THE PROBLEM OF ENVIRONMENT ON THE PROGRAMME "ROLL BACK MALARIA IN NIGERIA

A CASE STUDY OF MINNA LOCAL GOVERNMENT AREA NIGER STATE

BY

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CERTIFICATION

I Maimuna Grace Sabo hereby certify, that this research project was carried out and presented by me for the partial fulfillment for the award of the Postgraduate Diploma in Environmental Management, Department of Geography, School of Science and Science Education, Federal University of Technology, Minna.

DEDICATION

This project is dedicated to my late son, Master Samuel Emmanuel, who went to be with the lord on 14th April 2000. I know you are with the lord one day we will meet and never to part, Even in death, you still mean a lot to me.

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ABSTRACT

Wide spread publicity has been given to the subject of Roll Back Malaria as problem to environment in Minna Local Government Area. This work critically assesses the problems of Roll Back Malaria with a view of finding a lasting solution.

Questionnaires were administered to people of varying occupation to obtain data on the impact of Roll Back Malaria programme as it relate to the environment.

Environmental education should therefore be redefined in such a way as to make people realize that the environment is also a determinant of the incidence of disease malaria inclusive.

We must not destroy the environment because we want to eradicate Malaria, but we can manage the environment to reduce the incidence of malaria which also means to Roll Back Malaria.

This project is aimed at educating the public on the relationship between environment and malaria disease.

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CHAPTER ONE

INTRODUCTION

Malaria has been one of the most serious obstacles to man's efforts to establish sedentary settlements, develop agriculture and modify the environment.

Clean environment could be regarded as man's effort to protect himself and the community in which he line, against diseases, malaria inclusive. However a neat environment apart from being pleasant and refreshing to the eye is what is required to provide a high standard of environmental hygiene.

Malaria is the silent killer in our mist. With more than one million deaths and up to 300 cases every year the statistics are overwhelming. The disease is continuing to spread and even areas once considered malaria free are now suffering death and devastation due to an increase in out breaks and epidemics.

Two years after the launch of Roll Back Malaria (RBM) most malaria affected countries of the world are preparing for a renew attack on malaria based on the RBM principles and strategies.

It is against this background I want to find out the problem of environment on programme "ROLL Back Malaria in Nigeria case study of Minna Local Government Area, Niger State. It is on record that people living in this Local Government suffered from malaria disease for the past century, the people failed to realized the connection between mosquito (malaria) and the environment. Because lack of knowledge, diseases like malaria and other disease have remain to threaten the life of the people.

AIMS AND OBJECTIVES

This study is aimed at evaluating the problem of environment on programme (Roll Back Malaria in Nigeria. Case study of Minna Local Government of Niger State.

1. To detect the sources of mosquito and malaria epidemics as a result of poor environment
2. To know the health problems associated with poor environment
3. To mobilize the inhabitant on the need to maintain clean environment.
4. Recommend possible ways to succeed in the programme of Roll back malaria as an environment problem.

STATEMENT OF THE PROBLEM

In both rural and urban areas today, environmental health has become a great matter of concern to all citizens. It is in view of this that this study focus on the relationship of environment and the mosquito and the control measures in Minna Local Government.

SUB PROBLEMS

1. Will filthy gutter and focol water be responsible for the sudden rise in Malaria cases in Minna Local Government.
2. Will the habit and attitude of the inhabitants in Minna Local Government be responsible for unhealthy environment and incidences of malaria scourge.

3. The irregular empting of stagnant ponds be responsible for the incidences of mosquitoes breathing in Rafi Local Government Area.

And inadequate health personals, facilities and virtually the absence to some policies be responsible for the rise in the cases of Malaria in Minna Local Government.

ABOUT THE STUDY AREA

Minna Local Government is one of the densely populated Local Government Urban Area in Niger State, with a population of about 157,159 people and 90% living in the Local Government Headquarters. The Local Government being wide in land mass with scattered Villages spread in the Land Government made up of eleven (11) wards which are:

1. Minna Central
2. Makeral Ward
3. Nassarawa A
4. Nassarawa B
5. Nassarawa C
6. Sabon Gari
7. Tudun Wada North
8. Tudun Wada South
9. Limawa "A"
10. Limawa "B"
11. Barkin Sale ward

Health and social services are a scan in favour of urban areas. In 1990 the transfer of primary Health care to Local Government Council took place. Most of the dispensaries have upgraded to some for primary Health care programme.

