

CHAPTER ONE

INTRODUCTION

This chapter of the study contains issues like the background of the study, statement of the problem, purpose of the study, research questions, and significance of the study, limitations and delimitations, and the organization of the study.

Background to the study

Social studies involves the study of political, economic, cultural, and environmental aspects of societies in the past, present, and future. For basic school children, as well as for all age groups, social studies have several purposes. The subject equips them with the knowledge and understanding of the past necessary for coping with the present and planning for the future, enable them to understand and participate effectively in their world, and explain their relationship to other people and to social, economic, and political institutions. Social studies can provide students with the skills for productive problem solving and decision making, as well as for assessing issues and making thoughtful value judgments. Above all, the social studies help students to integrate these skills and understandings into a framework for responsible citizen participation, whether in their play group, the school, the community, or the world. (Armento, 1986).

The energy, curiosity, and imagination of young children lead them to action and interaction within their environment from a narrow, unilateral perspective. They live in a family, play in a peer group, and make decisions about how they will relate to other people, what to do in their free time, with whom to play, what books to read, and how to spend money. The larger social world penetrates their lives through television and other media,

travel, family, and friends; but young children lack the conceptual base to integrate the new knowledge these experiences bring. They also lack the skills to account for other perspectives in solving problems or to anticipate long-range consequences when making decisions. (Atwood, 1986, Berkowitz, 1981).

Environmental Education became an integral component of the National policy on Education in 1986. Introduction of ten years school curriculum include teaching of Environmental Studies for the primary stage of schooling. At the upper primary stage Environmental Studies was introduced as a separate subject besides teaching of science and social studies. Study of environmental issue of our age includes the adverse effects of pollution, extinction of several species, wasteful consumption and adverse effects of consumerism, (The International Strategy for Disaster Reduction, 2004).

Environmental degradation is a major problem in the many countries of which Ghana is included. The cities and towns in Ghana are being affected to a level, which is going to be harmful for the coming generation. The pollution of air, water, noise and disposal of solid waste is causing a serious for the civic and enforcement agencies. Almost all-human activities- Industrial, agricultural, mining and commercial activities cause water pollution.

According to Graham (1968), environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. Environmental degradation is one of the Ten Threats officially cautioned by the High Level Threat Panel of the United Nations. The World Resources Institute (WRI), UNEP (the United Nations Environment Programme), UNDP (the United Nations Development Programme) and the World Bank

have made public an important report on health and the environment worldwide on May 1, 1998.

The United Nations International Strategy for Disaster Reduction defines environmental degradation as “The reduction of the capacity of the environment to meet social and ecological objectives, and needs”. Environmental degradation is of many types. When natural habitats are destroyed or natural resources are depleted, environment is degraded.

According to Rogers (2001), *Environmental Change and Human Health*, a special section of *World Resources 1998-99* in this report describes how preventable illnesses and premature deaths are still occurring in very large numbers. If vast improvements are made in human health, millions of people will be living longer, healthier lives than ever before. In these poorest regions of the world an estimated 11 million children, or about one in five, will not live to see their fifth birthday, primarily because of environment-related diseases. Child mortality is larger than the combined populations of Norway and Switzerland, and mostly due to malaria, acute respiratory infections or diarrhoea — illnesses that are largely preventable.

Cholera has claimed some lives recently at Akim Nkwantanang, near Kade in Ghana’s Eastern Region (Ghanaweb.com; January 16, 2002). This preliminary news report indicated further, “about 40 others are on admission at the Kade Health Centre and the St. Dominic’s Hospital at Akwatia following a cholera outbreak.” Cholera killed a lot of people at Akwatia, last year. At the centre of this story is the fact that most causes for the incidence of cholera are man-made and preventable. Therefore, the issue for discussion, here, focuses on why preventable environmental conditions that tend to take the lives of citizens have

been allowed to persist by responsible people for a long period of time. In the case of Ghana, it is defensible to say that reckless and insensitive public policies in the mining industry operations have contributed, nefariously, towards persistent incidences of infectious diseases.

