

**TITLE PAGE**

**ENVIRONMENTAL SANITATION PROBLEMS  
AND PROSPECTS**

A CASE STUDY IN MINNA  
LOCAL GOVERNMENT AREA  
NIGER STATE

***BY***

**HAUWA ADAMU HALILU  
REG NO. PGD-GEO-2003-2004-280**

A THESIS REPORT SUBMITTED TO THE  
POSTGRADUATE SCHOOL IN FULFILMENT  
OF REQUIREMENTS FOR THE AWARD OF  
POST GRADUATE DIPLOMA  
IN ENVIRONMENTAL MANAGEMENT OF  
THE FEDERAL UNIVERSITY OF TECHNOLOGY  
MINNA, NIGER STATE

**DECEMBER, 2004**

## DEDICATION

This piece of work is dedicated to my late Parent who answered the call of Allah 13 years ago. May there soul rest in peace (Amen).

To my Husband **Idris A. Loguma** as well as my Children **Safiya, Sadiq, Isah** and **Adamu** whose untiring patience courage, moral and mutual understanding made it possible for me to successfully undertake my Post Graduate) Programme.

## ACKNOWLEDGEMENT

First and foremost I must be grateful to the Almighty Allah for sparing my life till this moment and for giving me better health condition, vision, guidance and inspiration throughout the course of my study despite the hurdles, bustles and surrounding me at the time of my study.

I wish to express my profound appreciation and thanks my project supervisor **Saidu, Salihu** who painstakingly guide me through out this work, per use every details of my work, suggesting and correcting all the correctable. My gratitude also goes to my academic adviser **Dr. Ayuba Halilu** I am indeed very grateful to the erudite Dr. for all his assistance.

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|------|----------------------|-----------------------------------|
| 1990 | 82, 995, 483         | 92                                |
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| 2025 | 235, 556, 077        | 253                               |
| 2030 | 263, 831, 190        | 289                               |
| 2035 | 304, 610, 540        | 328                               |
| 2040 | 341, 986, 340        | 368                               |

DATA SOURCE: NIGERIA AT A GLANCE CENSUS '1991 (NATIONAL POPULATION COMMISSION)

The population increase led to growth of urban population and urbanization, combined with other factors such as per capital consumption of sources and increasing level of technology, causing severe pressure on the eco system (Kunle etal, 1996). Due to pressure and the attendant on the eco system problems, United Nations Environment Programme (UNEP) have been playing important roles in developing knowledge of environmental problems and hoe to solve them. Among such is environmental sanitation.



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MINNA, NIGER STATE

**DECEMBER, 2004**

### **DECLARATION**

I **HAUWA A. HALILU** solemnly declare that this project work~~k~~ title "Environmental Sanitation Problems and Prospects" is carried out by me in its entirety. It is part of the requirements for the award of PDG in Environmental management of the Department of Geography, Federal University of Technology, Minna.

All citations from other literatures have been acknowledge and presented in my list of references.

**HAUWA ADAMU HALILU**

*STUDENT*

.....

*SIGN/DATE*

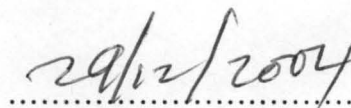
### **CERTIFICATION**

This is to certify that this project Environmental Sanitation Problems and Prospects is an original work undertaken by **Hauwa A. Halilu** PDG/GEO/SSSE/2003/2004/280, in accordance with the regulation governing the preparation and submission of project in the Department of Geography, Federal University of Technology, Minna, Niger State. Relevant work by other authors are duly given acknowledgement and accorded credit in this research work.



**MR. SALIHU SAIDU**

*(Project Supervisor)*



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**DR. M.T. USMAN**

*(Head of Department)*

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**SIGN/DATE**

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**PROF. J.A. ABALAKA**

*(Dean, Post Graduate School)*

.....

**SIGN/DATE**

.....

**EXTERNAL EXAMINER**

.....

**SIGN/DATE**

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To the director Primary Healthcare Department Minna West Local Government Chanchaga Minna, Niger State. **Hajiya, Titi Abubakar**, and the typist **Salihu Abdullahi**

In conclusion to all those who have contributed to the success of the project but due to space, I have been unable to acknowledge their respective contributions. I say thank you all.

## **ABSTRACT**

This study "The Environmental Sanitation Problems and Prospects: A case study of Minna Local Government Area, Niger State" as it effect the healthy living of the populace.

The variable covered in this study were of the sanitation of the Environment, as it relate to its problems and prospect, attitude and habits as well as facilities its inefficiency and non-availability. Eighty (80) responses drawn randomly and from eight (8) wards out of thirteen wards in Minna Local Government Area. questionnaire and field survey were the instruction used in this study and it was the 4 point laker scale type of strongly agree, agree and strongly disagree and disagree the data collected were analysed using frequencies and percentages

The findings of the study were ~~was~~ that there was a significant influence on the sanitation of the environment, vis-à-vis water pollution, refuse and sewage disposal, pollution and unplanned structural building. Habits and attitudes and facility on the problems and prospects of environmental sanitation in Minna Local Government Area of Niger State. The major problems facing environmental sanitation apart from people attitudes and habits was funding.

Poor funding was responsible for shortage of personnel and working facilities.

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## **CHAPTER ONE**

### **INTRODUCTION**

The earth is a "small home" if we are to look at it among the planets, it is said to be placed where life forms (plants and animals) exists. It was believed that before the creation of man, to decide the effective ways and means, there was no garbage on earth. It therefore, as part of man's day to day activities that garbage were produced. It is there the duty of man of getting rid of nuisance he created for healthy and clean environment.

Cleanliness (environmental sanitation) could be regarding man's effect to protect himself and the community in which he lives, against disease. However, neat environment apart from being pleasant and refreshing to the eye is what is required to provide a high standard of environmental hygiene. Environment sanitation problems and prospect in Minna Local Government with special reference to Minna town. It is on record that people living in this local government have suffered from severe epidemic disease, but the people failed to realize the connection between poor sanitary condition and epidemic. Also because of carefree attitude of the people in regard to environmental sanitation in the study area, to review in control of environmental sanitation activities.

#### **1.1 GENERAL OVERVIEW**

Every being has its closed associate as the immediate environment immensely. Various events have been affecting the air we breathe, the water we drink and the open green space we are accustomed to, using for leisure. The problems that arise from human use of land and resources are growing fast. The united nations environment programme (UNEP) have played important role in developing knowledge of environmental problems and how to solve them.



Girling (1978) concluded "that environment is a term applied to all conditions surrounding an individual, which are not part of the person plant, or animal itself".

The physical environment encompass such things as geographical and chemical conditions, later including the composition of the air, conditions of food and many other factors.

The world encyclopedia Britannica (vol. 17.1973) defines sanitation as "a field of public health, which involve man's efforts to control his environment, prevention and control of diseases. Sanitation also includes personal cleanliness which gives protection against diseases.

Udoh (1990) asserted that, any human society is said to pass a two way relationship with the environment he occupies. Man modifies the natural environment whether by hunting and the pursuit of agricultural activities and some complex urban industrial life. The environment which is under the influence of man also exert the well being of the human population that occupies it. (table 1.1 projected national population 1990 - 2040) its particular characteristic exposes and predisposes the human population to various form of disease and nutritional inadequacies on environmental health, one concentrate on identifying the agents which predispose their members to variety of infections and parasitic disease and to certain severe forms of nutritional problems. Added to those problems are the manifests of a new set of disease closely related to urban industrialized environment, diseases related to environmental pollution, stress - induced pattern of ill - health, including growing number of disease that continuously challenges the technology of modern medicine.

In Nigeria the population has been on increase and at an alarming rate. The growth rate was 3% with projected population of about 115, 224, and 312 for the year 2000.