In Minna Local Government being of Headquarter are largest consumer of pipe borne water which, is always on and off. In this reasons, many people collect water and stone for future use which is another source of mosquito breathing places. Wastewater is also stored for some hours for future use to minimize the usage of good water. During rain season in which it has always had the highest number of malaria cases keep gutters fill to their brims with stagnant water.

DELIMITATION OF THE STUDY

This study was delimited to the following:

1. A sample population of Health workers from the seven wards
2. Altitude of the inhabitants as they influence the upsurge or scourge in malaria cases
3. Use of questionnaire and schedule visit to Health facilities for the retrieval of the questionnaires and collection of information
4. Use of descriptive statistics of (frequencies and percentages) and the non-parametric statistics was used to test the hypothesis.

LIMITATIONS

1. Some questionnaires forms were rejected due to non comment completion while some were returned, though just very few

2. Other limitations like respondents false or unhonest responses that cropped up were averted as the respondents were assumed of their confidentiality of responses. And that their responses would just be used for the purpose of the research which would have no reflection on their persons.

3. Some staff were skeptical of the whole exercise for fear that their unit or departments inadequacy would be exposed, some attempted to influence others to give inaccurate information.

SIGNIFICANCE OF THE STUDY

Environment has been a nationwide concern that has gained acceptance by the generality of the Nigeria populace. This study is aimed at contributing to the already existing body of knowledge about good environment and the importance to Roll back Malaria – meaning to a manageable incidence if we have environment mind.

It is in the good aspiration of the research that the data collected for this study was interpreted and used to improve the healthful standard of the people through good environment.

This study will serve as a guide to the health personnel and environmental Health Officers as well as non-governmental organization (NGO) as a vehicle of further enlightenment to the public in order to enhance good environmental friendly habit among the people.

The study is also aimed at bringing out and directly people's attention towards good and adequate use of the environment and efficient strategies of mosquito control and prevention.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

(THE PROBLEM OF ENVIRONMENT ON PROGRAMME "ROLL BACK MALARIA" IN NIGERIA. CASE STUDY OF MINNA LOCAL GOVERMENT. AREA OF NIGER STATE)

The healthy living of an individual depends on the healthy and cleaner nature of the environment he/she lives in, because of the influence it has on his/her physical and emotional health. A good ensures emotional well being, beautiful scenery, and clean and orderly society free from diseases.

Z.A Ademuwaga (1975), said households know many things they no longer need. Every day we put waste food and water into cans. And once in a long while, big things such as a refrigerator or an automobile are left. He further said that every individual has his own share in daily generation of such refuse in his environment.

All those refuse above are breathing sources of the mosquitoes that causes malaria. How much can and attention have been paid to these waste created by us in our own environment. In the actual sense Most of this waste on our environment are valuable resource, but we have not been able to use them fully. The most common on like paper, old plates, empty and broken bottles are almost everywhere making the environment to look dirty and house mosquitoes.

Amadi Suleja (1986) said in order to maintain the quality and life of the people and reduce the state of illness and deaths; it is necessary for the govt. to provide primary health care for all and ensure healthy environment for all

Nigerians. To ensure healthy environment is to have disease free environment. Malaria has been known as an environmental related disease. To roll back Malaria, therefore, there are need to keep the environment clean.

EGBERE (1989) stated that the Buhari Idiagbon regime enacted a decree and introduce task force on environmental sanitation, making it mandatory for every individual to clean his or her environment at least once in a month. The essence of this is to calculate the sanitary habit in every Nigerian. The question then is how far has environmental sanitation culture been developed. Reported cases of malaria have always been from poor environmental maintenance.

To whom do we apportion blame for the occurrence and re-occurrence of these environmental diseases that are ravaging the urban centers and rural communities Minna local Government inclusive.

Origisi (1984) noted that imminent effort are commendable, the regulation may not achieve much success if the people fail to appreciate the need for a clean environment perhaps this can be done when government un-intensified it's enlightenment campaign on environmental sanitation.

Incidence of malaria can be reduced if the public is enlightened on malaria environment relationship. Hence roll back malaria.

The use of mechanical protection against mosquito bites is a very old practice. HERODOTUS (425 – 484BC) observed in parts of Egypt, above the marshes that people slept in lofty towers where mosquitoes where unable to reach because of the winds. While in the marshes, people slept under net.