Statement of the problem

In recent years, the maintenance of the environment has been a major concern for the government and the Environmental Protection Agencies (E. P. A.). It is understood that teaching social studies in the basic schools is an essential part of the framework of an overall basic school curriculum. The basic school years are important in that they are the ones in which children develop a foundation for the entire social studies program and a beginning sense of efficacy as participating citizens of their world. Social studies provide a sense of history, a sense of existence in the past as well as the present, a feeling of being in history. Danteng is a small town in Nkawkaw in the Kwahu West Municipal Assembly with poor environmental conditions like improper waste management, poor drainage systems, pollution, only to mention a few. The deterioration in the environment of Danteng Township has adversely affected the health of inhabitants. Students reports to school with various diseases believed to be environmental prone diseases like cholera, malaria, tuberculosis, bilharzias, etc. This has prompted the researcher to improve JHS 1 students understanding of the concept environmental degradation through field trips.

Purpose of the study

The purpose of the study is to improve the understanding of the concept environmental degradation among JHS 1 students at Danteng M/A Junior High School through field trip.

Research questions

The following research questions have been stated to serve as a guide and focus for the study.

1. What is environmental degradation?
2. What are the causes of environmental degradation?
3. What are the effects of environmental degradation?
4. What are some measures of preventing/ controlling environmental degradation?
5. Can students understanding be improved on the concept of environmental degradation through field trip?

Significance of the study

It is the duty of every teacher to find ways of improving the standards of students and education as a whole. The significance of the study is to expose students what environmental degradation is, its' causes and effects on the lives on people in the society.

The study will further help to sensitize members of the Danteng community on the dangers of deteriorating the environment and identify ways of preventing the menace.

Lastly, the study will serve as reference material for future researchers who may like to study into a topic of similar nature.

Limitations

It is quiet difficult and taskful working on issues concerning human and more especially children. The following are the limitations the researcher faced during the research work.

Firstly, teaching, preparing of lesson notes, teaching and learning materials, etc do not give the researcher enough time to carry out the study. Furthermore, insufficient time schedule for lesson in the school affected the study because the researcher uses 30 minutes for a period. Lastly, absenteeism on the part of some students affected the results. This is because some student were absent from school on some days of the intervention process.

Delimitations

Environmental degradation is one of the most predominant issues the country is struggling to find measures to. It has being a major concern for the government. In as much as the government is trying to control the deterioration of the environment, most people are still engaging in activities that degrade the environment. It is that they are not aware of its effects or they are deliberate.

It could be very appropriate to carry out this study nation – wide or in the district but researcher decided to delimit it to that intensive nature of Danteng community in the Kwahu East District.

Organization of the study

This aspect of the study talks about what is entailed in each of the chapters of the project work. This project has been written and arranged in a systematic order to make it

very comprehensive. The first chapter of this work deals with the introduction. It consist of the background to the study, statement of the problem, purpose of the study the research questions, significance of the study, limitations and delimitations, organization of the study and lastly definition of terms.

The second chapter also covers the literature review. This entails the discussion of the finding of other researchers on the topic. The methodology of the project work is found in the third chapter. It describes the way the research was carried out, the population, and the specific action taken to make the project a success (intervention procedures)

The fourth chapter deals with data collection and it analysis. The summary, conclusions and recommendations made at the end of the study are found in the fifth chapter.

Definition of terms:

1. The environment according to Jasim (2008) refers to all the things that surround us.
2. Pollution: It is the release of toxic substances into the environment in quantities which are harmful to living organisms.
3. Degradation: It means reduction in quality.
4. Disease: It is a disorder that interferes with the normal functioning of the body or part of the body.
5. Organic manure: It is a type of manure obtained from decompose parts of plant and animals.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter review related literature. It involves the findings of other researchers on the topic. The review will be based on the following sub – topics.

