**IMPORTANCE OF CONSERVATION OF NATURAL RESOURCES**

**ABSTRACT**

The research is to assess the importance of conservation of natural resources in some selected villages in Ovia South West Local Government Area, Edo State. In this research work, a case study research design was used to collect information on conservation of natural resources by the people in six areas of Ovia South West Local Government Area, the places covered were Udo secondary school, Udo ward, College of Agriculture Iguoriakhi, Iguobazuwa Village, Iguelaho Village, Udo Village etc. Data collection was by both questionnaires and interview, data analysis was by percentages. From the research carried out the usefulness and importance of conservation of natural resources and how natural resources ensures the continuous supply of minerals for energy and foreign exchange from generation to generation. Benefits derived from conserving the natural resources are: provision of income and raw materials such as timber for industries, preservation of the endangered species of plants and animals from extinction. In all if men are environmental friendly, it will ensure healthy living of man on the surface of this plant earth.

**CHAPTER ONE**

**INTRODUCTION**

**1.1 BACKGROUND TO THE STUDY**

Natural resources include the whole earth’s natural environment. A resource is anything that meets or satisfies human need or want of civilization. Early societies used wood rather easily taxed the extent of the earth’s resources turning to a new one to fill their needs when the old were used up. The renewable resources are fossils fuels, minerals etc. Man has been using these natural resources increasingly over the years to provide him with food, materials, and energy. The end result of this is the dangers of depletion of the non-renewable resources.

Renewable resources been used up faster than they are formed resulting in the pollution of the environment. If our existence on this planet is to continue, we have to conserve our natural resources (Ramalingan, et al, 1979). The term conservation came from two Latin word “Con” meaning together while “servare” means to keep or guard. Therefore, conservation literally means to keep together. Today, we think of conservation as using our natural resources wisely rather than keeping together in a status quo-situation. According to Ramalingua, et al (1979) to conserve something means to protect it and keep it in a healthy condition. In the present context conversation implies ensuring a high quality life for human by the wise use and management of natural environment. This definition has a broad scope, it thought about the protection of nature that is forest, soil, wild life etc to enrich our lives, the controlled and planned, production of useful materials, from the living environment such as crops, fisheries. The controlled use of possible idea is a corporate concept, if manipulation and decision making in regards to our natural resources but we must first know what our natural resources are and what part they play in the ecosystem. Aido Leopard (1979) a notable conservationist, pointed out that people must understand ecological process to practice conservation. The main purpose of conservation is to maintain a healthy6, functioning biosphere (part of the earth were there are living things) that will also provide us with our needs, including reservation of activities.

**1.2 STATEMENT OF THE PROBLEM**

The study examines the essence and importance of the environment and its resources. It is unfortunate that many people do not know the importance of the environment to mankind and it determines the existence of man and other living organisms. The reasons for the decrease in conservation of natural resources are many. They include:

1. Inadequate education, about the danger of pollution.

2. The improper waste disposal

3. Poor wastes management

4. Poor ventilation

5. Improper handling of crude oil which leads to water pollution

6. Indiscriminate bush burning

7. Illegal timber felling

Nature provides us the basic needs like food, shelter, clothes, etc. for our survival. We use air, water, soil, minerals, coal, petroleum, animals, plants etc. in our daily life. But do you ever think, how long these precious materials of the nature will be available for our use. The growing population, rapid industrialization and urbanization have created heavy demand on all these materials. It is feared that unless proper steps are taken to conserve them in time, we will face tremendous hardship in future.

**1.3 PURPOSE OF THE STUDY**

The purpose of this research study is to create awareness in people on the essence and importance of the environment. Definitely people should adopt the best method of exploring the environment and care for nature and there are many benefits derived when our environment is conserved.

1. Preservation of natural forest

2. Preserving the beauty of life

3. Wildlife presentation

4. Improvement of quality of life

5. Improves our revenue

**1.4 RESEARCH QUESTIONS**

In this course of study, the following research questions are posed, if the nature resources are covered.

1. Are natural resources useful to mankind?

2. Does the conservation of natural resource encourage wildlife continuity?

3. Does conservation preserve the beauty of nature?

4. Does a healthy environment improve our quality of life?

5. Does conservation ensure continuous sources of minerals for energy and foreign exchange?

**1.5 SIGNIFICANCE OF THE STUDY**

This project work is designed especially to provide people particularly arose in Ovia South West Local Government Area of Edo state with basic or fundamental knowledge of conservation of nature resources. Information gathered from this project work if available to those people in their various places, will go a long way in solving the problem of conservation which include the nature resources. A comprehensive analysis and description of the essence of environment and its resources as provided in this project work will go a long way to inspire and educate the researcher may and other researcher who may want to  carry out further research into this topic. Information available in this project work will add to the pool of already existing ideas to be used in planning developing not only biology department, Ekiadolor, Benin but also the nation at large.