**TABLE 1.1 PROJECTED NATIONAL POPULATIONS 1990 - 2040**

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But the increasing human population and accelerated urbanization in Nigeria and political development in terms of creation of new states and local government areas there is corresponding pressure on urban centres and degradation of environmental quality and the larger the urban area the lower the quality. (Kunle - etal, 1996).

Due to problems of environmental sanitation in our cities and the inability of local government areas whose environmental sanitation activities fall under its exclusive list, the federal government of Nigeria declared 1976 as the environmental sanitation year. Also on October 1<sup>st</sup> 1984 federal government launched its fifth phase of war against indiscipline which introduced weekly environmental sanitation in his speech, the then supreme headquarters General Tunde Idiagbon observed that a dirty environment contribute significantly to high mortality rate, particularly among the children similarly, in 1988 considering the degree of environmental problems in the country, the Federal government inaugurated Federal Environmental Agency (FEPA) and subsequent launching of National Policy on environment in 1989 and publication of guidelines and standards for environmental pollution control in Nigeria in 1991, in 1999 a ministry of environment was created and as part of re - orientation of Nigeria on the sensitivity of the environmental problems and cleanliness, environmental sanitation day was abolished. The principle behind this that cleanliness supposed to be a habit not be regulated.



## **1.2 BRIEF ON ENVIRONMENTAL SANITATION PROBLEMS AND PROSPECT IN MINNA.**

Minna like any other growing urban centres in Nigeria is still not free from environmental sanitation problems. The problem emanated from increase in human traffic into the town following the creation of Niger state with Minna as the state capital. Since that time population has been on increase.

The 1990 population census gave a growth rate of 2.83% with 143, 896. as its population figure. See (Table 1.1 projected National population 1990 - 2040)

Following the launching of war against indiscipline, phase five in 1984 environmental sanitation was given a priority under the then military governor Col. David Mark. A task force was inaugurated and jointly Financed by the state Government and Minna local government. Vehicles for sanitary purposes were provided as well as the necessary equipment. About thirty (30) environmental Health officers were employed into the Health and sanitary Department of the local government, and sixty (60) labourers were also employed. Sources: (Government Health office Minna).

The state ministry of Health also had a sizeable number of environmental Health officers on its pay rolls. During the David Mark's regime (1984 - 1986) environmental sanitation was goods and efficient, with the exit of David Mark in 1986, the organization's work towards sanitation and waste management began to face problems first of such problem was the funding between 1986 - 1990 the sanitation department and task force was given less than ₦50,000 monthly as subvention. By 1990 state government gave only about ₦20, 000 monthly while local government could not fulfill its obligation of the counter part finding.

This affected the organization's work and led to the lack of cleanliness and accumulation of waste in the environment.

The creation of State Environmental Protection Agency (NISEPA) and later Urban Development Board (NUDB) things began to take shape once more. Between 1990 – 1995 a total number of nine (9) sanitation vehicles were purchased. By 1999, the sanitation vehicles were raised to ten (10), unfortunately five (5) are road worthily forcing NUDB to chartered tippers from individual to execute their Programmes. The tippers were expected to make a trip in the collection and disposal of waste to minimize cost.

The Board has 215 casual labourers and makes use of sanitation officers (20) on the pay roll of local government.

Sources: (Niger Urban Development Board) (NUDB) the state government has been providing fund for the running and management of environmental sanitation activates. (NUDB).

With this provision for the agency that is concerned in management of sanitation activities and people's participation in the effort to keep their environment clean and free of waste, yet some toilet facilities, drainages and dumpsites are sorry sites to wastes.

The question then is what have been the problems towards effective environmental sanitation? What can we do to arrest the situation? And what prospect has the environmental sanitation in Minna considering the implication of health status of the people?

In view of the above situation there is the need to study the situation of environmental; sanitation, assess the management patterns and problems associated with it in order to explore other potential ways of enforcing



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environmental sanitation habit in the face of increasing population pressure (Kunle et al 1996).

On the basis it is hoped that a better way of tackling environmental sanitation problems will be proposed.

### **1.3 STATEMENT OF THE PROBLEM**

The environmental sanitation issues in Niger state have not been efficiently managed as observed, where the issue is involved at the identified communities i.e Minna local government area.

Nonetheless, this can be ascertained through logistics and planning aspects of the issues. The increase in population and corresponding increase in carefree attitude become a matter of concern to all. The generation of domestic waste in the municipal. These factors are the major determinants of only viable community programme, if success has to be achieved.

### **1.3 AIM AND OBJECTIVE OF THE STUDY**

As environmental sanitation problems and prospects constitute a serious environmental problem and threat to health, it becomes imperative to be studied. These objectives of the study are:-

1. To assess the extent of general poor sanitation
2. To assess the extent of carefree attitude of environmental sanitation in the study area.
3. To find out the problems of environmental sanitation.
4. To review the inputs of relevant agencies involved in control of environmental sanitation activities.
5. To make recommendations on the findings of the study.

## **HYPOTHESIS**

The researcher in her observations assume that the problems that affected the achieving of effectiveness, are among others, the attitude of our people towards government effort aim at ensuring the control of poor sanitary condition of the environment or environmental sanitation in the state.

## **HYPOTHESIS**

1. Environmental degradation waste and filthiness around dwelling will have no significant influence on environmental sanitation.
2. Irregular cleanliness and carefree attitude will have no significant influence on environmental sanitation problems and prospects.
3. Lack of proper disposal systems of human solid and liquid wastes will have no significant influence on the environmental sanitation problems.
4. Ill – informed habits and attitudes will have significant influence on the environmental sanitation problems prospects of Minna local government area.
5. Are people aware of the dangers of poor sanitary habit.
6. Regular evacuation of liquid wastes from sewages pits, drainages or gutters which produce unpleasant odour will have no significant influence on environmental sanitation problems.
7. Inadequate health personnel, Health facilities and virtually non availability of fund will have no significant influence on the environment sanitation problems and prospects in Minna local government area of Niger state.



Hi - that all listed - have significant on the prevalence of environmental sanitation in Minna.

The study will at long run serve as a reference material to individual NGO'S and public institutions.

### **1.5 JUSTIFICATION**

The subject intends to bring to light the problems associated with environmental sanitation and its impacts with special attention to Minna local government area Niger state.

These investigations will help give value and useful information in modifying our environmental field with regards to sanitation planning; this study would also be knowledge to people involve planning aspects of environmental sanitation programme. The implication of poor planning, specially of environment sanitation in Minna local government area such insight solution will give valuable and useful information in inaugurating our drive to achieve quick solutions with regards to general environmental sanitation.

### **1.6 SCOPE AND LIMITATION**

The study is mainly concerned with environmental sanitation on Nigerian municipalities problems and prospects.

As Nigerian municipalities cannot be studied generally, the research was confined to Minna local government area as the case study.

Some questionnaires were not returned lastly some staff were skeptical of the whole exercise for fear that their unit or department inadequacy would be exposed.

Some attempt to influence others to give inaccurate information.

## **STUDY AREA**

Minna the capital seat of Niger state Government is fed by River Chanchaga for all its water supply. Located at the eastern exit to Suleja. River Chanchaga takes its flow of water from the river Kaduna, the river provides the area with irrigation endowment (activates) which makes possible the agrarian nature of the people, who produce crops like maize, millet, guinea corn, vegetable of all kind, sugar cane production are among the agricultural potential of the people.

On the world map, Minna lies between latitude  $6^{\circ} 33''$  and  $7^{\circ} 15''$  north of the equator and longitude  $5^{\circ} 40'$  and  $6^{\circ} 33'$  east of the Greenwich meridian. Source (culled from Lands Department Archives) and world map)

This geographically places the area by sharing boundaries with Paikoro Local Government to the south Katcha to the west, and Shiroro Local Government area to the east, the estimated population of the various ethnic groups in Minna was about 851,995,483 (1990) while by 143,896 people. Major tribes are Gwari, Nupe, Hausa, Ibo, Yoruba and other similar communities of languages.

