is water safe enough to be consumed by humans or used with low risk of immediate or long term harm. In most developed countries, the tap water supplied to households, commerce and industry meets the water quality standards to qualify as potable, even though only a very small proportion is actually consumed or used in food preparation. Typical uses other than drinking and cooking include washing, toilet flushing, and irrigation (USEPA,2010).

Due to high level of poverty in Nigeria, safe portable drinking water is a scarce resource especially in rural areas. It is against this background that this study seeks to assess the accessibility of portable water In Bida local Government area of Niger state.

1.1 STATEMENT OF THE RESEARCH PROBLEM

Over 90% of deaths from diarrheal diseases in the developing world today occur in children under 5 years old (*Salman 2004*). Malnutrition, especially protein-energy malnutrition, can decrease the children's resistance to infections, including water-related diarrheal diseases. From 2000-2003, 769,000 children under five years old in sub-Saharan Africa died each year from diarrheal diseases. As a result of only thirty-six percent of the population in the sub-Saharan region have access to proper means of sanitation. More than 2000 children's lives are lost every day. In South Asia, 683,000 children under five years old died each year from diarrheal disease from 2000-2003. During the same time period, in developed countries, 700 children under five years old died from diarrheal disease. Safe drinking water is therefore a prerequisite for good health.(USEPE2010).

Therefore improved portable water supply reduces the frequency of water related illness and deaths, especially in area like Bida local government area.

Therefore it is essential to find out;

1. What is the source of water supply in Bida Local Government?
2. Are these sources of water supply safe for drinking and other domestic uses?
3. Was there any effort made by Niger State and Bida local Government council in improving water supply in the study area?

These form the research Question that will be pursued in this study.

1.2 AIM AND OBJECTIVES

The aim of this research is to assess the government effort in the provision of portable water supply in Bida local government area of Niger state. This can be achieved through the following specific objectives.

- 1) To identify source of water supply in Bida local Government.
- 2) To identify the origin of water supply facilities.
- 3) To examine the functionality of water supply facilities.
- 4) To identify the ease with which people access these sources.
- 5) To find out who is responsible for maintaining water sources.

1.3 RESEARCH HYPOTHESIS

H₀;there is no any effort made by Government in providing portable water supply in Bida local government

H₁; There are a lot of effort made by Government in providing portable water supply in Bida Local Government.

1.4 JUSTIFICATION

Virtually, it is justifiable to carry out a tentative research works on the assessment of government effort in provision of portable water supply in Bida town, so as to be used as tentative guide in the provision of portable water.

This study will also reveals the efforts made by Niger State government in previous years in the provision of portable water, particularly in Bida Local Government Area.

It is equally, justifiable to provide with basic knowledge of its benefit and the basic measures to adopt for the research problem.

1.5 SCOPE OF THE STUDY

The study focuses on the assessment of government effort on the provision of portable water supply with reference to Bida local government area of Niger state

1.6 RESEARCH METHODOLOGY

This research project is designed to study the assessment of government effort in the provision of portable water supply in Bida local government area of Niger state.

1.6.1 TYPE AND SOURCES OF DATA

Generally there are two major sources of data for a research of this nature i.e primary and secondary sources.

In this research, both sources were used in the course of data collection. Primary sources of data refer to the searching for detail by oneself through asking question (i.e. the use of questionnaire) interview and observation.

Secondary sources of data on the other hand refers to the use of records of what have already been done which is related to the research work, such records are usually obtain from Text books and journals.

A total number of 50 questionnaires were used to collect information from respondent from respondent within the study area.

1.6.2 METHOD OF DATA COLLECTION

The instrument used in the process of data collection for this research work was the use of questionnaire which was administered in the study area, by using a Random sampling technique in the selection of respondent.

1.6.3 ANALYTICAL TECHNIQUES

To carry out this research project chi-square analytical techniques was employed for the purpose generalization, finding and conclusions.

1.6.4 TECHNIQUE OF PRESENTATION OF RESULT

This study employed descriptive statistics, such as table, simple percentage to organized data.

1.7 THE STUDY AREA

1.7.1 LOCATION

Bida local government is in Niger State. It is situated between latitude $9^{\circ} 05' N$ and $6^{\circ} 01' E$. The local government has an area of 512km^2 and it equally bounded by Gbako local government to the North, lavun local government to the south, and katcha local government to the west.

1.7.2 POPULATION

The population of Bida is 171,656 according to the Geo name database.

1.7.3 GEOLOGY AND RELIEF

. Geochemical investigations show that potential source rocks in the Bida Basin are gas-prone. Potential reservoir units occur in the fluvial sandstones of the Lokoja Formation and in the shelf and flood plain sandstones of the Patti Formation. The shales and claystones of the Patti and Agbaja Formations may provide regional seals. Different trap configurations are possible in the basin, ranging from traps within uplifted blocks, traps in drapes and/or compacted structures over deep horsts to stratigraphic traps along flanks of uplifted blocks. Cross-sections indicate that the area around Bida, and to the south of Bida around Pategi, Muregi, Baro, Agbaja, Ahoko, Abaji, GadaBiyu, are particularly prospective.(Oyebande 1978)

1.9 CLIMATE

Bida experiences two distinct seasons the dry and wet seasons. The annual rainfall is about 1,600mm. The duration of the rainy season ranges from 150 210 days.

Mean maximum temperature remains high throughout the year, hovering about 32A°F, particularly in March and June. However, the lowest minimum temperatures occur usually between December and January when the town come under the influence of the tropical continental air mass which blows from the north. Dry season in Bida commences in October. . (Oyebande 1978)