1. Definition of environmental degradation
2. Some main issues about environmental degradation
3. Causes of environmental degradation
4. Effects of environmental degradation
5. Measure of preventing environmental degradation

Definition of environmental degradation

According to Rogers (2001), environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil, the destruction of the ecosystems and the extinction of wildlife.

Also, Jasim (2008) defined environmental degradation as the activities that cause harm or destruction to features in the environment. He stated that, environmental degradation is one of the key problems in Ghana today. If we carelessly destroy the features of the environment, our continued existence will be in jeopardy or danger. We must therefore show disinterest in activities that may cause harm to the environment.

For the purpose of information, scientific research from Kwame Nkrumah University of Science and Technology has found that Birim River's water level is dwindling, according to a reliable source. It is well known that water basins get their protection from forest overgrowth. The fact that Birim River's water volume is thinning is an indication that both the forest's undergrowth and overgrowth are degraded, most probably from indiscriminate diamond prospecting along its banks.

That the banks of the Birim River are dotted with timber process sawmills could not be sheer coincidence with respect to the dwindling of water in the basin. In addition, the diamond mining company based at Akwatia since 1947 has been dumping excessive silt leftover from its processing plants into the Birim River. It should not take any great imagination to understand that excessive silt deposit into the Birim River contributes to the thinning of the water volume.

To anybody's thinking, the problems mentioned above call for public policy solutions; and this is where the government of the day comes in. In spite of the need for public policy action to solve the problem of environmental degradation along the banks of Birim River, Ghana's Minister of Mines recently advised the Board of the ailing Ghana Consolidated

Diamond Company to extend its operations downstream towards Akim Oda. One wonders whose interest the Honorable Minister Kwadwo Adjei-Darko is protecting, the voters in the community or profits of the mining company?

For an unexplained reason, it appears the directives of the Minister of Mines are in conflict with the concerns raised recently by Ghana's Vice President Alhaji Aliu Mahama regarding degradation of the forest cover for water basins in Ghana. In a recent speech, the vice president is reported to have charged District Assemblies "to deal drastically with environmental offenders ..." (See: "VP Launches Environmental Protection Program", Ghanaweb.com, Jan. 12, 2002). In this context, why shouldn't Kwaebibirem District Assembly and the other District Assemblies along the banks of Birim River "deal drastically" with mining operators and prospectors that degrade the ecology of the areas under their jurisdiction?

Some main issues about environmental degradation

- ✓ Land degradation: Soil degradation affects a third of the world's land and diminishes its ability to produce food for the growing population. It is caused by deforestation, poor land and water management, over-use of fertilisers and pesticides, poor waste disposal, clearance of poor land for growing food and air pollution.
- ✓ Urbanisation: Though 60 to 70 per cent of people in developing countries live in rural areas, more and more people are being attracted to the cities. As cities grow, productive farming land is covered in houses and roads and the remaining land has to produce more food to support even more people. Rapid urban expansion also puts pressure on infrastructure development and the environment. Well-planned, densely

populated settlements can reduce the need for land conversion, provide opportunities for energy savings and make recycling more cost-effective.

- ✓ Pollution and climate change: Contamination of air, water and soil can have serious effects on the health of people and the world's ability to grow food. Since the industrial revolution, the concentration of carbon dioxide in the atmosphere has increased significantly, contributing to the greenhouse effect known as climate change. Increasing temperatures, more frequent droughts and polar ice melts also affect health and food security.
- ✓ Alternative energy sources such as solar, wind, hydro, biogas, thermal and tidal are being developed to address carbon pollution. While these resources are renewable and have a lower impact on the environment the technology is not developed enough to overcome their unreliability.
- ✓ Marine and coastal degradation: Disposal of wastes, particularly sewage, directly into oceans is a major source of pressure on marine and coastal areas. Population growth and increasing urbanisation, industrialisation and tourism is increasing the extent of the coastal degradation.