In this dispensation, mosquitoes Treated Nets (mtn) are used especially along the Riverine areas. People living along the damage drainage system is Minna use both treated and insecticides.

MARCO PHO also observed that the wealthier residents of the Coromandel Coast in India used bedstead with curtains, which could be closed by night. It is also recorded; in 1640 that missionaries in the Philippines were allowed to protect themselves from mosquitoes bites with a tent. Later the use of mosquito nets and window screening was viewed as a protection. Till these days almost all residential houses in Nigeria are potential users of window screening. Many houses in Minna screen their windows and even have screened shooting doors to prevent the malaria-biting mosquito to enter their houses.

Most brides go to their husband's houses with this bedstead with curtains all in the view of beautifying their houses and prevent the bite of mosquitoes.

CHAPTER THREE

RESEARCH METHODS AND PROCEDURES

This study was carried out about the problem of malaria as it relate to our environment and it intending capability of it's becoming the medium of disease transmission among the inhabitants of Minna Local Government Area of Niger State.

This chapter is designed and discussed under the following sub-headings for systematic collection and analysis of data for this study.

1. Research Method
2. Population
3. Sample and Sampling Techniques
4. Research Instruments
5. Reliability and Validity after research instrument
6. Procedures for data collection
7. Method of data analysis
8. Pilot study

RESEARCH DESIGN

The descriptive survey research design was used, Bests and Jacob (1981) said, to obtain information concerning status or phenomena, descriptive survey should be used, this is because they are directed towards determining the nature of a situation as it exists at the time of the study it was asserted that descriptive design method is often used in this type of research as it describes, interprets and is concerned with conditions or relationships that exist, opinion that

are held, processes that are going on, effects are evident or trends that are developing.

POPULATION

The target population for this study was made up of Health workers in the environmental offices, the Government Health, Minna Urban development Board and the Niger State Environmental Protection Agency (NISEPA).

SAMPLE AND SAMPLING TECHNIQUE

Since it was not practicable to use all the health institution in Minna Local Government Area of Niger State, a total number of 160 health workers was selected randomly as respondent. A stratified sampling method was used in selecting from the health workers in Government Health Office Minna sanitation Inspectorate unit of the Local Government, while maternal and child Health Centres and Dispensaries were selected from the primary Health Care Department of Minna Local Government Area.

From the total number of II wards in Minna Local Government Area, five wards were randomly selected at random too. The five randomly selected were:

1. Minna Central
2. Makera
3. Nassarawa A
4. Tudun Wada North
5. Limawa A.

TABLE 3.1
THE FIVE RANDOMLY SELECTED WARD WITH PERCENTAGES

S/NO.	WARDS	NO. OF RESPONDENTS	PERCENTAGES
1.	Minna Central	80	40%
2.	Makera A	35	17.5%
3.	Nassarawa A	25	12.5%
4.	Nassarawa B		
5.	Nassarawa C		
6.	Sabon Gari		
7.	Tudun Wada North	27	13.5%
8.	Tudun Wada South	23	16.9%
9.	Limawa A		
10.	Limawa B		
11.	Barekin Sale		
		200	**100%**

Minna Local Government.

The above table 3.1 shows the tallies of the respondents randomly selected according to the number of health staff capacity of the health department of the selected wards. The total numbers of the respondents selected stood at 200 represented by 100% for fair and convenience in distribution of questionnaire forms.

RESEARCH METHOD

The research instrument used for this study was self developed structure questionnaire which was vetted by the supervisor, altitudinal rating scale of Agree and Disagree was used. The respondent, reacted to each item on the questionnaire by ticking ( ) from the alternatives given to the question item. This format was used YES OR NO which does not give room for wider scope and against the essay structure type, given the maximum amount of freedom in responding which makes scoring a problem.

RELIABILITY AND VALIDITY OF THE INSTRUMENT

The obtained results of the pilot study carried out prior to the administration of the questionnaires to respondents to ensure it's strength of reliability, while the validation of the questionnaire was consciously ensured by taking expert views of lectures in the department of Geography school of science and Science Education Federal University of Technology, Minna.

PROCEDURE:- The aim is to provide further details or sources of further study or information used in this study. Both primary and secondary sources were used in collection of data for this study.