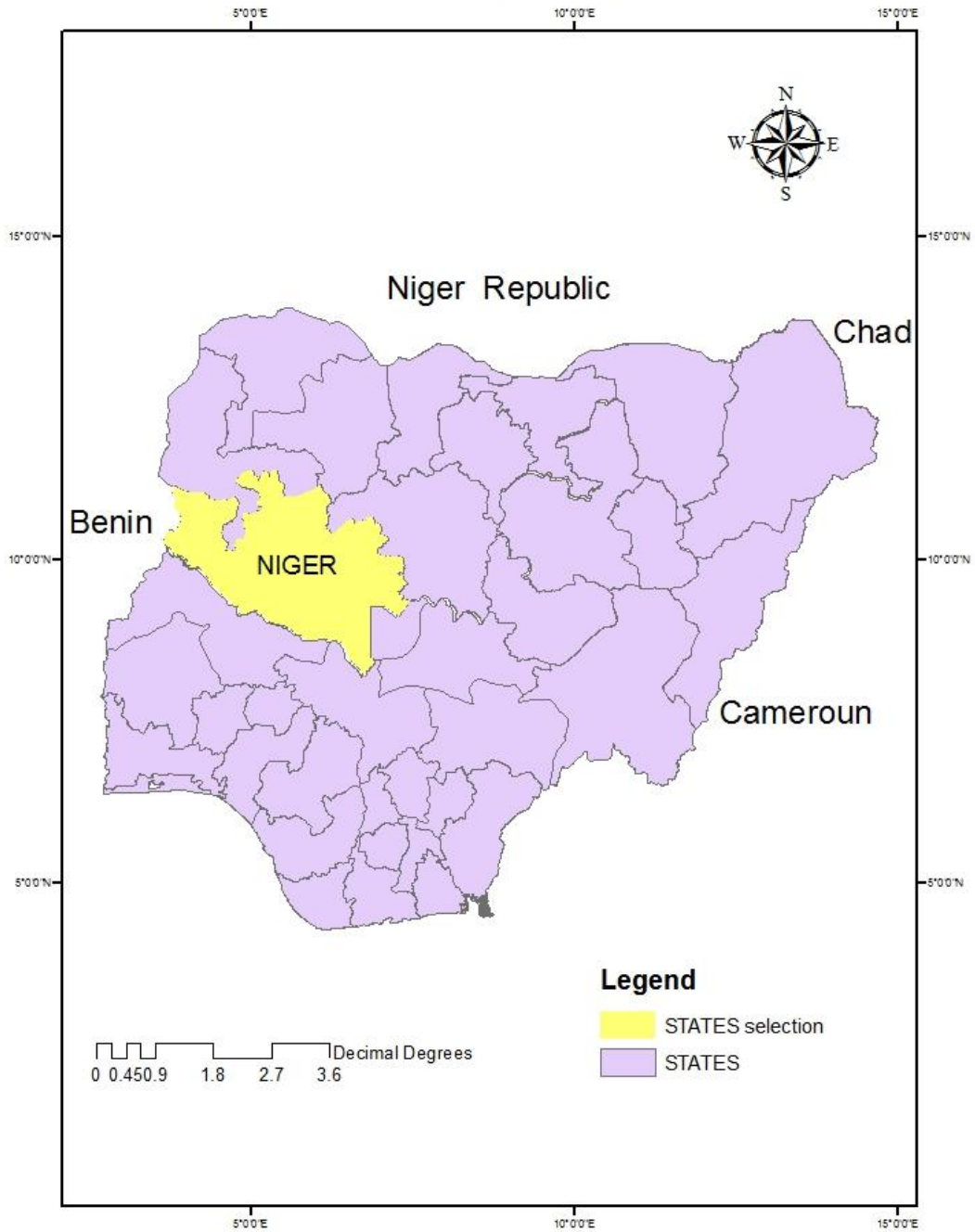
1.10 SOIL AND VEGETATION

The most predominant soil type is the ferruginous tropical soils which are basically derived from the Basement Complex rocks, as well as from old sedimentary rocks. Such ferruginous tropical soils are ideal for the cultivation of guinea corn, maize, millet and groundnut. (Oyebande 1978)

Hydromorphic or waterlogged soils are largely found in the extensive flood plain of the Niger River. The soils are poorly drained and are generally greyish or sometimes whitish in color due to the high content of silt. Ferrosols which developed on sandstone formations can be found within the Niger trough. (Oyebande 1978)

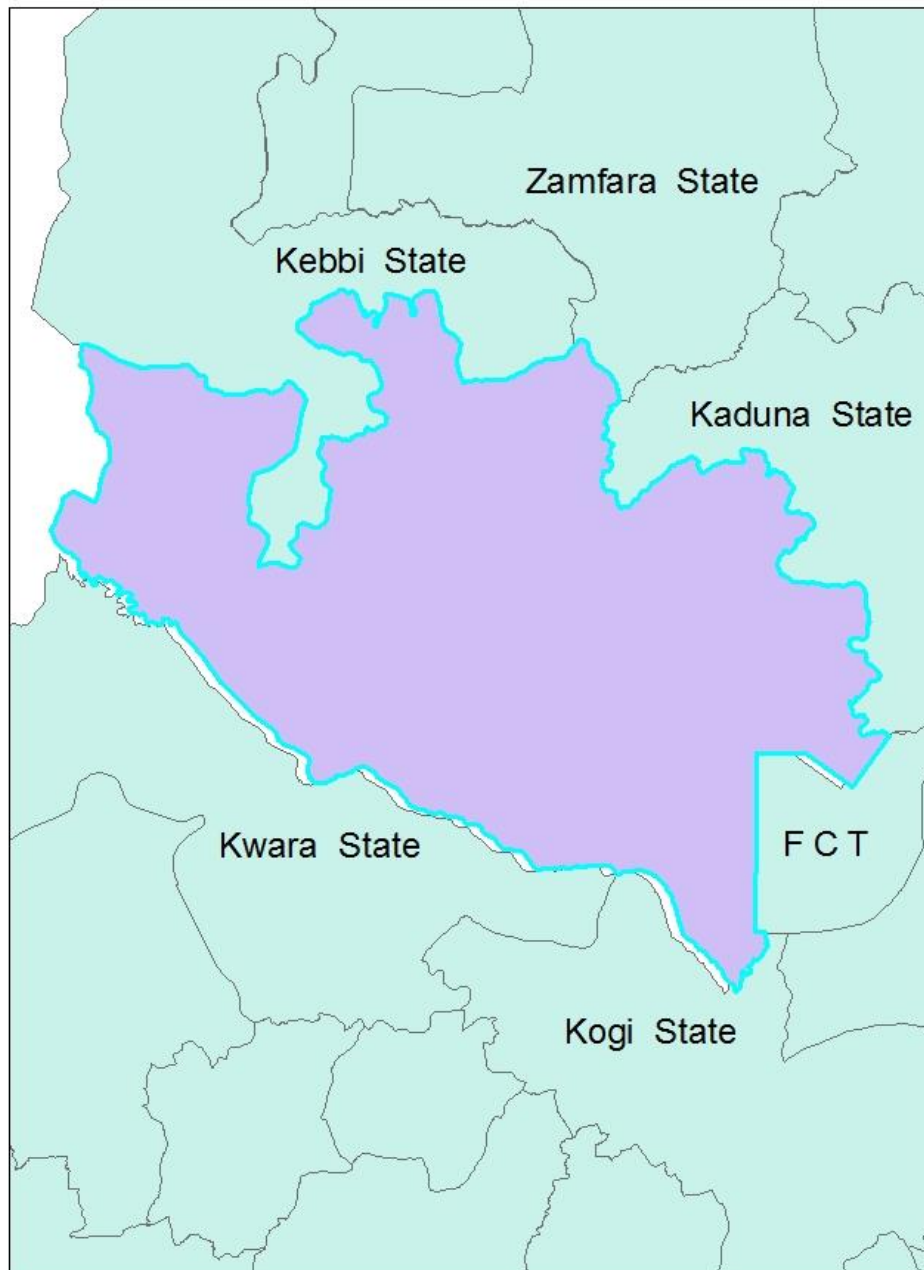
Their characteristic red color enriched with a clay sub soil is noticeable in the landscape. Termite hills dot the landscape, these can be seen along the major highways in the area. The Southern Guinea Savannah vegetation covers the entire landscape of the area. Like in other states of similar vegetation, it is characterized by woodlands and tall grasses interspersed with tall dense species. However, within the Niger trough and flood plains occur taller trees and a few oil palm trees. In some areas, traces of rain forest species can be seen (Oyebande 1978).