Causes of environmental degradation

According to Nikoi (2008), there are many human activities which adversely affect the environment. These include;

- a. Poor farming methods: Poor farming methods such as bush burning and continuous farming are two main poor farming practices that degrade the environment. The burning of the bush after clearing the vegetation reduced nutrients in the soil and leads to desertification.

- b. Surface mining: It refers to the process of obtaining minerals by removing the surface layer of the earth.
- c. Overgrazing by livestock: Overgrazing by animals such as cattle, sheep and goats deprive the land of its vegetative cover.
- d. Industrialization: The establishment of industries had led to environmental problems such as air and water pollution.
- e. Fishing with chemicals such as DDT: The use of poisonous chemicals such as DDT for fishing in rivers and seas pollutes these water bodies and reduces their ability to support the growth of aquatic species.
- f. Deforestation: It refers to indiscriminate felling of trees from the forest. It often reduces the vegetative cover in an area.
- g. Stone quarrying and sand winning: This create large and deep channels or ditches in the landscape making it difficult for people to build or farm on the affected land.

Effects of environmental degradation

Cholera belongs to the group of deadly illnesses classified as “diarrhoeal disease” among other infectious diseases. Diarrhoeal diseases cause their victims to lose body fluids and matter rapidly and excessively, often resulting in death quickly if left untreated immediately. Besides diarrhoeal diseases, the World Health Organization, WHO, identifies pneumonia, AIDS, TB, malaria and measles as the leading infectious diseases afflicting the world today, (Johnson et al, 1997).

In layman’s terms, the diseases identified above are described as “infectious” precisely because once they come into existence they are communicated or transmitted from the sources or agents to their human victims. Humans who have the misfortune of hosting the infectious agent of the diseases pass them on directly or indirectly to others leading to a

multiplying effect or epidemic. “Direct transmission is the immediate transfer through touching, kissing, biting, or sexual intercourse or by droplets spread during sneezing, coughing, spitting, singing, or talking,” according to AVISO, an information bulletin on global environmental change and human security (“Infectious Diseases and Global Change: Threats to Human Health and Security,” Issue No. 8, June 2001).

Other direct transmission of infectious disease agents includes exposure of open tissue to affected soil, decaying vegetable matter, animal bites and transfer from a pregnant mother to the fetus. “Contaminated objects such as soiled bedding or dressings, or poorly cleaned utensils, as well as water, food, milk, blood and serum ...” are indirect vehicles for the transmission of agents of infectious diseases, according to the AVISO bulletin.

To reinforce the view stated earlier that there is interconnectedness between social environmental conditions and the incidence of infectious diseases, the AVISO bulletin stated: “The potential for micro-organisms to cause disease outbreaks is dependent on exposure of humans to environmental risks, the overall health of the individual, and the ability of the pathogen to affect humans.” The bulletin emphasized, “There is an intrinsic relationship between pathogen, host, and environment (physical, biological, social, cultural, and economical).”

Polluted water features prominently as vehicle for the causes and transmission of infectious diseases and that is where the concrete situation of Akwatia, Kade and the outlying villages come into focus relative to the contradiction between diamond mining operations in the area and public health policy of Ghana (or the lack of it.) Since 1947, diamond mining operations based at Akwatia have resulted in the dumping of waste water into the Birim River which historically has been the source of drinking water for citizens living along its banks. The Birim River since 1947 has lost its value and essence for the

people at Akwatia and downstream. It is a joke among some circles familiar with the unhealthy quality of Birim River downstream from Akwatia that even frogs cannot survive in the water.

Elliot (1991) contended on the effects on environmental degradation that, the resource base generally translates into decreases in production or income and thus in the availability of food. Declining soil fertility leads to lower crop yields while rangeland depletion reduces off-take, and any deterioration in water quality adversely affects the fish catch. Degradation of common property resources pulls labour away from directly productive activities towards gathering - simply collecting non-wood and minor forest products - and probably diminishes opportunities for deriving income from this source.