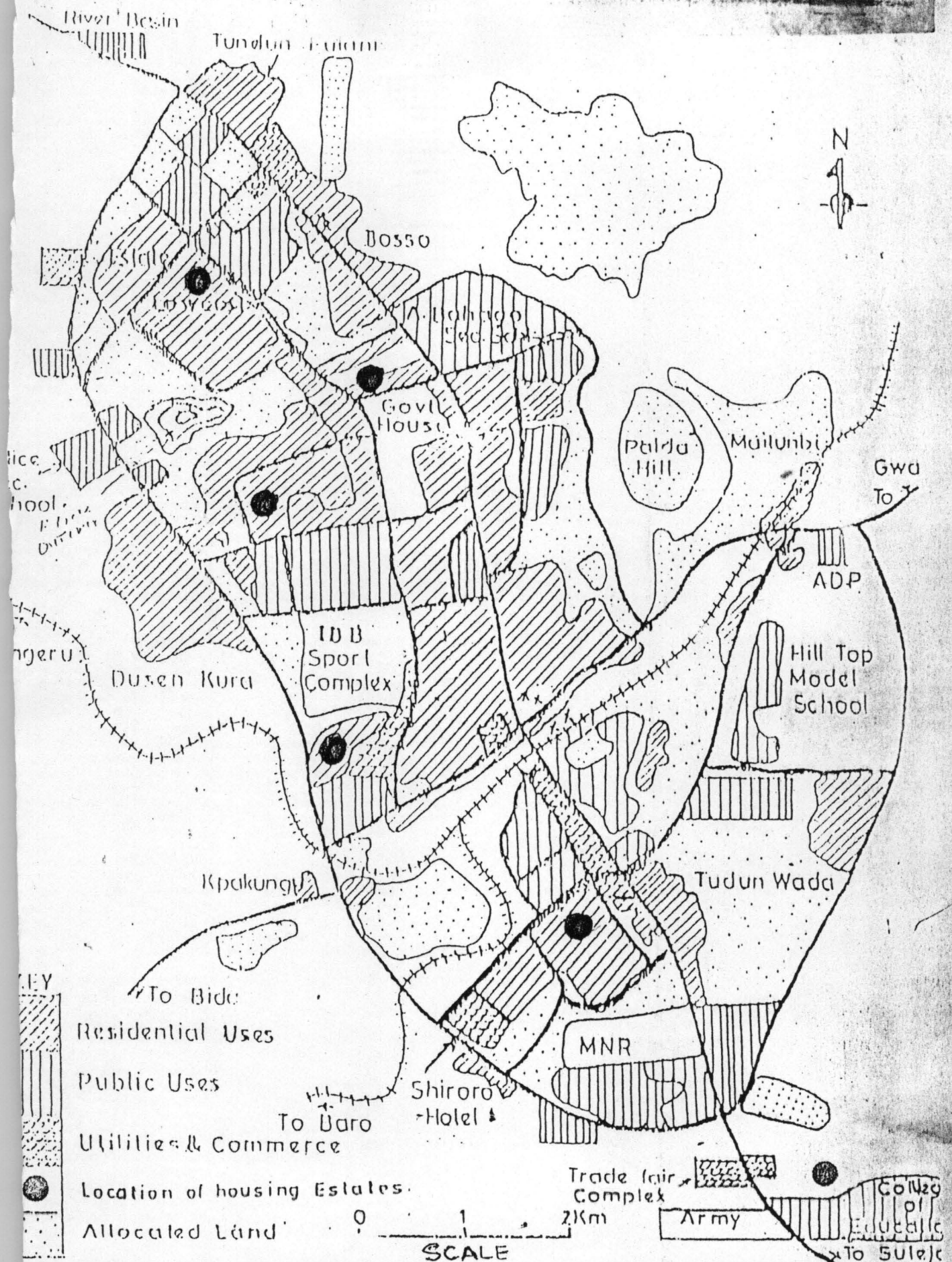
The duration of sunshine ranges from 7 to 9 hours per day from January through April and May. In months of July and August it drops to a mean of 4 hours per day due to increase in cloud cover and as this decreases to September, it rises again, Minna experiences dry and rainy seasons every year. The dry season is between November and March with harmattan dust haze around November. While rainy season is from March to October. Source (1991 census and Climate change department FUT Minna.) the highest temperature is recorded in the months of February and March at  $38^{\circ}\text{C}$  during the dry season. Source: (climate change FUT Minna). The vegetation in Minna is predominantly



Guinea savannah rainy savannah. The soil is of tropic he migenous soils which is clayish and ashy in colour. Source (Geography Department FUT)

The influence of people of people and rise in population had led to over - stretching of the available resources including those of satiation.





Source : Survey Department, Ilorin With Modification



## 1.7 GLOSSARY OF TERMS

**BREED:** Having young ones reproduced

**DEGRADATION:** Slum condition

**DUMP:** Place where rubbish may be unloaded and left

**ECOSYSTEM:** A function interaction of living and non living things.

**ENVIRONMENT:** Aggregate of all external condition and an influence  
affective life and development of an organism.

**ENVIRONMENT HAZARD:** Any dangerous material capable of causing  
injury to environment

**ENVIRONMENTAL SANITATION:** Measures that promote cleanliness of  
our immediate surroundings.

**MANAGEMENT:** A form of control or decision making process

**MUNICIPAL:** A town or city having self organization

**NGO:** Non Governmental organization

**POPULATION:** Number of persons living in a place.

**WASTE:** Any material that is thrown away because it has no further use  
by owner.

**REFUSE DISPOSAL:** Throwing away of solid waste by dumping.



## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **CONCEPT OF ENVIRONMENTAL SANITATION**

The health living of an individual depends solely on aesthetic and healthy nature of the environment, the individual lives in because of the influence it has on the individual physical, social, and emotional health. A good sanitary environment ensures emotional well being beautiful scenery, clean and orderly society.

The term Environment sanitation consists of two distinct words. Environment; Referring to the external influence that affect the individuals physical needs for good health such as fresh air, water, shelter, food, sleep, rest and protection against diseases attacks on the other hand. Sanitation refers to the tendency to react towards the promotion and maintenance of good health.

From the above assertion and views it was deducted that the problems of the environment are multidimensional.

In both the rural and urban areas today solid waste are produced by individuals and institutions. These solid wastes are generated as an object become obsolescent or un-usable and these include municipal wastes (combination of residential wastes and commercial wastes). These are discards of home offices, motor parks, markets, streets, stores, etc. our attitude to throw-away worsen the situation which now crane for an urgent action to avert the impending catastrophe.

Udoh (1978) opined that physical environment are known to have very far reaching consequences for health. This clearly draws our attention to the fact "that rapidly growing quantities of wastes both solid and liquid gradually degrade. The aesthetic nature of our environment which now pose threats to

human health and environment itself. Such rising situations in Minna of poor Environmental sanitation, in Minna call for urgent alertness to incidences of poor environmental sanitation among the people.

The worsening transformation of the environment has been the responsibility of man himself. The clean up exercise of drainages along roads and houses are the responsibilities of both government officials and the community. It is either done unsatisfactory or totally refusing to do it by doing since adequate supervision is lacking alongside.

Anto Chechon (1979) has this to say that "man has been blessed with good sense of reasoning the power to create so that he can add to what he is been given. But also he has not been a creator. Only a destroyer, forest keeps disappearing, rivers drying up. Huld life become extinct the climates ruined and lands grow poorer everyday, so bringing environmental standards up to scratch should be a task to be accomplished. For the stakes are high and time may be running about".

### **WATER POLLUTION**

Some impurities in taps are inevitable these are derived both from the different sources of water and from the treatment processes. Water quality is of prime importance. The traditional water source in towns and cities are more liable to faecal pollution. Domestic water is extracted from the ground water reservoir or from stream and rivers depending on settlement area of the people. Ground water in agriculture areas is at increased risk of contamination as out rate base fertilizer and pesticides applied on crops can reach into water supply.