Nigeria showing Niger State

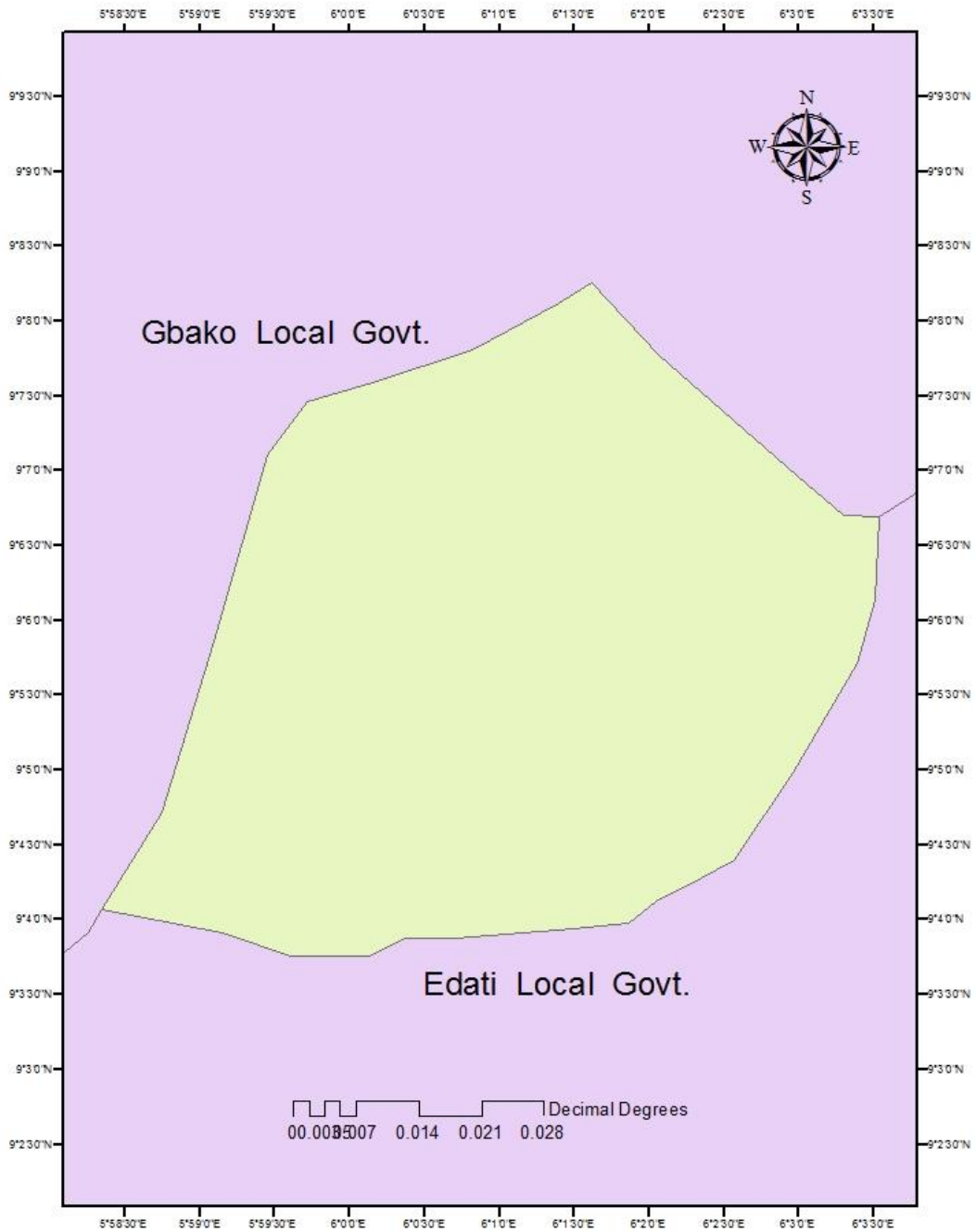


Source Arc Map

Drawn by Abubakar Salah UDUS [2015]



Bida Local Government Area



Source Arc Map Drawn by Salah Geo. Dept. UDUS [2015]

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Many scholars at one time or the other have looked into water problems in Nigeria, Ayode and Oyebande (1978), Oyebande (1978), olofin (1983), Isaac (1965) and so on. Even in our national dailies, the need for a solution to the water supply problem is constantly being highlighted from diverse perspective; the recent in water resources both at federal and state level has definitely expanded the stock Of literature on micro water supply.

Water as we have seen, is an essential part of living matter, so it is not surprising that water should also be an ideal home for living matter. Where ever there are rivers, lakes, reservoirs and ponds there is form of life is impossible for lack of nutrient, oxygen or light (Davies-1969).

Many of the present problems in developing countries are in fact water related. Poor health standard can also be attributed to scarcity of water which often leads to consumption of polluted water resulting in illness such as cholera, diarrhea, etc. land degradation which is closely related to soil water deficit, drought, starvation and hunger crescent in Africa is located on the hydrological margin sensitive to changing relations between the short and long branches of the water cycle (WHO 1965)

2.2 PORTABLE WATER

The presence of lead in drinking water is more prevalent and serious than many people realize. Despite common perceptions, lead is not restricted to inner-city communities, but rather is a problem that affects many water systems across the country. According to an Environmental Protection Agency study released in 1993, more than 800 drinking water systems around the nation contain excessive lead. Today, the EPA estimates that more than

40 million Americans are exposed to potentially dangerous amounts of lead in their drinking water. Recent legislation has helped decrease the problem.

Mobogunje (1975) did an analysis of domestic water in 28 urban centers in Nigeria. He came up with a result establishing the cordial relationship existing between the two. He disowned their lack of portable water as a hindrance to economic development.

Although we drink two pints daily, our domestic consumption of water may be over 80 gallons per head per day the total domestic will be then the product of population and the per-capital domestic demand much of this used. For hygiene bath, washing cloth and flushing toilets. The remaining we used in various ways such as industrial demand and that of luxury such as watering flowers, car wash etc. (davies 1969).in many under developed countries the prevalence of water borne disease s is still as it was in England 100 years ago. As there is no efficient medical treatment, the only answer is a safe water supply. But it is very difficult to convince people to the benefit especially where water is concerned (davies 1986).

The security of water also explains the boom in proliferation and sale of bottled and bagged cellophane water under different names. After the Government discovered the hazard sin the scale and consumption of such water enacted a decree which permitted the National agency for food, drug administration and control (NAFDAC) to regulate the activities of water producers by granting licenses only to eligible producers. Despite this, hacker of the pure water in cellophane bags is still very rampant.

2.3 SOURCES OF WATER

Davies (1969) defined “precipitation as the main source of water supply. He stressed further this could occur in the form of rain, snowfall and dew that precipitation in the form of rain provide the percentage of other precipitation and form the highest form of water supply in the tropical region. This support the observation in the study area which show the rainy

season as the period that reduce the hardship of people thereby enabling people to store rain water in large pot and drums.

Rainfall by its nature according to Jasper (1976) occurs in different quantities in various areas. The distribution of rain water causes various water problems in the country that about 65 percent of the total world population lacks a reliable source of water for both domestic and Agricultural use. The percentage of mostly affected is found in Asia, Latin America, Caribbean and African countries.

2.4 THOSE RESPONSIBLE FOR THE PROVISION OF WATER

Institutional structure at the Federal, States and Local Government levels is necessary for the formulation and implementation of the policies for improved water resources management and public investment. Presently, there are three major participants in water resources development and management programs in Nigeria: governmental organizations, NGOs, and private agencies. A new dimension must be included in water resources development and Management programs by community involvement. In order to implement a sound water resources management policy, a level of inter-connectivity amongst different organizations.

In 1994, the minister of water resources and rural development in person of Alhaji Isa Muhammad advised states Government to set aside 5 to 10 percent of their annual budget for water supply scheme as one of the major to fight water born disease, he maintained that such level of funding for water projects, would minimize expenses on hospital building and curative drug supply.

In 1991, the EPA imposed new standards for lead levels in drinking water that are 10 times more protective than levels previously thought to be safe. The new standard allows for a lead level of no more than 15 parts per billion (ppb). Current studies, however, show that lead

levels in our drinking water continue to be too high. What's more, new research indicates that lead may be more harmful than previously thought.

In the early 1950s, government's attempt at Ground water development in Nigeria was through the Geological Survey of Nigeria. But concerted efforts have been made since Independence towards the provision of potable water to the citizenry. The Nigerian government's major intervention in water resources development came during the first National Development Plan (1962 – 1968) which saw the establishment of the River Niger and Lake Chad Basin Commissions. In 1973 and 1974, the Sokoto-Rima and Chad Basin Authorities were established. In 1976, the river basin authorities were increased to eleven (11) to cover the whole country. But, before then in 1975, the Federal Ministry of Water Resources (FMWR) was created. (Nwankwoala, 2010)

World health organization (WHO) in its survey of some developing countries came stated that about one third of urban dwellers were supplied with pipe borne water. The remaining two third were forced to obtain their water from unsuitable and unsanitary sources such as open shallow wells, streams, irrigated channel etc. (WHO, 1965)

According to Goni (2006), good water policies and management depend on the quality of knowledge available to the decision makers. The major institutional problem in water resources development and administration is finding a relevant decision making framework, for maximizing the effective management of water resources at minimum possible economic, political and social costs (Ajayi, 2006).

Even though an analysis of expenditure so far by some state government such as Lagos state through word banks financed water project only 35% of total water demand for the state population of 6.5 million can be met (Mabogunje 1975).

The interest of international agencies such as UNICEP and UNESCO in water supply in the country should be encouraged and nurtured because these world bodies are concerned

with domestic water supply, generally in developing countries due to direct or indirect relationship with other health functions of reducing or eliminating water borne diseases. World Health Organization (WHO) stated that every 8 second a child dies from water related disease in under develop countries. This is very sad and alarming and only portrays the importance and need for the provision of efficient supply of adequate and portable drinking by the Nigerian government.

Therefore, as a student conducting a research project I am interested in finding out to what extent the supply of water by the state water board has been able to meet the needs of the people of Bida township.

2.5 PROBLEMS OF WATER SUPPLY

It would be interesting to note that during the cause of my search for newspaper articles related to this project work I noticed that at least every 5 or 6 papers I read through , one would have something on water which was of interest to me. Obviously the might have been coincidental but to the pattern really struck me of the reality of problems and importance of water faced globally.