Linkages with food security can also be less direct. Shortages of biomass may result in a transition to lower-nutrition foods that require less fuel for cooking. In addition, recurrent drought or natural calamities also directly result in progressive loss of food security prospects. In their quest for food security, the rural poor have sometimes little choice but to overuse the limited resources available to them. The resulting environmental degradation imposes further constraints on their livelihood in what has been called a "downward spiral" or "vicious circle".

They are often forced to make trade-offs between immediate household food requirements and environmental sustainability both in production and consumption. Their negligible man-made capital assets, ill-defined or non-existent property rights, limited access to financial services and other markets, inadequate safety nets in time of stress or disaster, and lack of participation in decision-making can result in their adopting "short time horizons", which favour immediate imperatives over longer-term objectives. This can result in coping strategies that rely on the drawing down of the capital available to them, mainly in

the form of natural resources. It also makes them more vulnerable to environmental degradation, including degradation wrought by others than the poor themselves.

The poor may be both agents and victims of environmental degradation, especially in marginal areas, where the resource base is ill-suited to agriculture. But it cannot be assumed that the poor have an intrinsic propensity to degrade environmental resources. On the contrary, many poor traditional communities demonstrate an admirable environmental ethic and have developed complex resource management regimes. There is little evidence that the rural poor, when offered an appropriate environment - including secure tenure and access to markets - pursue resource-degrading strategies. Thus, while poverty may be an underlying cause of environmental degradation, it is more accurately seen as a proximate cause influenced by a complex of policy and institutional factors.

The very same processes that lead to and perpetuate poverty constrain the poor in their decision- making with regard to natural resource management. Affluence and poverty affect the environment in different ways: poverty eradication would not erase environmental degradation but change the nature of environmental problems facing society.

According to Jasim (2008), our environment has been under serious threat as a result of our everyday activities. He outlined the following effects of environmental degradation on the climate.

- i. Reduction in rainfall: When we cut trees indiscriminately without re-planting, we reduce the rate of transpiration, which is a contributory factor to the formation of rain.
- ii. Formation of acid rain: some of the harmful factory wastes which pollute the air are poisonous. For example, sulphur dioxide is a poisonous gas release

when oil and coal are burned. It is also released from factories that generate electricity.

- iii. Destruction of Eco-system: Land degradation through improper mining activities removes surface soil, causing soil erosion and preventing plant growth. It also destroys our forests and natural climate.
- iv. Increase in weather temperature: When we cut trees in our environment, the coolness of the atmosphere is also affected. As a result, the weather temperature goes up. This can also reduce the rainfall we get and affect our farming seasons and yields.

Measures of preventing environmental degradation

Jasim (2008) identifies the following measure of preventing environmental degradation.

- i. We must avoid wrong methods of farming and mining.
- ii. We must avoid indiscriminate bush burning.
- iii. We must avoid deforestation.
- iv. Building contractors must not encourage sand winning from unauthorized places.
- v. People must contact Town and Country Planning Department for proper layout of our township before they put up building.
- vi. We must dispose our refuse safely.
- vii. We must not rely on trees for firewood.

Graham (1968), explained that, environmental degradation can be prevented through ecologically sustainable development. Ecologically sustainable development is the environmental component of sustainable development. It can be achieved partially through

the use of the precautionary principle, namely that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Also important is the principle of intergenerational equity, namely that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations; the conservation of biological diversity and ecological integrity; and improved valuation, pricing and incentive mechanisms, namely that environmental factors should be included in the valuation of assets and services. Environmental issues are negative aspects of human activity on the biophysical environment. Environmentalism, a social and environmental movement that started in the 1960s, addresses environmental issues through advocacy, education and activism.