SECONDARY DATA

Before the collection of primary data, available sources of information about the study were collected mainly from thesis, books, report journals, seminar papers and other published and unpublished material and malaria.

PRIMARY DATA

The structured questionnaires were distributed to various respondents in their locations by volunteer research assistants. The administration of the questionnaire forms was carried out by these research assistants especially in General Hospital office and the sanitary inspections unit. Wait and collect on the spot was not practice but most respondents tried on meeting up the scheduled arrangement for the collection.

A total number of two hundred questionnaire forms were distributed to the respondent through research assistants and the myself.

One hundred and sixty usable questionnaire were successfully returned and these were used for analysis.

DATA ANALYSIS

The completed questionnaire forms from the respondents were collected, coded and analyzed, the descriptive statistics of frequency and percentages were used to analyzed the data

PILOT STUDY

A pilot study was conducted prior to the actual study purposely for instrument validation. The pilot study was carried out in Government Health Care where 30 available health workers were used as the respondent. Delays in collection and misunderstanding of rating scales were experienced and these served as a guide during the administration of the instrument at the actual study area –Minna. Minna Local Government Area of Niger State.

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

This study was aimed at identifying the preventive and control measures of malaria infections among the inhabitants of Minna Local Government Areas it relates to our environment.

The chapter deals with results analysis and discussion of findings. The questions which tested the hypothesis formulated were itemized in B part of the questionnaire form while the A part is on the socio demographic data of the respondent.

Two hundred questionnaire forms were distributed for administering to the respondents and hundred and sixty useable ones were returned and collected by the researcher.

In the proceeding paragraphs, information on the respondent demographic data was supplied in numbers and percentages while the itemized sub-hypothesis were supplied in percentages. This was used to test the acceptability or rejection of the sub hypothesis in the first chapter of this project work. The sub-hypothesis, for convenience and coherence of work were treated under variables identified on the topic.

SOCIO- DEMOGRAPHIC INFORMATION

The table below presents information on the respondents according to their units or departments of work.

UNITS	NO. OF RESPONDENTS	PERCENTAGES
Government Health Office	72	45%
P. H. C.	47	29.37%
Gwari Clinic	31	19.38%
Family Support Programme	10	6.25%
TOTAL	**160**	**100%**

HEALTH FACILITIES

In table 4.1 above, 45% of the respondents were from the General Hospital Minna while 6.25% of them were from the Clinics. The percentage numbers 19.38% were from the Primary Health Care Department, which included the sanitary inspectors. While centers 100% respondents of the160 respondents.

TABLE 4.2 The below represents the respondents working experience as distributed in ranges of years.

UNITS	NO. OF RESPODENTS	PERCENTAGES
1 – 5 Years	121	75.63%
6 – 10	10	6.25%
11 and above	29	18.12%
TOTAL	**160**	**100%**

HEALTH PROFESIONALS

The above table shows a high concentration of 75.63% of the respondents representing 121 respondents, out of the 160 within 1 –5 years of working experience. This is reasonable for it reveals to the researcher what the respondents feel about the current trend of our modern society in terms of epidemics and the sanitary level of an society. The older experienced respondents also should a reasonable percentage for they compare what was obtained in the past and what is currently obtaining now as per our community cleanliness of drainages and gutters.

HYPOTHESIS TESTING

Environmental fitness around dwellings have significant influence on the incidences of epidemic of malaria in Minna Local Government Area of Niger State.

Along the line with the other ascertains, Nigerian environment like in all developing countries predisposes their members to variety of infections and parasitic diseases and to certain severe forms of malaria and leukemia (Udoh 1990). The researcher is of the view that since the incidence of epidemic in Minna Local Government was of abrupt nature. It must have been to other agent apart from the noticed ponds and drainages with stagnated filthy waters that is favourable to mosquitoes breeding.

Similar studies seem to support this finding. Aliyu Alhassan (1995) state overgrown grasses around our premises that allowed to sprawl all over increases the potentiality of Adult mosquitoes breeding and of malaria incidence of epidemics among the communities.

(Loguma 1980) in his earlier findings observed that frequency of occurency of different malaria parasite and it's relation to various mosquitoes gives room or chance for wrong diagnosis and thereby worsen the case. Without filthy environment, mosquitoes have non or less area to breed and multiply.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

SUMMARY: This study was conducted in order to identify and ascertain the prevention and control of malaria infection related to poor sanitation particularly ponds, poor drainages and gutters and incidence of malaria cases in Minna local government, hence to **ROLL BACK MALARIA.**

The hypothesis of the study was rallied around the variables of environmental fitness, poor drainages stagnated ponds, habits and attitudinal influences and lack of facilities in terms of personnel's and equipment for fumigation purposes.