Shodpo (1999) writing in the Guardian ‘‘No WATER IN MUSHIN’’ i make bold to state that at least in mushxin (precisely in Cardoso street and adjoining areas) water has remained an essential commodity since October last year.

Also Obih (1999) observed that the countdown to the 10th world youth championship was on and one of the host cities seems not able yet to solve the problem of electricity and water supply. Their supply instant of improving has remained erratic and unreliable. (The Guardian, 1999).

Ogomigo (1999) stated that with a population growth rate 4.5 and with less than 35% of the Nigeria population having access to portable drinking water, then it would be

reasonable to say that 70% of the populace can have access to drink water by the 2020 (The Guardian- 2005).

But the water crisis is already here for many households particularly in the poor areas of Nigeria. In south-east Nigeria, (Enugu, Abia, Ebonyi, Imo, Anambra), some of the reasons for the crisis, include the fact that some of the pipes in use have aged with, thereby compromising water purity as well as the health of people. This is particularly the case in cities, where also, the perennial water problems have been attributed to a lack of funds to carry out repairs and rehabilitation of obsolete water schemes. The states are thus only able to make partial supplies to cities, implying that most rural communities are left out. This has heightened the vulnerability of rural households to water related diseases and food insecurity. Households bridge the gap by sinking boreholes or patronizing vendors. In such cases they pay as much as N20-N30 for a 20-liter jerry can. Others, who are unwilling or unable to pay resort to fetching from rivers or streams which are not guaranteed to be pure and healthy. Yet, the country is noted for its two river systems: the Niger and the Benue which together with their tributaries drain half the area of the country. According to Oyebande (2011), “the per capita share of surface water alone is of the order of 3,000m per annum. Areas which are deficient in surface water (e.g. the Sahelian zone) or whose surface water is contaminated by saline intrusion or oil pollutant (e.g. Niger Delta) are adequately compensated with ground water resources”. So ideally, water shortage should not be a major concern in the nation. The case however is different. One major reason is that the first major water supply and sanitation policy came up only recently, year 2000, with a full document being prepared in 2004. The absence of a policy allowed the development over time to become inadequate and inefficient. The States, through their Water Supply Agencies (WSA), have primary responsibility for urban water supply. The River Basin Development Authorities (RBDAs) release water from

their dams to State agencies at agreed rates of charge for water supply development. (Olajide,2011)

Jasper (1970) suggested that one of the major means of combating water problem is the intra and inter regional drainage system. Dry region of Egypt and Sudan for instance depend mainly on Nile River. He stressed that river and Oasis are nerves and nuclear which help desert countries like Libya and Algeria to survive. He added that in Nigeria river Neger, river Benue, Gongola, Sokoto and Anambra help in no more small to alternate water shortage by providing huge pods and some mechanized and guide water reservoir system.

Much of the life in water is harmless and some are beneficial, but in water there is also organism invisible to the naked eyes that have caused more sickness and death than all the wars in history. There are the pathogenic bacteria, viruses and protozoa (Davies 1969).

Life expectancy at the beginning of the 19th century was 30 years. This was as a result of several water borne disease such as Cholera, Typhoid and gastric interests. People were ignorant the cause of all these disease was as a result of bad sanitation and contaminated water sources. Many disease associated with tropical areas are as a result of poor sanitary practices are due to poor water preservation. Canals, gutters marshes, cisterns and holes in trees provide a suitable habitat for the young of mosquito that transmit malaria, yellow fever, and dengue fever Water equally support several worms and flukes that infect man and cattle e.g. the fluke bilharzias (schustosoma).

When a person comes in contact with infected water the parasite enters the skin and breeds inside the body. The eggs of the parasite pass back into the water with human excrete and the off spring becomes parasitic on snails. From here it spread and infects more people (WHO-1965).

In the Nigerian Guardian of March 22nd 1992 Kafara, a member of the legal association of alternative medicine practitioners (LAAMP) argued that the therapeutic

potency of water has long been acknowledged she maintained that it is use in treatment of cold influenza, constipation, fever, general debility, elixir for gastronomically waste. It was also said that in the absence of adequate drinking water diseases such as cholera, typhoid, dysentery and diarrhea together with skin and eye infections and were a common occurrence it was stated by Kafara, (1992) that 80% of the illness in the developing world is due to inadequate, unsafe water supplies and sanitation facilities causing an estimated 25,000 deaths a day 1. She also stated that four million children die each year from diarrhea caused by water borne pathogens and in absolute terms an estimated 1,300 million people lack safe water supplies in developing countries.

It has been noticed that in herbal preparation of medicine, a lot of water is needed. The reason is that water is said to be media of extraction i.e. to bring out the chemical ingredients in the herbs. It is also used aexcipient or transporter of such dissolved or extracted chemical ingredients without which such cannot circulate in the body. Some experts on herbal remedies also said it acts as flushing agents that will help in the assimilation of whatever is put in the system (Kafara 1992).

Jaspa (1970) argued that one way to manage water resources is to increase the supply in a particular area, mostly by building Dams and reservoirs, bring in surface water form another area and tapping ground water. The other approach is to improve the efficiency of water supply by decreasing use and waste.

In this regard most to the state in the country established water co-operation of which Niger state Government also established a Board at Bida with the aim of putting the planning and administration of water supply in the state to the more efficient.

2.6 CONCEPTUAL FRAME WORK

Water is crucial to every type of human endeavor, indeed to human life itself. Water resources, while renewable, are limited. The drought situations in the Sahel in the early 1970s, in Western Europe in 1976, and in the United States in 1977 have merely accentuated the long-term problems are likely to become critical unless urgent and immediate action is taken both to increase and conserve existing supplies of water resources. (Adrian T. McDonald & David Kay).

Water is among the most essential requisites that nature provides to sustain life for plants, Animals, and humans. The total quantity of fresh water on earth could satisfy all the needs of the human population if it were evenly distributed and accessible.

Water is an important resource being used in a variety of ways at many different levels which produces social, spatial and organizational problems. Given also its potential as a resource of hazard, the result is a management task of remarkable complexity. A specific water resource at one site is frequently being used in several different capacities at the same time. It is therefore subject to multiple-use management, or perhaps, to management based on compromise and conflict resolution.

Historically, nations have flourished on a basis of advanced water resources development and nations and individuals have conflicted over water rights. As early as 4500 Bp, the Mesopotamian cities of Kagash and Umma were in dispute over water the apparent civil nature of many water resources developments was, in reality, frequently more military in nature, being the expression of the desire for a more secure water supply at times of conflict (Adrian .T McDonald & David Kay).

CHAPTER THREE

In this chapter, the data gathered from failed measured and observation were organized and organized and presented using both tables and other descriptive statistical tools. 44 questionnaires are available for the analyses. Information obtain from these questionnaire is presented below

Sex of the respondents

Sex	Frequency	Percentage
Male	31	69 %
Female	14	31%
Total	45	100%

(source: field work, 2015)

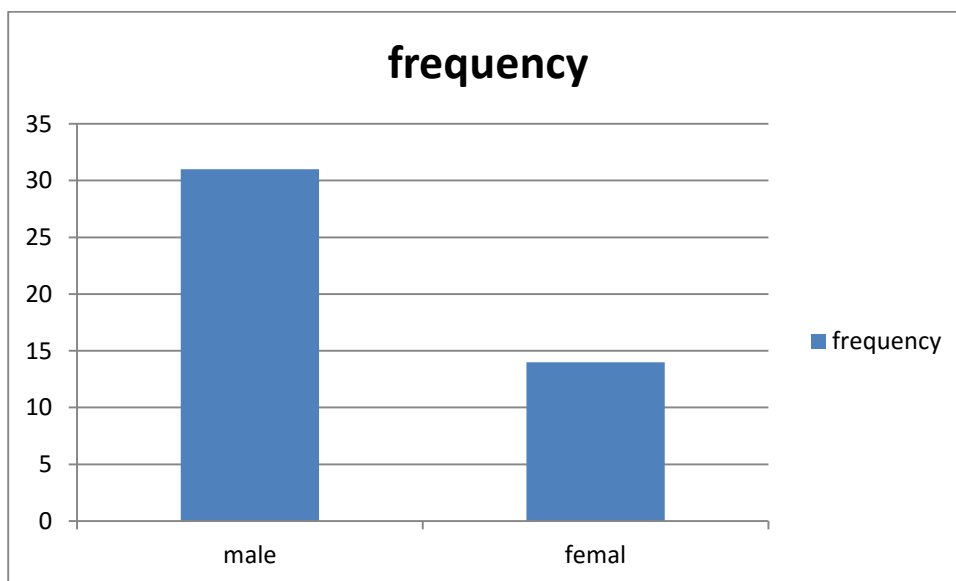


Table 1, shows that majority 31 (64%) of the respondent were males and only 14 (31%) were female as observed in the area, this is due to the fact that early marriage is practice their, that majority of the female are married.