Another way of preventing environmental degradation as outlined by Awoyemi (1957), is through 'Scientific grounding'. The level of understanding of Earth has increased markedly in recent times through science especially with the application of the scientific method. Environmental science is now a multi-disciplinary academic study taught and researched at many universities. This is used as a basis for addressing environmental issues. Large amounts of data have been gathered and these are collated into reports, of which a common type is the State of the Environment publications. A recent major report was the Millennium Ecosystem Assessment, with input from 1200 scientists and released in 2005, which showed the high level of impact that humans are having on ecosystem services.

Furthermore, Elliot (1991) stated that, environmental issues are addressed at a regional, nation or international level by government organisations. He continued that, the

largest international agency, set up in 1972, is the United Nations Environment Programme. The International Union for Conservation of Nature brings together 83 states, 108 government agencies, 766 Non-governmental organizations and 81 international organizations and about 10,000 experts and scientists from countries around the world. International non-governmental organizations include Greenpeace, Friends of the Earth and World Wide Fund for Nature. Governments enact environmental policy and enforce environmental law and this is done to differing degrees around the world.

To Rogers (2001), sustainability is the key to preventing or reducing the effect of environmental issues. There is now clear scientific evidence that humanity is living unsustainably, and that an unprecedented collective effort is needed to return human use of natural resources to within sustainable limits. For humans to live sustainably, the Earth's resources must be used at a rate at which they can be replenished. Concerns for the environment have prompted the formation of Green parties, political parties that seek to address environmental issues. Initially these formed in Australia, New Zealand and Germany but are now present in many other countries.

A publication by a popular Ghanaian Newspaper, The Chronicles on combating environmental degradation stated that, many organizations including the World Resources Institute (WRI), United Nations Environmental Programme (UNEP), United Nations Development Programme (UNDP) and the World Bank made public an important report on health and the environment sighting how the activities of man has contributed to the degradation of the environment and how the situation can be rectified. In spite of these campaigns, it is quite disheartening that people are still degrading the environment to the suffering of the mass.

The landmark report of the World Commission on Environment and Development, entitled "Our Common Future", warned that unless we change many of our lifestyle patterns, the world will face unacceptable levels of environmental damage and human suffering. The Commission, echoing the urgent need for tailoring the pace and the pattern of global economic growth to the planet's carrying capacity, said that: "Humanity has the ability to make development sustainable and to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs."

According to Nikoi (2008), the environment can be protected many ways. This include;

- i. Improper farming systems.
- ii. Increase the use of organic manure.
- iii. Encouraging proper disposal of industrial waste.
- iv. Encouraging proper disposal of domestic waste.
- v. Monitoring lumbering activities.
- vi. Enforcing the ban on the use of chemicals for fishing
- vii. Enforcing environmental laws
- viii. Controlling soil erosion
- ix. Replanting felled trees
- x. Afforestation
- xi. Recycling
- xii. Educating

Summary of literature review

In the final analysis, the environmental crisis affects everyone on the planet, but the degree to which the inhabitants of different parts of the world contribute to this crisis depends on the level of their economic development and their consumption patterns.

Deterioration of the environment poses threat to all inhabitants of a society, the nation and the world at large. It is therefore very important to develop positive attitude towards effective use of and care for features in our environment and sustain them.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter is devoted to the task of addressing the problem through the application of an intervention. It throws lights one the research design, the population for the study, sample and sampling procedure, instrument(s) used, pre – intervention, intervention and post – intervention aspects of the research.

Research design

The design used in the project is action research. Action research is a kind of research used to find immediate solution to a classroom problem. By extension, the researcher works collaboratively with other people to solve a perceived problem. This approach aims at improving a problem – related situation through change. The action research has a lot of benefits so far as teaching and learning is concerned. It assists the teacher to evaluate his or her teaching effectiveness. Action research also helps the teacher to understand what actually goes on in teaching and learning situations.