**1.6 SCOPE AND LIMITATION OF THE STUDY**

The researcher has limited the scope of this study to Udo, Iguobazuwa, Iguelahor College, Nikorogba, Okomu Oil in Ovia South West Local Government. The scope is limited to farmers in rural areas and also to a few students who are into research especially those in Biology Department of College of Education, Ekiadolor, Benin. Also to timber fellers who always have influence in the forest and finally the industrialist.

However the research has some constraints which are;

**Time**: the time at the disposal of the researcher which is allocated for the study was a major limitation as the researcher has to combine other academic work with the study.

**Finance:** The finance at the disposal of the researcher in the course of the study does not allow for wider coverage as resources are very limited as the researcher has other academic bills

**1.7 DEFINITION OF TERMS**

For the purpose of clarification, the following terms which are used in the content of the study are hereby defined.

**Eco-System**: Is the sum total of the biotic and abiotic components interacting in the environment.

**Endangered species**: Are wildlife species (animals) which are useful to man and for entertainment but are being endangered. They are being protected from extinction e.g. stripped hydrias, giraffe, whales, kites, sparrow, hawks etc.

**Extinction**: Is when animal’s species reptiles, birds and mammals have been hunted or killed by man which makes them go into extinction.

**Non-Renewable Resources**: Are those resources which cannot be replaced when the initial stock is used up examples are petroleum, coal, gold etc.

**Renewable Resources**: Are those resources which can be replaced when the initial stock are used up.

**Pollution**: Is the release or discharge of waste substance or energy into the environment by man in quantities which are harmful to him or to other things or which in some ways reduce the quality of human life.

**1.8 ORGANIZATION OF THE STUDY**

This research work is organized in five chapters, for easy understanding, as follows. Chapter one is concern with the introduction, which consist of the (background of the study), statement of the problem, objectives of the study, research questions, research hypotheses, significance of the study, scope of the study etc. Chapter two being the review of the related literature presents the theoretical framework, conceptual framework and other areas concerning the subject matter. Chapter three is a research methodology covers deals on the research design and methods adopted in the study. Chapter four concentrate on the data collection and analysis and presentation of finding. Chapter five gives summary, conclusion, and recommendations made of the study.

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

**2.1 INTRODUCTION**

The proper application of natural resources for long-lasting human welfare is known as conservation. When talking of natural resources, it includes all land, waters, vegetation, minerals and wildlife useful to the society in the maintenance of civilization. The wise and judicious use of natural resources without wasting them and the efforts of replacement like planting tree whenever possible are called conservation. The term conservation came into use in the late 19th century and referred to the management, mainly for economic reasons, of such valuable natural resources as fish, topsoil, pastureland and minerals and also to the preservation of forests, wilderness and watershed areas.

Natural resources, both renewable and non-renewable, and ecosystem services are a part of the real wealth of nations. They are the natural capital out of which other forms of capital are made. They contribute towards fiscal revenue, income, and poverty reduction. Sectors related to natural resources use provide jobs and are often the basis of livelihoods in poorer communities. Owing to this fundamental importance of natural resources, they must be managed sustainably. Government plays the essential role in putting into place policies that ensure that resources contribute to the long-term economic development of nations, and not only to short-term revenue generation. High-quality institutions in the present, and planning for the future, can turn the so called resource curse into an opportunity. Poverty is an important underlying cause of further deforestation, of which about two thirds is carried out by small farmers clearing land for cultivation and to obtain wood for fuel. Commercial logging for timber is responsible for most of the rest. The pressure on the remaining forests is increasing as the numbers of people with a low income and worldwide demand for commercial timber products grow. The demand for food, and therefore for agricultural land, will also rise sharply as the world’s population rises and people’s diets contain more protein (Matthews 1999). Almost all the best agricultural land is already cultivated and so less suitable land is being brought into cultivation, leading to more soil erosion and loss of biodiversity.

**2.2 CONCEPT OF NATURAL RESOURCES**

The term “resource” means anything that we use from our environment to achieve our objective. For example, we require bricks, cement, iron, wood etc. to construct a building. All these items are called the resources for construction of building. A resource can be defined as ‘any natural or artificial substance, energy or organism, which is used by human being for its welfare. These resources are of two types:

1. Natural resources and
2. Artificial resources.

All that the nature has provided such as soil, air, water, minerals, coal, sunshine (sunlight), animals and plants, etc., are known as natural resources. Human being uses these directly or indirectly for survival and welfare. The resources, which have been developed by human being during the growth of civilization, are called artificial resources. For example, biogas, thermal electricity, plastics, etc are manmade resources. These man-made resources are generally derived from some other natural resources. For example, plastics and many other chemical products are ultimately derived from the natural resource of petroleum.