Age category

Age of respondent	Frequency	Percentage
20-30	22	49%
31-40	11	24%
41-50	10	22%
50 and above	2	5%
Total	45	100%

(Source: field work, 2015)

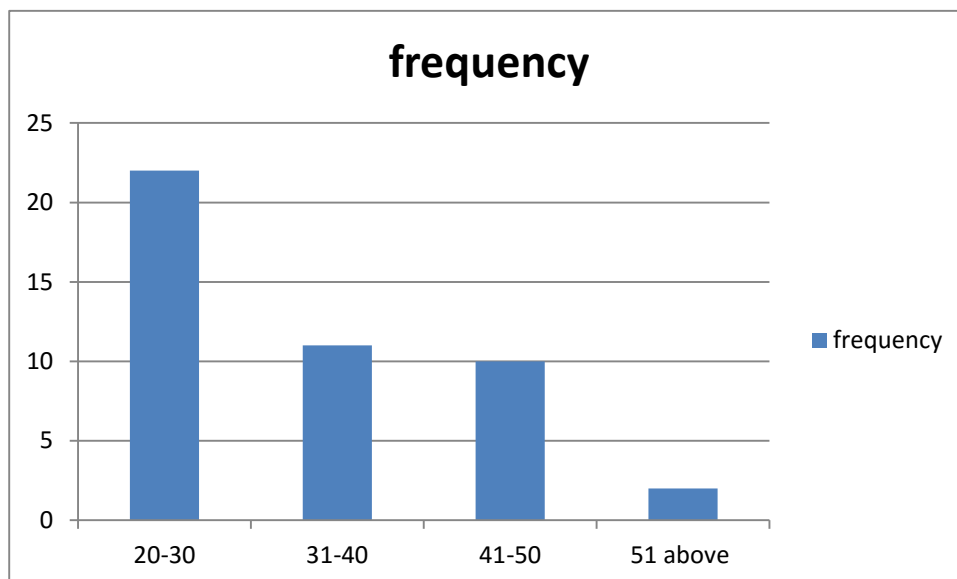
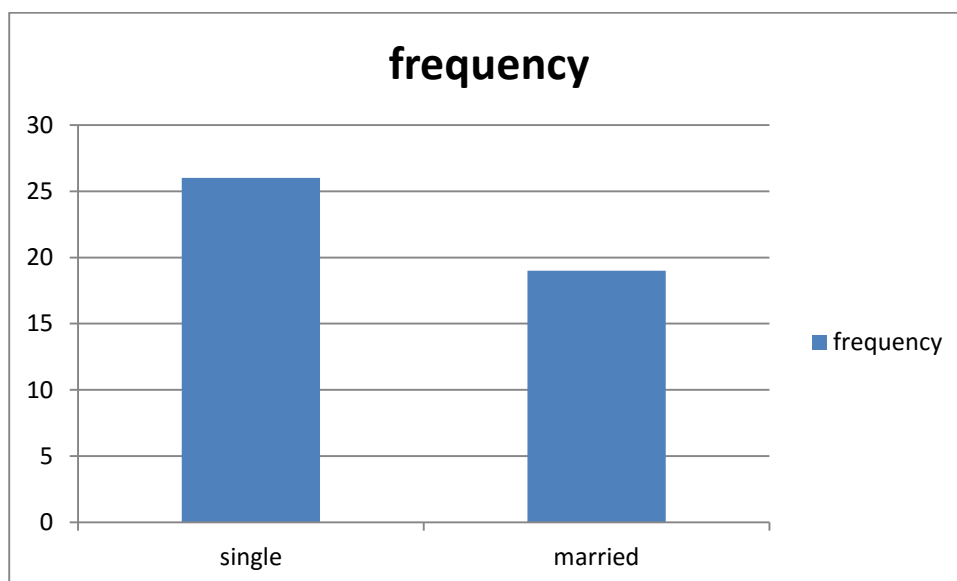


Table 2 shows that, majority of the respondent whom are 22 (49%) are within the age of 20-30, 11 (24%) of the respondent are within the age of 31-40), 10 (22%) of the respondent are within the age of 41-50 while 2 (5%) of the respondent are within the age of 50 and above. This may be interpreted to be that the environment is of more young people who could be as a result of in migration within the urban area.

Marital status

Marital status	Frequency	Percentage
Single	26	58%
Married	19	42%
Total	45	100%

(Source: field work, 2015)



The table 3 shows that majority of the respondent were marriage people this coincide with the observation made that early marriage is practice in the area

Occupation of the respondent

Occupation	Frequency	Percentage (%)
Farming	11	24%
Public service	8	18%
Trading	23	51%
Others	3	7%
Total	45	100%

(Source: field work, 2015)

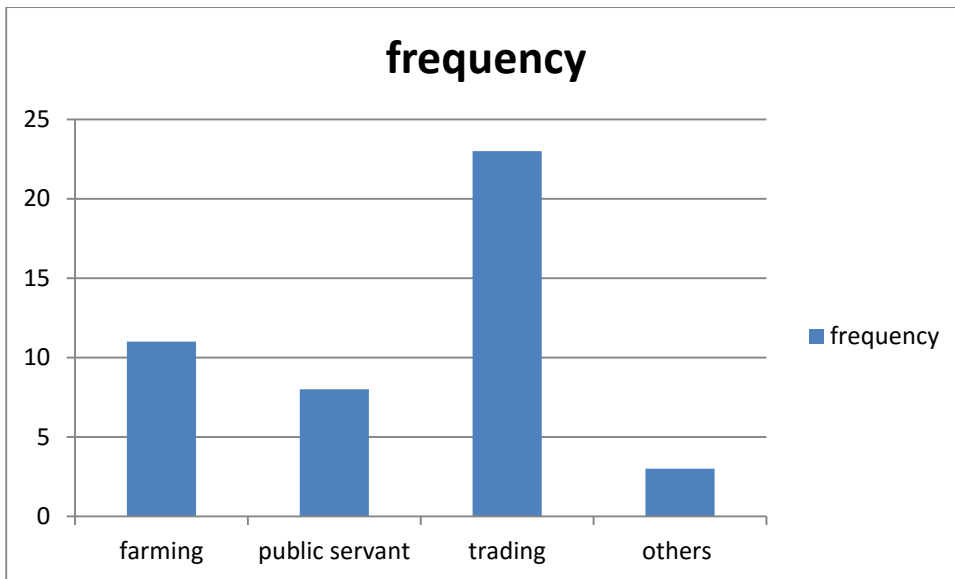


Table 4 shows that 11 (24%) of the respondent are farmers while 8 (18%) of the respondent were public service staff then 23 (51%) of the respondent were traders while 3 (7%) of the respondent engage in one form of economic activities.

Is there any water supply system in your house?