Minna Local Government Areas main sources of water supply are at risk. The Chachanga Water Works managed by the state water board and from where

is pumped to the treatment plant could be seen taken its source of water from where agricultural crops are intensively grown. It was also observed that water pumped through pipe networks for public consumption around May – June 1999 was contaminated, arising from the corrosions of pipes and inside gutters thereby allowing waste water spillage to various homes for use.

Water borne diseases transmission occurs when the pathogens are in water which if drunk by a person or animal may then become infected potentially, water born diseases include the classical infections, notably, Cholera, Typhoid but also include a wide range of other diseases such as infectious hepatitis, diarrhea, dysentery, all spread through faecal oral routes.

One cannot quantify the faecal diseases but improvement in water quality will reduce their incidence.

Freeman (1975) stated that water is a compound of two parts of hydrogen to one of oxygen. Boils at 100°C (212°F) and freezes at 0°C (32°F) that organic products in water may be harmful if they contain pathogenic (disease producing) bacteria. The bacteria include those of typhoid and paratyphoid, dysentery and cholera.

### **FOOD POISONING**

There are dangers of bacteria food poisoning which occurs when cooked or uncooked food stuffs are heavily contaminated by certain kinds of spore-forming bacteria carried on or within the human or animal body from literature. Two types of bacteria are identified to contaminated food. These are disease producing bacteria which use one food as a vehicle in which enter the body. They can be transmitted by way of excreta of a patient, unwashed hands handling food and other unhygienic manners. The second type is the food



poisoning bacteria that produce their toxin in the food which may alter its taste and appearance.

Glibert and Robert (1977) reported "that" food poisoning produces on acute gastro enteritis which is usually short and self limiting. Between 300 and 1200 cases of various diseases are un - reported that there are between 20 and 50 deaths each year resulting from severe 'hydration and loss of electronic these deaths occur among the young and adult people.

Cases of incidences of food poisoning can be traced not only to run sanitary environment, but also due to our unhygienic habits and attitudes in handling these food items and foodstuffs, poisoning had been reported to be responsible for the incidence of diarrhea and vomiting in England and Wales as reported by Gilbert and Robert (1977).

### **FOOD PRESERVATION**

There are five (5) notable melmods of keeping food in a condition fit to be eaten at anytime it is required, these include Cooking, Heating, use of preservatives substances, drying and Air conditioning. Daniel (1974) Health Science and physiology for tropical schools.

Cooking - here food may be dulled, that is kept at a temperature just above 0°C frozen below 0°C, food kept in household refrigerator given very deep freezing while fresh are noticed to retain their vitamin, nourishment and flavour value to the full.

Heating - boiling is not always a guarantee of sterility at ordinary temperation except boiling. Oil or sugars are used in frying or boiling fruit. Which reaches a much higher temperature. "Bacteria are killed above 110°C in most cases.



Preservatives substance – curing or smoking through age – long methods of preserving food still stand a challenge of the modern period. The meat or fish is held over wood smoke for a few day where the creosote firms kill the bacteria and give a woody taste to the food. Salting is another method which involves leaving some fish in brine with other flavouring until ready to be used.

Drying – through old, but also stands challenges of the time this simply involves the removal of food moisture needed for bacteria growth. Vegetable and some other foodstuffs are preserved and stored over indefinite period of time through the use of this method.

Air conditioning – the air that is the humidity, temperature, oxygen and carbon dioxide is carefully controlled so that even meat can now be taken to a long distant area arrives fresh with its flavour un – altered. Daniel (1974) Health science and physiology for tropical schools.

### **FOOD SANITATION**

Serious attention must be paid to article consumed by human beings as food. Food hawkers and food vendors are today seen on our street advertising their food items uncovered. Take for instance, the meat we buy from butchers in our market. It is dishearrening – if one get to the slaughter and find out that the basic needs for proper slaughtering of animal are lacking. Slaughter attendants are virtually absent, lack of water supply at times, non concentration of animal health, by health workers before being slaughter.

After slaughtering these animals, the meat are nakedly conveyed in open wheeled – barrows, tattered vehicles even on motor bikes to market stalls for sales. Glaring left open files, atmospheric contamination all occur, further making the meat unwholesome.

This same thing goes to other food items young girls and boys hawking cakes uncovered customers who call to buy, dip their bare hands into the "all" to pick for his / <sup>her</sup> choice, since provisions for tongs to be used in picking is not there, included among hawked food items on our streets uncovered are beans cake (akara) millet cakes (ma'assa). Groundnut cakes (Kulli - kulli). Fried potatoes, fried yams, roasted meat, roasted fried plantain (dodo) and the rest alike. Situation like this nature gives room for contamination, hence pollution which eventually may lead to gastrointestional problems among customers. Our local food canteens, hotels, Inns and cafeteria are unispected. The sanitary laws are not silent about all these but adequate and efficient personnel are not there to see to the accomplishment of these laws.

Newman (1962): In an official report gave six fundamental needs for health as "suitable food fresh air and sunlight, warmth, exercise, rest and cleanliness and it is obvious that these are not to be got out of bottle of medicine but depend on a balanced habit of life.

### **SANITARY HABITS AND ATTITUDES**

Egun Jobi (1985) stated that "we must not under - estimate the role of habits and attitudes of the people in keeping a sanitary environment". Even if we provide all necessary facilities we will only realize a minimum achievement if we do change the attitude of people in areas of refuse dumping indiscriminately so that effective strategy for health education will consequently evoke a change in attitude. Habit once formed and imbibed are hard to change unless with gradual positive attitudinal process that will outweigh the earlier one.

It is a long age practice. Seeing young children even adults defecating in open spaces, sometimes closer homes instead of using the latrines urines maturation

is also passed out indiscriminately around house, the landfills sites a little far away from communities are ignored for selfish reasons.

### **REFUSED DISPOSAL**

Refuse in tropical countries usually contain such damp vegetable matter that decay rapidly at such high temperatures. Producing unpleasant odor or smells it also serves as breeding place for rats and flies. It must be disposed off quickly out of people.

Anderson (1973) state that "The source of community waste includes households waste" respectively. These occurs as garbage, Refuse Street clearing, human discharges, kitchen wastes sewage wastes, manufacturing and processing wastes. The value in year can develop into a mountainous stock pile. He added that if each year wastes accumulated in a period of two year a community would be buried by its own waste products.

Badly managed refuse can promote water pollution by rain washing debris out of piles of refuse and into surface water, group, water pollution may also occur. In addition piles of refuse present a fire risk, they smell and aesthetically unpleasant in the urban environment.

### **SEWAGE DISPOSAL**

Sewage is liquid waste, possibly infections and hard to get rid of. It a triumph of skill and engineering to rid, a large town of its sewage. To purify it unobtrusively and without pollution the towns water closet while others have the squat - pan where feaces together with all waste water from washing and cooking flow through drain pipes called sewers to sewage disposal work plants.

Any latrine need good maintenance and will become fouled and offensive without it. If this is allowed to happen the latrine will health hazard in itself.



### **DRAINAGE SYSTEM**

This entails the collection and disposal of sewage through water carriage system in Minna which is built by the multinational company Julius Berger Nigeria Limited. It cut across the length and breath of town, each household has it sub - connection to those bigger drains other across which badly structural planned area and building, provision where made for dug soak away pit to temporally store waste water and which periodically evacuated due to lack of proper treatment, in the aspect of germicidal and insecticidal application to those soak - away pits. It thus cause fouling water, unpleasant odour and subsequently becomes a breeding place for flies and mosquitoes.

Ogunsaki (1990) in a paper titled, (The role of health education in the achievement of heath for all by the year 200 and beyond) was of the view that "Nigeria as a whole has multitude of health problems. These problems include. Poor personnel and environmental health infection diseases, malnutrition, polluted water and environment, superstitious beliefs, taboos ignorance and illiteracy" Hall (1975), has asserted that "the advent of industrial revolution in Europe towards the end of the 19<sup>th</sup> century. Cities (as centre of innovations and indeed as centre where the impact of industrial revolutions were initially felt) begat to show signs of environment decay due to limited water supplies. Untreated sewage, inadequate arrangement for water disposal dense concentration of people closely surrounded by filthy matters of all kinds.