Action research has its own weaknesses. Firstly, it is time consuming. Also, not all problems identified can be solved. Furthermore, it limits the researcher to a particular school environment or local setting.

Population

Danteng M/A Junior High School is in the Kwahu West Municipality with pupils population of two hundred and seventy – six (276) comprising on one hundred and thirty – six (136) boys and one hundred and forty (140) girls. A class has an average of forty – six (46) pupils. It is the only Junior High School in the town beside Presby and Catholic Primary Schools.

Sample and sampling procedure

According to Amedahe and Gyimah (2002), a sample consists of a carefully selected subset of the units that made up the population. However, due to limited time, the researcher through purposive sampling technique selected JHS one (1) class as the accessible population. In purposive sampling also known as judgmental sampling, subjects who fall within the topic under study are selected (Cohem et al (2000). Pupils' population in the class is forty – one (41). This comprises of twenty – one girls (21) and twenty (20) girls. However, through weeks of careful observation and test, all the pupils in the J.H.S. one were samples for the study. This is to ensure that all the pupils in the class benefit from the study.

Research instrumentation

The major instrument used for data collection was observation and tests. Considering the topic under study, its purpose as well as the population, it was deemed necessary to use these tools

in the collection and gathering of data needed for the study. These tests or exercises were carefully structured to cater for individual needs and the abilities of pupils.

Observation

This is the type of data collection procedure that employs vision as its main means of collecting information. Observation means to watch carefully the way something happens or someone does something especially to learn from it. Observation offers first hand information on about a topic and withholds the disadvantages that go with relying on the report for other people. However, because it is less complicated, it is time consuming. JHS one students were observed by the researcher on different occasions during Social Studies lessons. All observations made were recorded for the purpose of the study.

Test

This was also a major tool in the gathering and collection of data. Test is a series of questions This tool was employed to assess the effectiveness or the result of the study. Test has two components namely the diagnostic test (pre-test) and the pos-test form the data collected.

Intervention processes

Pre – intervention

In diagnosing the problem, the researcher took three days round the community taking pictures of some poor hygienic conditions such as improper waste disposal, poor drainage systems, water pollution, etc. The community of Pitiku has been put into such degradable manner which identifies the inhabitants as illiterates and ignorant of environmental conservation measures. Further observations revealed that, their daily activities knowingly

or unknowingly are not environmental friendly and thus degrade the environment. Appendix A contains pictures of poor hygienic conditions in Pitiku town.

Intervention

Information gathered from the interviews administered to the samples proves that, they have little knowledge on environmental degradation. Though they are suffering from the menace of their own careless activities, they seem not to realize. Day in day out, both old and young are rushed to the community clinic for various diseases such as cholera, dysentery, malaria, typhoid. It is very surprising to note that the water source they pollute is the same water they use at times for domestic purposes. Through the interview, inhabitants were educated on the effects of degrading the environment. The researcher took them round to observe some of their bad practices and its consequences. By the help of the assemblyman, the town crier sent information to all members of the community to manage and dispose their waste properly. Those who indiscriminately dump waste will be sanctioned. Furthermore, communal labour was organised on every Sunday morning to help clean the community.

Post – intervention

The researcher took another tour round the community after a week of the intervention exercise and the site was different. Inhabitants of Pitiku now dispose off their refuse properly. A pit was dug to accommodate all waste products. Places which were known to be very dirty especially the gutters were all empty all allow free movement of water. Moreover, the community has been assured of a fresh breathing air, absent of pollutants.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

Introduction

This chapter deals with the presentation of data and its analysis. These data presented was based on the observation and the interviews administered. Simple figures and percentages were used in the analysis.

Table 1

Awareness of environmental conservation measures

Awareness of environmental conservation measures	Number of peoples	Percentage (%)
Number of people aware	10	25
Number of people not aware	30	75
Total	40	100

Table 1 shows data on the number of people in Pitiku who are aware of the measures of conserving the environment. It reveals that, 10 people forming 25% are aware of some measures while as many as 30 people representing 75% responded that they know of no measure of conserving the environment.