Water supply system	Frequency	Percentage
Yes	28	62%
No	17	38%
Total	45	100%

(Source: field work, 2015)

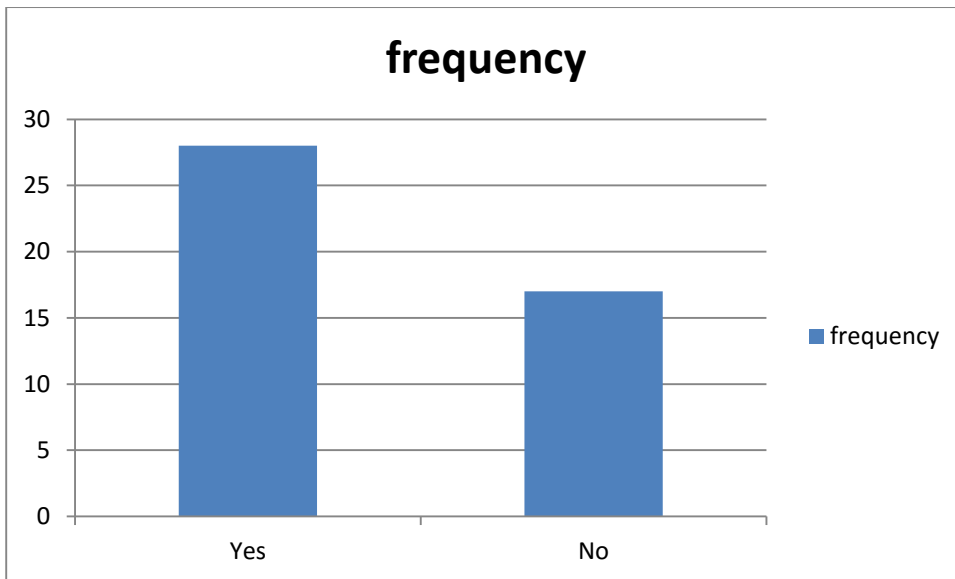
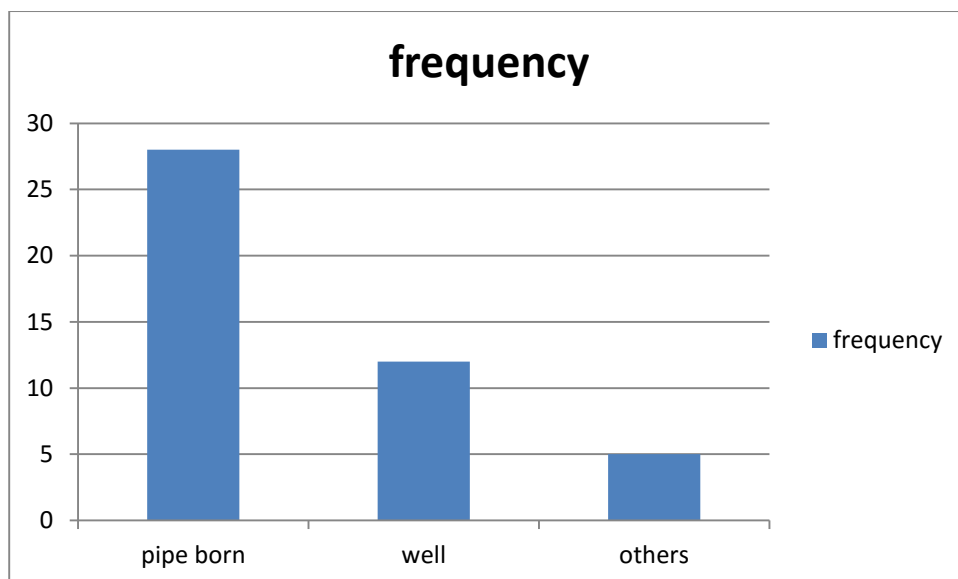


Table 5 shows that majority of the respondent have one form of water supply system in their houses which comprise of 28 (62%) of the respondent while the remaining 17(38%) of the respondent don't have any water supply system in their houses.

Types of water supply system

Water supply	Frequency	Percentage
Pipe born	28	62%
Well	12	27%
Others	5	11%
Total	45	100%

(Source: field work, 2015)

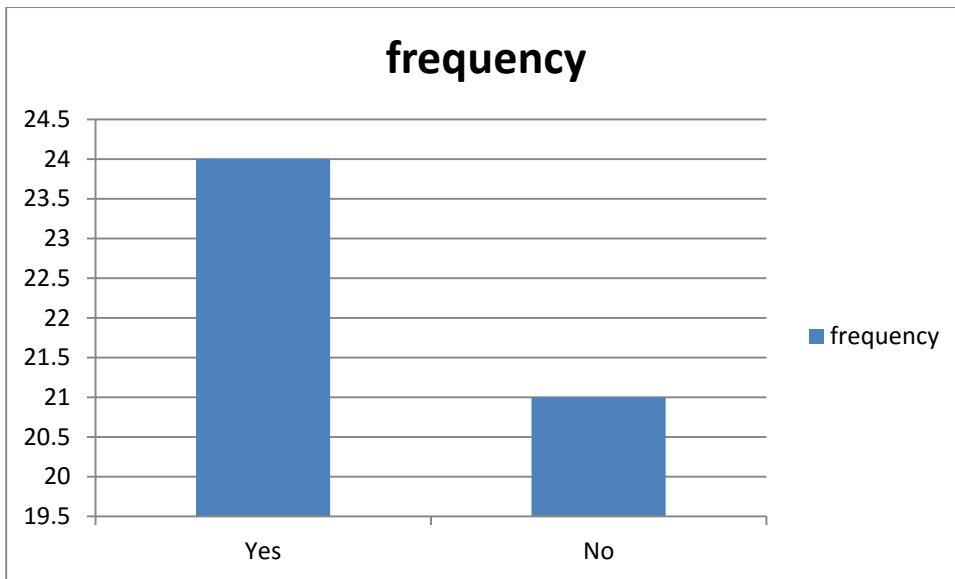


The table 6 above shows that 28 (62%) of the respondent source their water from the pipe born sources while 12 (27%) percent of the respondent source their water from the well while 5 (11%) of the respondent got their source of water from other sources.

Is the water supply system suitable?

Response	Frequency	Percentage
Yes	24	53%
No	21	47%
Total	45	100%

(Source: field work, 2015)

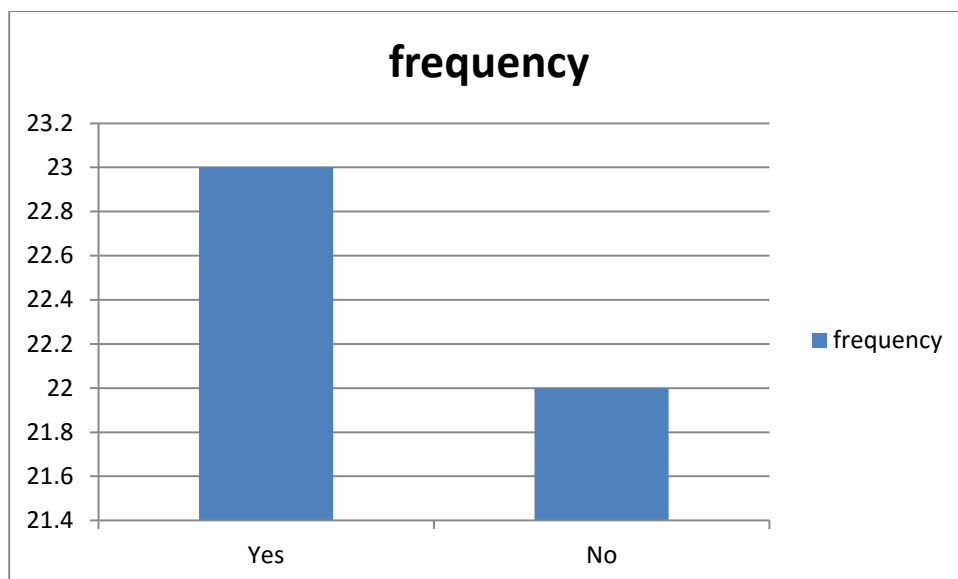


The table 7 above shows that 24 (53%) of the respondent are of the view that the supplied water is suitable for their domestic uses while 22(49%) are of the view that the water is not suitable for domestic uses.

Is the water supply system meeting up with the increase population?