As a matters of concern to Nigeria community the Federal Government of Nigeria established the Federal Environmental Protection Agency (FEPA) through decree 58 of 1988 as an autonomous body charged with the overall responsibility of protecting the Nigeria Environmental marked the delightful turning point in the



chequered history and mode of environmental protection in this country. Rodernrick (1975) pointed out that for most environmental problems. Four interested parties must understand themselves and cooperate; these according to him are the public, the labour main industry and government. This overall approach should be participatory whereby the activities of any given group compliment those of others in the context of achieving goals and objectives that bring about a sustainable environment.

### **POPULATION DENSITY AND UNPLANNED STRUCTURAL PREMISES**

The Federal task force on research science planning in environment health science had a great role in man health rapid technological change, increase population in urban centre are compounding problems of maintaining the environment at healthy level".

Okpara (1990) added that "housing policy which over looks the housing needs of the poor, leaving in existing slums while other create slums in other urban neighbour hoods will actually participate over problem of congestion and non better infrastructure as for as housing is concerned.

Along side with the above Ologbolo (1994) drew attention to the fact that "slums" in Nigeria cities are associated with some parasitic intestinal worms which ravage the health of the residents of such slums. Jn another assertion as contained in British medical journal (No 5964 vol. 309 of Saturday 12<sup>th</sup> November 1994" the cost of doing are unthinkable" – we have to improve housing now and no amount of jogging and low fat yoghurt hert will compensate it could be noted at this point the such squalor slums exist in Minna, in area like Kpakungu, Keteren – Gwari and Sauka – kahuta, people can be seen to be

## **SUMMARY OF RELATED LITERATURE REVIEW**

In reviewing related literature on the environmental sanitation problems and prospects of Minna Local Government Area Niger State. The research highlighted the following variables water supply pollution, food poisoning, food preservation, food sanitation sanitary habits and attitudes of an individual refuse disposal, sewage disposal drainage system, population density and unplanned structural designs as related to environmental sanitation.

Effects of environment have been found to be multifarious and multidimensional. Both solid and liquid wastes being generated in our communities tend to pose problems to our health as far as their management is concerned. Pollute the atmosphere. Water supply and its pollution contrive to be a major problem in our societies. Variability in both supply and demand escalates distribution problems when demand exceeds supply then distribution to areas of need become a problem too. Coupled with adoption to appropriate strategies to cope with the rising volume of demands therefore, its supply sources users and the human consumption should be the top goal for every citizen.

Refuse disposal had been identified as one important aspect of environmental sanitation in Minna local government area of Niger state. Refuse occurs as garbage human discharges, sewage wastes, commercial wastes e.t.c from all indications, it is crystal clear that the sanitary is absent. As for the sewage various provisions of latrines in our house should be made fit clean and easily accessible for our use at all times. Our drainages are given prominence in construction while clearance of sludge and other objects of obstructions are made at intervals.

Good housing with adequate planning has also been identified to contribute immensely towards promoting good health. As such people should be discouraged from slums for good planned structures that have provisions for health living and appealing to life conclusiveness.



## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

This study was carried out to find out the problems and prospects of environmental sanitation in Nigerian municipalities, with Minna the capital city of Niger State as the case study for systematic collection and analyses of necessary data towards the study, the following procedures were employed:-

1. To assess the extent of general poor sanitation.
2. To assess the extent of carefree attitude on environmental sanitation.
3. To review the inputs of relevant agencies involved in control of environmental sanitation activities.
4. To make recommendation on the findings of the study.

### **3.1 METHOD OF DATA COLLECTION**

To obtain information which allowed for – depth study on the state of environmental sanitation problems and prospects in Minna municipalities, the researcher employed descriptive survey method. This method allows for information to be sourced concerning the current states phenomena or happenings. Descriptive survey method is used because it is concerned with conditions or relationship that exist, options that are held, evidence of effects, current and developing trends.

### **3.2 SAMPLES AND SAMPLING TECHNIQUES**

As all inhabitants of Minna cannot be reached, the researcher selected randomly a total number of eighty (80) respondents to administer questionnaire on. The respondents were either the head of the household or his spouse and



## **3.2 PROCEDURE FOR DATA COLLECTION**

In collection of information and necessary data, the researcher used both primary and secondary data in addition to other research used in descriptive survey studies.

### **3.2.1 PRIMARY DATA**

This is made up of structured questionnaire. (See Appendix I) A copy of which was administered to head of household or his spouse and where neither was available on adult member, who has sufficient knowledge on the research topic was given the questionnaire were administered based on twenty questionnaires in each of the four wards.

The questionnaires were structured in such a way that respondents can easily respond, by ticking from the alternatives given to each question.

### **SURVEY**

An extensive personnel observation was taken condition with a view of making inventory of existing condition and assembly of background data of the sampling areas in Minna. These include the assessment of dumping sites, the mobility of people and their activities around the site. Photographs of refuse dump sites were also taken in <sup>Tudun Wada</sup> ~~Limawa~~ and Makera.

### **PERSONAL INTERVIEW**

Interviews were conducted with individuals directly involved in the management of our environment and sanitary issues. The people interviewed were staff of the agency concerned with environmental issues such agencies includes the Niger State Environmental Protection Agency (NISEPA), Urban Development Board (NUDB), and the sanitary inspecting units of the local government council. The people interviewed were carefully chosen to ensure

where neither of them was available, an adult may be familiar, or has sufficient knowledge about the research topic was given the questionnaire.

Also from the number of political wards in Minna, (4) four were randomly selected from which the respondents randomly selected, a total of twenty (20) questionnaire forms were administered there.

**TABLE 3.1**

**THE POLITICAL WARDS MINNA LOCAL GOVERNMENT AREA**

| <b>S/NO</b> | <b>WARDS</b>     | <b>WARD TAKEN</b> |
|-------------|------------------|-------------------|
| 1.          | LIMAWA "A"       | LIMAWA "A"        |
| 2.          | LIMAWA "B"       |                   |
| 3.          | MAKERA           | MAKERA            |
| 4.          | MINNA CENTRAL    |                   |
| 5.          | MINNA SOUTH      | MINNA SOUTH       |
| 6.          | NASSARAWA "A"    |                   |
| 7.          | NASSARAWA "B"    | NASSARAWA "B"     |
| 8.          | NASSARAWA "C"    |                   |
| 9.          | SABON GARI       |                   |
| 10.         | TUDUN WADA NORTH |                   |
| 11.         | TUDUN WADA SOUTH | TUDUN WADA SOUTH  |

**SOURCE: INDEPENDENT NATIONAL ELECTORAL COMMISSION (INEC)**

**MINNA (1999).**

validity and reliability of the information received. Apart from the above category of people interviewed, during reconnaissance survey people found around the dumpsite were also interviewed with such people include adult coming to dump refuse and scavengers.

### **3.2.2 SECONDARY DATA**

The secondary data were sourced from national population commission (NPC), Independent National Electoral Commission (INEC) Minna and Niger State Urban Development Board (NUDB) Minna.

### **3.3 DATA ANALYSIS**

For easy analysis of data two dimensional representation of statically information (Table) was drawn to assemble data. The table was meant for the complete questionnaire forms received from the respondents. The responses were coded and fed into table

The descriptive statistics of frequency and percentage were used for the final analysis.

Thus, the statistic methods used in the analysis therefore, include:-

- i. Frequency count or number distribution along the alternatives provided for the respondents to choose from.
- ii. The frequency distributions summarized into table were converted into percentages for easy use age in the analysis.