Table 2

Waste management method at home

Method	Number of people	Percentage (%)
Refuse dump	13	32.5
Pit	1	2.5
River	5	12.5
Bush	15	37.5
Not precise	6	15
Total	40	100

According to table 2, 13 people representing 32.5% responded that they keep their refuse in a refuse dump. Moreover, a person (2.5%) also said he/she dumps the waste in a pit. Furthermore, 5 people representing 12.5% responded that, they keep throw their waste into the river that run through the town. 15 people forming 37.5% ticked that, they throw their

waste products into the bush. 6 people representing 15% responded that they are not precise where their children throw off their waste.

Table 3

Do you know of any proper way of managing or disposing waste?

Proper waste management	Yes	No	Total
Number of people	8	32	40
Percentage (%)	20	80	100

Table 3 also shows data on samples knowledge on proper waste management. The data revealed that, 8 people representing 20% responded yes whiles 32 people also representing 80% responded no

Table 4

Who disposes off waste at home?

Who disposes waste	Number	Percentage (%)
Children	31	77.5
Parents	9	22.5
Total	40	100

Table 4 shows data on the response ticked by samples to who dispose off waste at home. According to the data, 31 people making 77.5% said their children are responsible for waste disposal. Moreover, 9 people forming 22.5% also said the dispose off waste themselves.

Table 5

Do you teach children about waste management?

Teaching of waste management	Yes	No	Total
Teachers	4	0	100
Percentage (%)	100	0	100

Table 5 presents data on teachers' teaching their pupils on waste management. All 4 teachers representing 100% responded 'yes'.

Table 6

How do children dispose waste at school?

Waste disposal in school	Number of respondents	Percentage %)
Refuse dump	3	75
Pit	1	25
Total	4	100

According to table 6, 3 teachers representing 75% responded that their wards throw waste onto the refuse dump anything the dust bin is full. Also, 1 teacher representing 25% said waste is thrown into a dug pit in the school.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

In this chapter, an attempt is made to summarize the findings of the study. Conclusion and recommendations are made to all stakeholders in the study.

Summary of findings

The following findings were made by the researcher during the study. Firstly, information gathered revealed that only few people know of the measures of conserving the environment with majority of the people ignorant. Another finding made was that, in managing waste at home, inhabitants use the refuse dump or dug pit. Others also throw rubbish in to the river, the bush, and the last group not precise.

Moreover, a finding made is that, majority of parents leaves that task of waste disposal to children. Most of the teachers responded that they teach their children proper waste of managing domestic waste. It was also found out that, waste management methods in the schools in the community are quiet appropriate since gathered refuse are burnt to prevent it from polluting the environment. The study recorded a positive change in the attitude of inhabitants after series of public education on proper ways of managing waste.

Conclusion

It can be therefore concluded that, a healthy mind is found in a healthy body. Poor sanitation is an enemy to progress because it affects the health of people. Strong and

energetic men and women lay sick in bed due to unhygienic conditions prevailing in the community. School going children are not regular and punctual in school because of ill health. It pays to live in a clean environment.

Recommendation

Based on the findings highlighted in chapter four, the researcher would like to make the following suggestions.

- a. Educationist and curriculum planners should include environmental degradation as a topic in the primary school syllabus.
- b. The study could involve a larger sample say pupils in the school or members of the community.
- c.

APPENDICES

Appendix A

Appendix A contains pictures of poor hygienic conditions in Pitiku town.

Appendix B

Interview on the

Awareness of environmental conservation measures

Waste management method at home

Do you know of any proper way of managing or disposing waste?

Who disposes off waste at home?

Do you teach children about waste management?

How do children dispose waste in school?

How do you manage your waste at home?

Reasons for improper waste disposal

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