Response	Frequency	Percentage
Yes	23	51%
No	22	49%
Total	45	100%

(Source: field work, 2015)

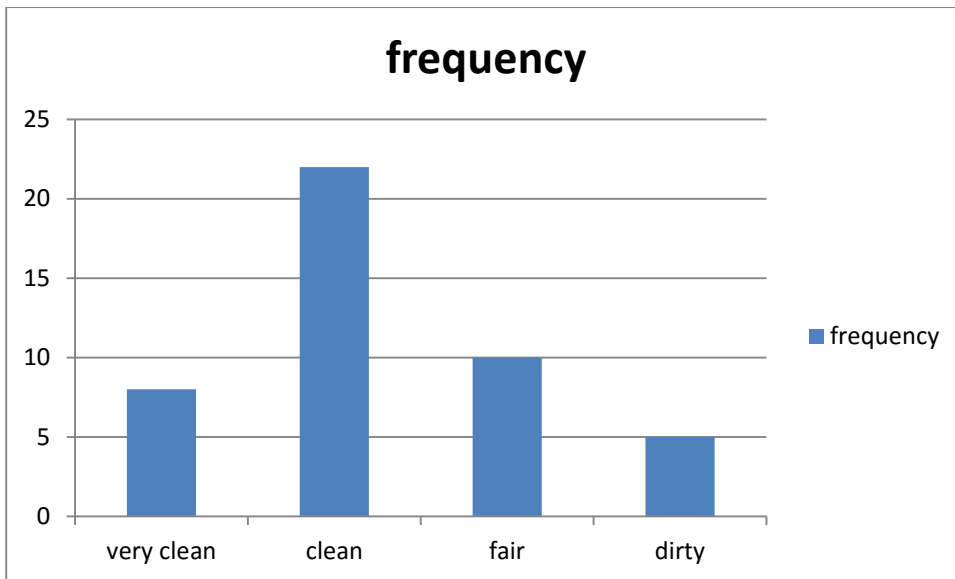


The table 8 above shows that 23 (51%) of the respondent are of the view that there is increase in the rate of the supply system as population increase while 22 (49%) are of the view that there is no any increase in the supply system

How portable is the water you drink?

Response	Frequency	Percentage
Very clean	8	18%
Clean	22	49%
Fair	10	22%
Dirty	5	11%
Total	45	100%

(Source: field work, 2015)

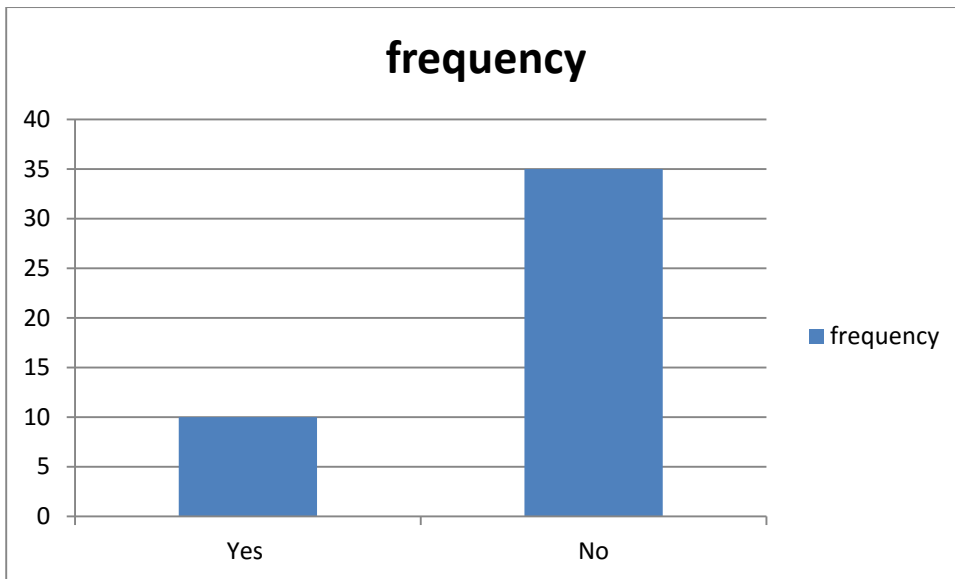


The table 9 above shows that about 8(18%) of the respondent have access to very clean water while 22(49%) of the respondent have access to clean water while 10 (22%) of the respondent have access to fairly clean water while the remaining 5 (11%) of the respondent are of the view that the water their obtain is from a dirty source.

Do you use any means to purify your water

Response	Frequency	Percentage
Yes	10	22%
No	35	78%
Total	45	100%

(Source: field work, 2015)

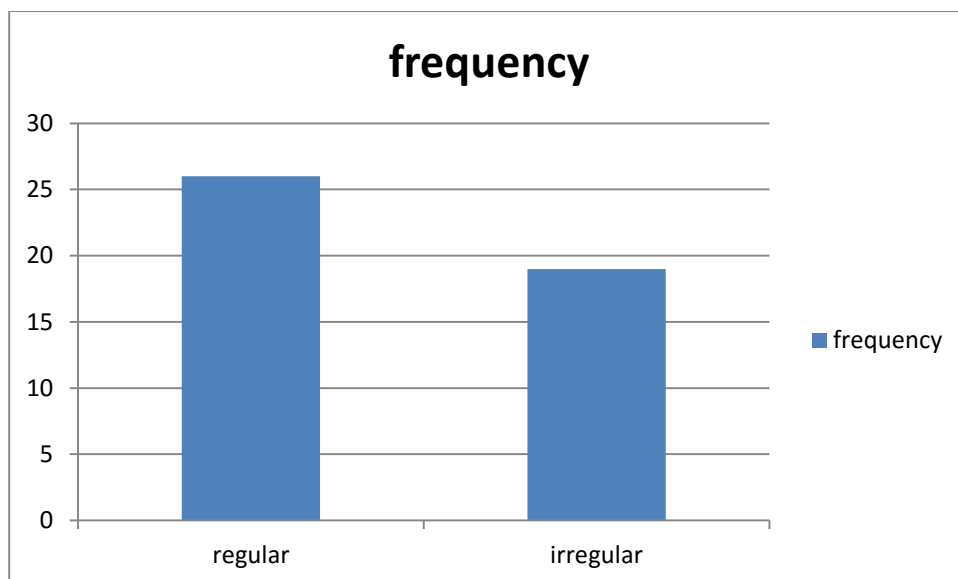


The table 10 above shows that about 10 (22%) of the respondent have to purify their water before consumption because they found it unclean while 35 (78%) of the respondent say they need no any purification method before consuming their water.

What is the position of the water supply?

Response	Frequency	Percentage
Regular	26	58%
Irregular	19	42%
Total	45	100%

(Source: field work, 2015)

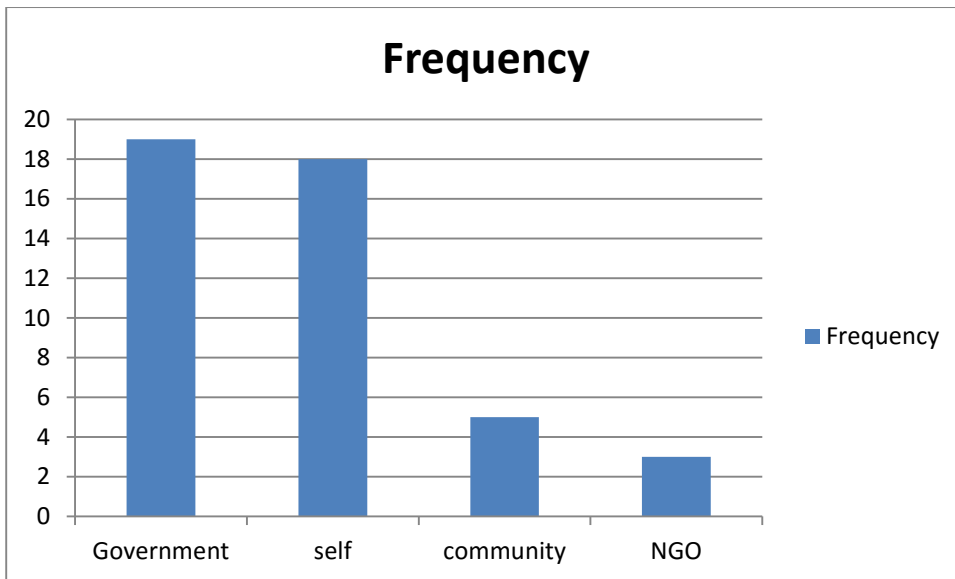


From the 11 table above it seen that 26 (58%) of the respondent have access to regular water supply while 19 (42%) of the respondent have it that they lack regular water supply.

Who is responsible for supply of water?