The main hypothesis for this study was that the prevention and control of malaria, slum structures, inadequate facilities and altitude level of the people will have no significant influence on the attack or epidemic of malaria among the inhabitants of Minna Local Government Area of Niger State.

Chapter two of this study deaths with review of related literatures. The correlation, relationships and differences or disagreements in past studies and this study were part at parallel. Comparison for assessable analogies, while chapter three was on treatment and how sampled population was drawn from the total population as well as the collection of data. The instrument used for data collection was self structure question.

Chapter four, epitomized the analysis of data interpretation and discussions of the result, the data collected were coded, built into frequencies and percentages for analysis.

WHO / CDS / RBM / 2002.26 (Advocacy Guide) Malaria is the silent killer in our midst. With more than one million deaths and up to 300 million cases every year the statistics one overwhelming. And yet even they may not convey the to me picture as many deaths in villages, observed by untrained on lookers are never recorded as malaria deaths.

The disease is continuing to spread and even areas once considered malaria – free are now suffering death and devastation due to an increase in outbreaks and epidemics.

Two year after the launch of **ROLL BACK MALARIA (RBM)** most malaria affected countries of the world are preparing for a renewed attack on malaria based on the RBM principles and strategies and adopting malaria has been secured.

Rolling back malaria is one of the who's highest priorities. I propose that together we Roll Back Malaria not as a revamped vertical programme but by developing a new health sector-wide approach to combat the disease, why how? Because the call is there. We have knowledge, skills and tools to launch a new concreted effort.

Dr. Gro BrundtLand

DG WHO

A. Roll Back Malaria is a global movement mobilizing support for local initiatives

B. A coordinated approach to strengthen public and private health care.

C. Multiple strategies targeted to meet local malaria control needs.

D. A diverse partnership acting in concert to achieve common goals.

Roll Back Malaria was established on 31st July 1998. Roll Back Malaria African Region targets by 2005 – 50% of households in targeted districts will have at least one ITN.

- 25% of childhood fevers will be correctly managed using I\IMC.
- Countries that are malaria free in 2001 will remain malaria – free.

By 2010 - Reduction of malaria morbidity by 50% of the 2000 levels.

- Reduction to malaria morbidity by 50% of the 2000 levels.
- Elements of Roll Back Malaria (RBM) as

a. Early defection

b. Rapid treatment

c. Multi-pronged interventions

d. Well coordinated strategy

e. Determined research

f. Dynamic movement.

CONCLUSION

From the study, it is evident that there are stagnated ponds, and low moving water streams around the communities, this immensely contribute to the deteriorating gutters and drainages.

Almost all of the homes in Minna local government can be observed as having no concrete system of good drainages refuse dump in nearby gutters and road side thus causing more devastating problems during raining season, for blockages and diverting running and domestic waters. Overgrown grasses for adult mosquitoes.

RECOMMENDATION

Based on the findings of this study, the research has the following recommendations to make in order to prevent future occurrence.

- That all existing household earth gutters should be well streamlined in such away to freely carry away from the communities.
- Each household should endeavor to clear all over grown grasses surrounding their premises to eliminate mosquito-hiding places.
- Stagnant ponds should be drained and the identified breeding and concurrent or periodically fumigation of all drainages and ponds should be carried out to eliminate adult and early stages of mosquitoes.
- A malaria control board should be established and charge with the responsibility of prevention and control of malaria.
- The board should have a working legal/enforcement department, which will oversee the general compliance with simple mosquito control elimination strategy.
- The local Govt. efforts on Roll Back Malaria have to be revisited with zeal and vigor. At the time of this write up, the proposal to launch Roll Back Malaria as one of the environmental problem has not been approved.

- The state govt. should assist the local govt. area with all the logistics materials to help keep the environment clean.
- Public enlightenment should be carried out strategic places, house to house health education talk on the need to keep the environment clean, even when flowers are planted, they need to be treated, trimmed and kept clean.
- Store water, stagnant water, blocked gutters and drainages are not a suitable environment for human being, care has to be taken in the manner we store water for future use.

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