## **CHAPTER FOUR**

### **RESULT PRESENTATION AND DISCUSSION**

This study is concerned with the environmental sanitation problems and prospects, with Minna as the case study area.

To assess the extent of general poor sanitation in Minna, the extent of carefree attitude on environmental sanitation and to review the inputs of relevant agencies involved in the control of environmental sanitation activities also to, make recommendations on the finding of the study.

This chapter deals with the result, analysis and discussion of findings. The questionnaires were structured in line with the objectives of the study. The questions which tested the hypothesis formulated were itemized "B" part of the questionnaire form while the "A" part on the socio demographic data of respondents.

Eighty questionnaire forms were administered to the respondents and 76 useable ones were successfully returned and collected by the researcher.

In analysis of data, on the respondents were supplied in percentages and pie charts.



**TABLE 4.1 SOCIO – DEMOGRAPHIC INFORMATION**

The table below presents information of the respondents according to their occupation.

| OCCUPATION         | NUMBER OF RESPONDENTS | PERCENTAGE |
|--------------------|-----------------------|------------|
| Civil servant      | 31                    | 40.8       |
| House wife         | 10                    | 13.2       |
| Privately employed | 13                    | 17.1       |
| Others             | 22                    | 28.9       |
| <b>Total</b>       | <b>76</b>             | <b>100</b> |

**Source:** Field Survey 2004.

The above table presents information on the occupation of respondents information from the table shows that 40.8% of the respondents were civil servants as against respondents were civil servant as against 13.2% that were house wives while 17.1% were engaged private business 28.9% constituting others, were spread into either unemployed, retired civil servant or not willing to disclose their occupation.

**FIG. 4.1 RESPONDENTS WORKING EXPERIENCE**

The pie chart above present information of the respondents working experience as distributed on ranges of years from the chart. It shows that 40.5% of the respondents have working experience range within 1 – 5 years. This is reasonable for it reveals to the researcher what the respondents feel about the current trends of our modern society.

The older experiences respondents also show a reasonable percentage for they compare what obtained in the past and what is currently obtaining now as per our community cleanliness and sudden out break of illnesses.

The pie chart above dictate that 50% of the subject whose responses were received positively agreed that environmental degradation refuse wastes and filthiness around our dwelling significantly influence the environmental sanitation problems and prospects while 41% of responsiveness of the problems and prospects of sanitation in Minna Local Government Area.

Along other assertions Nigerian Environmental like in all developing countries, pre dispose their inhabitants to variety of infections and parasitic disease and to certain severe forms of malnutrition. (Udoh 1990).

It is agreed that filthiness brings about certain occurrence of diseases but there is no record to show the current link (this may have with other environmental sanitation problems and projects in Minna was to abrupt nature) (Udoh 1990).

**CONTINGENCY TABLE ON ENVIRONMENTAL FILTHINESS AS IT  
SANITATION PROBLEMS AND PROSPECTS**

| RESPONSES  | SA   | A    | D    | SD   | TOTAL |
|------------|------|------|------|------|-------|
| NUMBER FO  | 30   | 22   | 13   | 10   | 76    |
| PERCENTAGE | 40.8 | 28.9 | 17.1 | 13.2 | 100   |
| NUMBER FE  | 22   | 22   | 22   | 10   | 76    |

Table 4.2 is to test the acceptance or rejection of hypothesis in this case the null hypothesis which states that there will be no significant difference from

filthiness around dwellings and the environmental sanitation problems and prospects in Minna Local Government Area of Niger state was therefore rejected.

**FIG. 4.3 CONTINGENCY FIGURE ON POPULATION DENSITY AND UNPLANNED STRUCTURAL BUILDING AS IT INFLUENCE ENVIRONMENTAL SANITATION PROBLEM PROSPECTS.**

Population density and unplanned building structure will have no significant influence on environmental sanitation amongst inhabitant of Minna Local Government Area.

The above pie chart is in line with finding of deit (1978). "who started that the effects of overcrowding have been demonstrated by laboratory studies in which rats under condition of experimental crowding failed to breed and started fighting and devouring one another.

**TABLE 4.3 CONTINGENCY ON POPLATION DENSITY AND UNPLANNED STRUCTURAL BUILDING AS IT INFLUENCE ENVIRONMENTAL SANITATION PROBLEMS AND PROSPECTS**

| RESPONSES   | SA   | A     | D    | SD  | TOTAL |
|-------------|------|-------|------|-----|-------|
| NUMBER FO   | 28   | 24 \  | 10   | 4   | 76    |
| PERCENTAGES | 39.7 | 30.70 | 21.8 | 7.6 | 100   |
| NUMBER FE   | 26   | 22    | 20   | 10  | 76    |

Table 4.3 presents information from the respondents the table shows that 39.7% strongly agree that population density and unplanned structural building as it influence environmental sanitation problems and prospect which 30.7% agree and 21.8% disagree in Minna Local Government Area in Niger state.



**TABLE 4.4 CONTINGENCY TABLE ON THE INFLUENCE OF HABITS AND ATTITUDES TOWARDS ENVIRONMENTAL SANITATION**

| <b>RESPONSES</b> | <b>SA</b> | <b>A</b> | <b>D</b> | <b>SD</b> | <b>TOTAL</b> |
|------------------|-----------|----------|----------|-----------|--------------|
| NUMBER FO        | 38        | 23       | 10       | 5         | 76           |
| PERCENTAGE       | 51%       | 44       | 3        | 2         | 100          |
| NUMBER FE        | 36        | 25       | 10       | 5         | 76           |

The above table shows that 51% of the respondent strongly agree and only 5% strongly disagree that the influence of habitats and attitudes towards environmental sanitation in Minna local government of Niger state.

**RESPONSES ON THE INFLUENCE OF HABITS AND ATTITUDES TOWARD ENVIRONMENTAL SANITATION.**

Fig. 4.4 above shows 51% of the respondent strongly with the view that ill – informed habits and attitude level of some inhabitants in Minna Local Government area influenced significantly the problems and prospects of environmental sanitation while a percentage of 44% agree with such view.

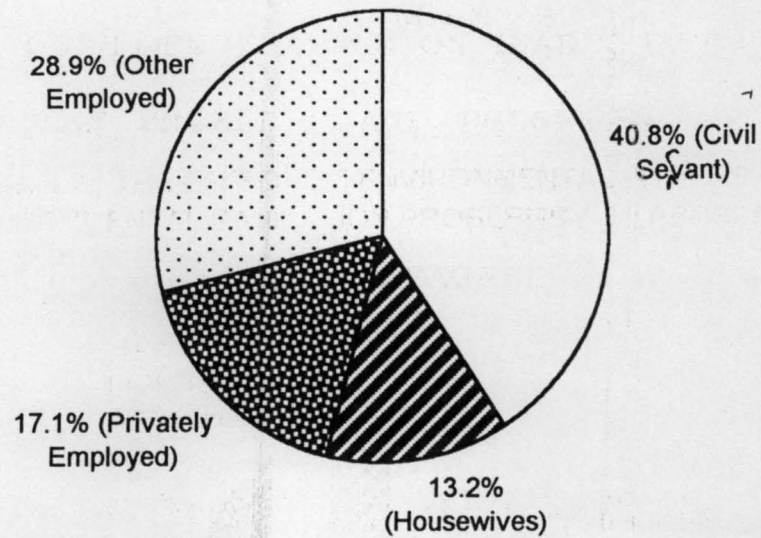
**TABLE 4.5 CONTINGENCY TABLE ON INADEQUATE FACILITIES AS IT INFLUENCED THE PROBLEMS AND PROSPECTS OF ENVIRONMENTAL SANITATION**

| <b>OPTIONS</b> | <b>AGREE</b> | <b>DISAGREE</b> | <b>TOTAL</b> |
|----------------|--------------|-----------------|--------------|
| NOS. FR        | 52           | 23              | 76           |
| NO. R.A        | 38           | 38              | 76           |
| %              | 68.59%       | 31.41           | 100          |