Response	Frequency	Percentage
Government	19	42%
Self	18	40%
Community	5	11%
Non government organization	3	7%
Total	45	100%

(Source: field work, 2015)

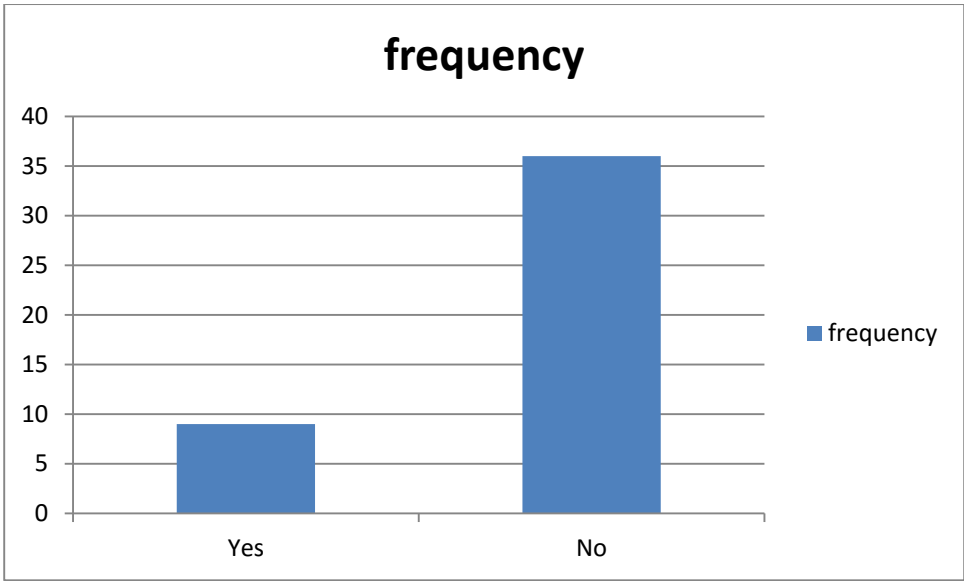


From the table 12 above it is shown that 19 (42%) of the respondent are of the view that government is responsible for the available water supply while 18 (40%) of the respondent say that there are responsible for their water supply themselves while 5 (11%) of the respondent say that community are responsible of water supply while 3 (7%) of the respondent are of the point that water is been supply

If the supply is from the government do you pay tax?

Response	Frequency	Percentage
Yes	9	20%
No	36	80%
Total	45	100%

(Source: field work, 2015)



From the table 13 it is broadly seen that the minority of the respondent are whom are 9 (20%) have it that they pay tax for the water supply system while the majority of the respondent are of the view that no is been paid for water supply system.

CHAPTER FOUR

SUMMARY OF THE FINDING, RECOMMENDATION AND CONCLUSION.

4.1 INTRODUCTION

This chapter summarizes the findings for this study. Recommendation and conclusion of the findings. This was followed by recommendations and lastly conclusion.

This research has been concerned with the assessment of government effort in the provision of portable water supply in Bida Local Government area, in Niger State of Nigeria. The research sought information from the inhabitant of the area through questionnaire administered, with the view to have an insight into the provision of portable water in the study area.

The information obtained from the respondent are analyzed, it is the analysis made that reveal fact of the situation and from the fact discovered we reached to the final conclusion after which recommendation as regard to the possible ways of improving the situation were provided as presented below.

4.2 SUMMARY OF THE MAJOR FINDING

From the research conducted, the following are major findings.

Firstly, water supply conditions in the study area is very regular and reliable, because of the effort made by government through it National Borehole programme.

Secondly boreholes are the major source of water supply in the area which serve the major modern water supply system in the study area.

Thirdly, the water supply in the area is clean to a minimum level of consumption this signifies that water is been treated before pumping it out for the consumption.

Fourthly the rate of the supply of water is increasing on daily bases to enable it meet the increasing demand by population in the area.

Fifthly, the study also reveals that people in the study area, have regular water supply, even though some of them relied on communal hand dug shallow wells.

Sixthly, the study also reveals that most of the sources of water in the area are provided by the state government through construction of boreholes and hand pump in the state..

4.3 RECOMMENDATION

Based on the finding of the research the following recommendations are therefore made.

Government should increase it effort towards ensuring the provision of portable water within the area as there is a lot of people who are still suffering the used of contaminated water from an unsecure source within the study area.

Government should also try to see that the supply of water in the study area meet up with the increasing population as a result of high birthrate in the area due to the practice of early marriage.

Also the inhabitant on their own should further more straitening the initiation of community development programmers to help in the construction of another sources of water such as boreholes in other to check into the effort of government.

Finally seminars and workshops should be introduced at local government level in order to enlighten people on how to manage water sources.

4.4 CONCLUSION

The findings, suggestions and recommendations stated above are meant to solve or reduce the problem affecting the people of Bida local Government area of Niger state as regard to the

provision of portable water and way in which water supply in Bida can be effective, regular and reliable. These recommendations will certainly assist in solving people’s problems as regard to portable water if authorities or Agencies concern with administration of water issues adhered to them.

Finally it is hope that, by implementing the recommended strategies, the need for adequate and portable water supply in Bida local government area will be achieved.

4.5 TEST OF RESEARCH HYPOTHESIS

H₀: There is no any effort made by Government in providing portable water supply in Bida local government

Chi square formula is used for testing the hypothesis

$$X^2 = \frac{\sum(O-E)^2}{E}$$

O =observed

E = Expected variable

$$\sum \frac{X}{n} = \frac{45}{4} = 7.5$$

With reference to table 12 those responsible for the supply of water

Response	Frequency	Percentage
Government	19	42%
Self	18	40%
Community	5	11%
Non government organization	3	7%
Total	45	100%

(Source: field work, 2015)

Chi square table for those responsible for supply of water

O	E	O-E	(O-E) ²	$\frac{(O - E)^2}{E}$
19	11.25	7.75	60.0625	5.3
18	11.25	6.75	45.5625	4.1
5	11.25	6.25	39.0625	3.5
3	11.25	8.25	68.0625	6.1
Total	45			18.95

D f = n-1

DF= degree of freedom

N= number of raw

D f= 4-1 =3

Calculated value of $X^2=18.95$ while the T tabulated is 7.815 at 0.5 significant level

Therefore the calculated value of 18.95 is greater than the tabulated value of 7.815, we therefore reject the null hypothesis (Ho) and accept the alternative hypothesis, by concluding that, there are a lot of effort made by Government in providing portable water supply in Bida Local Government area of Niger state.

4.6 INTERPRETATION

Based on the calculation using chi-square formula as stated earlier the calculated value of 18.95 is found to be greater than the critical value of 7.815 that means the null hypothesis have to rejected that why we rejected the null and therefore accepted the alternative hypothesis. That is why we concluded that, there are a lot of efforts made by Government in providing portable water supply in Bida Local Government area of Niger state

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APPENDIX

USMAN DANFODIYO UNIVERSITY, SOKOTO

DEPARTMENT OF GEOGRAPHY

RESEARCH TOPIC: ASSESSMENT OF GOVERNMENT EFFORT IN THE PROVISION OF PORTABLE WATER SUPPLY IN BIDA LOCAL GOVERNMENT AREA OF NIGER STATE

I am a student of Usman Danfodiyo University, Sokoto. Conducting a research on the above mention topic. All information provided will be treated confidentially and will be used for academic purpose only.

You are therefore requested to respond as freely as possible.

Please tick where appropriate

1. Sex

Male { } Female { }

2 Age category

a. 20-30 { } b. 31-40 { } c. 41-50 { } d.50 and above { }

3. Marital status

a. married { } b. single { }

4. What is your occupation?

a. farming { } b. public service { } c. Trading { } d. Other { }

5. Is there any water supply system in your house?

Yes { } No { }

5b. if yes what types?

a. Pipe borne { }

b. well { }

c. others { }

6. Is the water supply system meeting up with the increase population?

a. Yes { }

b. No { }

7. Is the water supply system suitable?

a. Yes { } b. No { }

8. How portable is the water you drink?

a. very clean { } b. clean { } c. Dirty { } d. others { }

9. Do you use any means to purify your water?

a. Yes { } b. No { }

10. What is the position of the water supply?

a. Regular { }

b. Irregular { }

c. Others { }

11. Who is been responsible for the supply of water?

a. Government { }

b. self { }

c. community { }

d. Non-governmental organization { }

12. If the supply is from the government do you pay Tax?

a. Yes { }

b. No { }