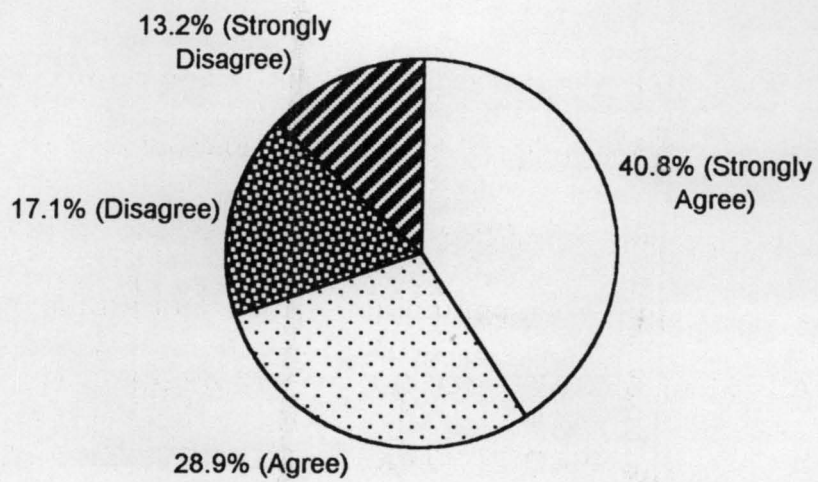
In this case the null hypothesis which states that inadequate health personnel and facilities and absence of some facilities will have no significant



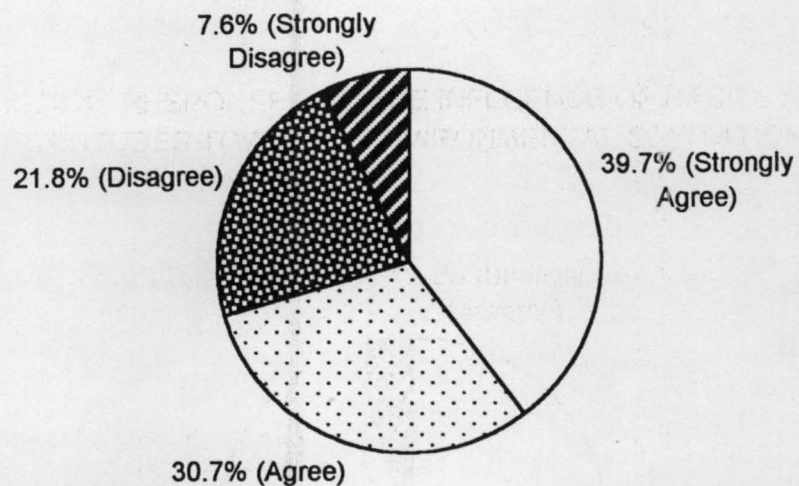
**FIG. 4.1: RESPONDENTS WORKING EXPERIENCE**



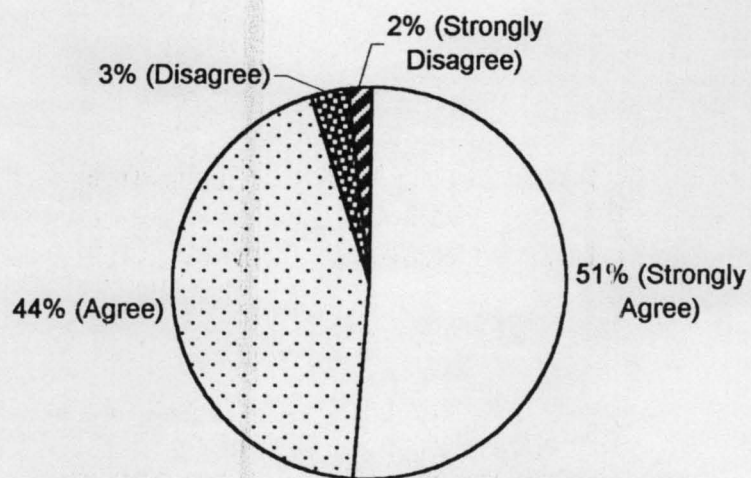
**FIG. 4.2: THE EFFECT OF ENVIRONMENTAL FITNESS ON ENVIRONMENTAL SANITATION PROBLEMS AND PROSPECTS**



**FIG. 4.3: CONTINGENCY FIGURE ON POPULATION DENSITY & UNPLANNED STRUCTURAL BUILDING AS IT INFLUENCE ENVIRONMENTAL SANITATION PROBLEMS AND PROSPECTS**



**FIG. 4.4: RESPONSES ON THE INFLUENCE OF HABITS AND ATTITUDES TOWARDS ENVIRONMENTAL SANITATION**



influence on the environmental sanitation problems and prospects in Minna Local Government Area of Niger state was rejected.

This findings is in line with some earlier findings. Folarin (1980) observed that frequency of occurrence of parasitic infection and interstitial diseases are due to non – provision of adequate toilet facilities.

#### **4.6 WASTE DISPOSAL METHOD**

This section is concerned with the study of waste disposal.

**TABLE 4.9 METHOD OF WASTE DISPOSAL**

| <b>METHOD</b>   | <b>DISTRIBUTION</b> | <b>PERCENTAGE</b> |
|-----------------|---------------------|-------------------|
| Incinerator     | 0                   | 0                 |
| Near by Pit     | 8                   | 10.5              |
| Dump Site       | 62                  | 81.5              |
| Nearby Drainage | 6                   | 8                 |
| <b>TOTAL</b>    | <b>76</b>           | <b>100</b>        |

**Source:** field survey 2004.

The table above indicates on the various way of disposing refuse, incinerator is not in use as none of the respondents tick it favour. From the reconnaissance survey carried out by the researcher few number of incinerators were built by the government but none was put into use. 10.5% of the respondents do not carry their refuse far from home as any near by pit was use as dumpsite, while 8% of the respondent threw waste into a nearby drainage. This often blocked drainage that is not wide enough. In fact, even multi – million naira modern drainage constructed by government is not spared of such



menace. But 81.5% of the respondents carried their waste to the nearest communal dumpsites.

From the above presentation it is not out of place to say that open dumping is being used in Minna. PLATE1, shows a typical open dumping site at <sup>Kwangila</sup> Limawa in Minna.

Plate II, shows a typical of waste in the drainage in Kwangila.





PLATE 1: AN OPEN DUMP IN TUNGA, MINNA



PLATE II: A TYPICAL OPEN DUMP BLOCKING PEDESTRIAN  
BRIDGE AND DRAINAGE AT KWANGILA MINNA

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS.**

#### **SUMMARY:**

This study was conducted in order to identify and ascertain the environmental sanitation problems and prospects within Minna Local Government Area of Niger State.

To assess the extent of general poor sanitation, the carefree attitude, to find out the problems of environmental sanitation, to review the inputs of relevant agencies involved in control of environmental sanitation activities and to make recommendation on the findings of the study.

The hypothesis of the study were rallied round the variable of environmental degradation such as filthiness, refuse and sewage collection and disposal, population and slums, habits and attitudinal influence and lack of or inadequacy of facilities in terms of personnel and equipment.

The main hypothesis for this study was that the impact of environmental sanitation, improper refuse and sewage collection and disposal, slum structure, inadequate facilities and attitudinal level or complacency of the people have significant influence on the environmental sanitation problems and prospects within Minna and the population therein.

From the study and analysis of data collected, it shows that a number of factors usually determine the extent of poor sanitation such factors include population size, education and income level, attitude and habits of the people. From the study, it shows that areas with higher population and slums such as Nassarawa "A" and Minna central wards generate more waste and poor



sanitation than places with moderate or less population as it was with Limawa "A" Ward.

On the aspects of sanitation, result shows that basically indiscriminate dumping of refuse, dilapidated toilet and soakaway dirty drainages and filthy environment.

This composition of sanitation can be attributed to the carefree attitude of the people.

Similarly, the wastes generated in Minna are mostly from domestic activities with a sizeable portion being from commercial activities. This may be due to the fact that Minna is not an Industrial City and most of the small scale industry products are consumeable.

Open dumping was the most prominent method in use. Residence dumps there refuse on designated dumpsite, with few numbers of people throwing theirs into drainage.

From the surveys, where these wastes piled up residents do set fire on it thereby polluting the atmospheric.

The dumpsites clearances were done by the government agency, Niger State Urban Development Board (NUDB) in collaboration with the staff of the Local Government Sanitation Unit. From the surveys Board of recent had cleared or reduced to the bearliest level the heaps of waste found in the town of recent e.g. Limawa dumpsite.

Poor knowledge, attitude and habits of people constituted a major problem of efficient good sanitary condition of the City.



Above all, the most intricate problem to effective environmental sanitation has to do with poor funding. Fund provided to the agencies is grossly inadequate.

## **CONCLUSION**

From the study, it is evident that there are refuse and sewage collection and disposal problems in Minna Local Government Area, especially that of irregular collection of wastes from the few existing communal depots or dump and from the landfills which had become a heap-pile of unmaintained wastes. These residential areas are thereby deteriorating and degrading the aesthetic scenery of the environment.

Most of the homes in Minna can be observed as having no concert system of waste disposal system generated domestically there is lack of dust-bins for storing, and of wastes of solid or liquid nature. Lack of refuse storage facility for household refuse encourages indiscriminate disposal of refuse in open spaces around their homes or in nearby quitters (Drainage) or close to road. Which causes a more devastating problem during rainy season, causing blockages running waters.

It is believed that when homes are sanitized the spread of diseases in an area is then controlled.

## **RECOMMENDATIONS**

Base on the finding of this study which is to evaluate the environmental sanitation problems and prospects in Minna local government area of Niger state, the researcher has the following recommendations to make in order to prevent further deterioration

- (i) All existing heap-pile refuse dumps around the residential houses must be cleared immediately to forestall health hazard, each house should therefore arrange for adequate domestic waste disposal system so as to ensure proper sanitation and for easy collection by refuse collectors.
- (ii) Dustbin should be provided and properly covered to prevent this perching on wastes especially the wet ones and this will as well prevent animal from exposing them, littering the environment. this will go a long way in enhancing the quality of the environment sanitation and make for all efficient waste management
- (iii) The Niger state government, in conjunction with Minna local government administration should provide adequate supply of facilities human, logistic and financial resources necessary for effective implementation of efficient waste management in our environment.
- (iv) Lack of conceptual sewage system (UNDP 79). Clearly indicates that human waste disposal facilities are not sufficiently available it's common therefore, to find human wastes disposed of very close to settlement areas. It is indeed disheartening to find human faces disposed indiscriminately, because of inadequate provision for public toilets. And even if provided, maintenance due to insufficient



supervision and lack of regularity in water supply will turn them to nuisance) to ensure provision of such facilities. Government should ensure regularity water supply, efficient waste removal system, accessibility to public and maintenance personal.

- (v) Since children are mostly in charge of disposing wastes in to landfill or communal depots they must be properly instructed and supervised by older peoples to the residences to avoid littering of the environment.
- (vi) Waste management board should be established and change with the responsibility of parking away wastes using truck or carts from various wards in the local government area. the board can make a blanket charge on those who make house basis arrangement this board should have a working legal/enforcement department which oversee the general and punishment of defaulters.

the present effort of the Local Government Primary Healthcare is well appreciated but should endeavor to increase the strength especially the refuse scavengers incharge of collection and disposed to allow for wider coverage and increased collection frequency.

Vi Every laudable programme must be accompanied with regulation enforcement and monitoring. The teeming population is characterized with endemic poverty malnutrition, ignorance and disease.

People should be enlightened on personal and neighborhood hygiene. To ensure proper environmental sanitation in Minna Local Government Area Niger State.

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## **APPENDIX I**

Department of Geography  
Federal University of  
Technology, Minna.

### **RESEARCH QUESTIONNAIRE**

Environmental Sanitation Problems Prospects.

A Case Study in Minna Local Government Area, Niger State.

Dear Respondent,

You are please requested to complete this research questionnaire on the above title. Your response should be made independent and as personal as possible and ensure honesty. All responses shall be treated with strictly anonymity and in confidence. There are no rights nor wrong answers. It is purely on academic exercise, the responses will be used for the purpose of Post Graduate Diploma in Environmental Management.

Thanks for your anticipation.

**Hauwa .A. Halilu**

## QUESTIONNAIRE

### INSTRUCTION:-

Read each of the statement below used of the guide above to tick in any one column those appeals to your opinion. To be completed by people in Minna Local Government Area.

KEY:            SA – Strongly Agree  
                  A -    Agree  
                  B -    Disagree  
                  SD - Strongly Disagree

### FILTHINESS

|    |   |    |   |   |    |
|----|---|----|---|---|----|
| 1. | Improper use of space around the dwelling for faeces, urination and dumping cause poor sanitation.  | SA | A | D | SA |
| 2. | The high breeding places for disease vectors in Minna Local Government contribution to outbreak of Epidemics  |    |   |   |    |
| 3. | Both bio-degradable and non bio degradable objects and items like cellophones bags, cream containers, Baby feed containers dry leaves, waste papers, cartons e.t.c littering the environment cause poor |    |   |   |    |



|    |  |  |  |  |  |
|----|--|--|--|--|--|
|    | sanitation standard in Minna Local Government Area.  |  |  |  |  |
| 4. | <b>REFUSE DISPOSAL</b><br><br>The poor environmental sanitation was as a result of heap – pipe refuse around dwelling area.          |  |  |  |  |
| 5. | Irrigation and inefficiency on the part of refuse collection crew of the Local Government contribute to the low standard sanitation. |  |  |  |  |
| 6. | Low level of knowledge on the proper use of the few communal depots for refuse disposal is responsible for poor sanitation.          |  |  |  |  |
|    | <b>POPULATION AND SLUMS</b>  |  |  |  |  |
| 7. | The population density and congestion are responsible factors for poor sanitary condition.   |  |  |  |  |
|    | <b>SEWAGE DISPOSAL</b>   |  |  |  |  |
| 8. | The untreated liquid waste collection pits and open sewage and soakaways result to poor environment sanitation.                      |  |  |  |  |
|    | <b>ATTITUDE</b>  |  |  |  |  |

|     |   |  |  |  |  |
|-----|---|--|--|--|--|
| 9.  | The poor environmental sanitation is as a result of unhygienic habit and carefree attitude of inhabitant of Minna towards positive hygiene practices.       |  |  |  |  |
| 10. | Lack of well and coordinated supervision in part of sanitary inspectors immensely contributed to low standard of sanitation in Minna Local Government Area. |  |  |  |  |
|     | <b>FACILITY</b>   |  |  |  |  |
| 11. | Inadequate health personnel and working facilities in Minna Local Government Area health office contribute to low standard of environmental sanitation.     |  |  |  |  |
| 12. | Insufficient provision of dustbins communal depots and land fills for effective disposal of refuse cause low standard of sanitation.                        |  |  |  |  |
| 13. | Few or virtually non-provision of public toilets by the authority encourages the indiscriminate use of open spaces for feaces and dump                      |  |  |  |  |

|     |  |  |  |  |  |
|-----|--|--|--|--|--|
|     | resulting to poor sanitary condition of the environment.   |  |  |  |  |
|     | <b>SANITATION</b>  |  |  |  |  |
| 14. | Embark on mass enlightenment campaign on environmental sanitation  |  |  |  |  |
| 15. | Improving the sanitary condition of the town, environmental health offices should embark inspection to ensure clean environment. |  |  |  |  |
| 16. | Impose finds on sanitary often offences.   |  |  |  |  |
| 17. | Increase the finding of sanitary programme, and provision of facilities.   |  |  |  |  |