**2.3 TYPES OF NATURAL RESOURCES**

Forest Resources, Timber

Animal Resources

Land Resources

Water Resources

Air, Wind Energy

Sunlight, Tidal Energy

Precious Stone such as Gold, Diamond

Lime Stone, cement, gravel

Fossil fuel such as coal, petroleum, natural gas

**Classification of Natural Resources:**can be done in different criteria, such as the basis of origin. The two categories of resources are biotic and abiotic resources. Biotic resources extracted from the biosphere can be obtained in the raw forms or by means of cultivation through agriculture. Most of the biotic resources are non-renewable in nature, such as petroleum and natural gas which formed through years of decomposition of organic matters. The organic matter can be known as the remains of plants and animal. Examples of biotic resources are Timber, Petroleum, Fruits, Natural gas and wax etc, (Thompson, 2003).

Abiotic resources are the non-living and non-organic materials which are in different forms, such as crud, coal, diamond, air, water, gravel, salt, etc. Natural resources can also be classified in a manner that helps to know the fast-depleting nature of the resources. Some natural resources can be renewed while some cannot be renewed. The renewable resources are the ones that can be produced again such as plants and animals. Whereas non-renewable resources are those which cannot be produced again, such as fossilfuel timber etc, (Darner, 2009).

Natural Resources can be classified on the basis of the stage of development which is known as potential resources. Potential resources are those that exist in region and may be used in the future. An example of such is mineral oil, which are found in sedimentary rocks, but until the time it is dilled out and put into use, it remains a potential resources. Most of the resources are materials in the environment which have the potential to satisfy human needs, but there is no appropriate technological means to access it. These resources are hydrogen and oxygen which are two inflammable gasses present in water, but there is no technology to use it from water (Sourabh, 2012).

**2.3.1 THE IMPORTANT NATURAL RECOURSES**

1. Water is precious for life. It is stored for irrigation, domestic use, industrial use, and mining and for other purposes. It is store in porous soil, artesian wells and mountain streams.

2. Lakes, oceans and rivers fulfill diverse human needs like food, recreation etc. Land is the basic resource. It serves as the storehouse of minerals, livestock, and a home for wild animals, a producers of crops, a reservoir for water and a conserver of soil fertility.

3. Minerals includes useful components like gravel, coal, metals, oil, clay, sand, stone, phosphates, nitrates, etc.

4. Top Soil is the fertile layer of soil. Productivity of agricultural crops, forest and fodder crops are dependent on this. The whole animal world is also dependent on it indirectly.

**2.3.2 BENEFITS OF NATURAL RESOURCES**

Natural resources provide and solve daily needs of man such as clothing, shelter, and food, through farming and rearing of animal for domestic and commercial uses. Man can earn, invest and save money from farm produce. Agricultural productivity have unlimited access to improved proper managed irrigation (Lekwa, 1996).

Proper managed irrigation makes agriculture an unseasonal phenomenon and this enhance sufficient production of agricultural goods such as crops, grains, nuts, rubber. Natural resources also contribute immensely to the boosting up of the national economy in the sense that the national income is increased. Examples of such product are cocoa, rubber, coal, wild managa etc, which can be exported to foreign countries. The availability of such product in the country will also attract foreign investors and this create employment opportunities (Terry, 2001).

There are different variety of natural resources which can be used in different ways. Most plants and animals have medicinal value that can be used to manufacture drugs. A significant proportion of drugs are derived directly or indirectly from biological source that are found in natural compound from plants and animals. Medicinal drugs derived from natural sources make important global contribution to health care of the people. Many of these natural chemicals cannot be manufactured synthetically (Heasman, et al 1985).

**2.3.3 NEED FOR CONSERVATION**

i) Deforestation caused the loss of energy resources.

ii) Use of natural resources is increasing but the amount of these resources by decreasing.

iii) Relational and international capacities conserving the resources are not properly organized, must have some common conservation strategy.

**2.4 CLASSIFICATION OF NATURAL RESOURCES**

The air we breathe and the light we get from the sun are available in unlimited quantity. But what about coal, forest, and petroleum? The stock of these resources is limited. The quantity of these resources is depleting day by day.

**Inexhaustible Resources:** The resources which cannot be exhausted by human consumption and other uses, are called inexhaustible resources. These include energy sources like solar radiation, wind power, water power (flowing streams) and tidal power, and substances like sand, clay, air, water in oceans, etc.

**Exhaustible Resources:** On the other hand, there are some resources, which are available in limited quantities and are going to be exhausted as a result of continuous use. These are called exhaustible resources. For example, the stock of coal in the earth is limited and one day there will be no more coal available for our use. Petroleum is another important exhaustible resource.

**Renewable Resources:** Some of the exhaustible resources are naturally regenerated after consumption and are known as renewable resources. e.g. The living beings (both animals and plants) reproduce and can thus, replace the dying or killed individuals. However, if the consumption of these resources exceeds the rate of regeneration they may also get totally exhausted. Some examples are fresh water, fertile soil, forest (yielding wood and other products), vegetation, wildlife, etc.

**Non-renewable Resources:** The resources, which cannot be replaced after the use, are known as non-renewable Resources. These include minerals (copper, iron etc.) fossil fuels (coal, oil etc.). Even the wildlife species (rare plants and animals) belong to this category.

**2.5 SOCIAL CAPITAL AND NATURAL RESOURCE CONSERVATION**

The concept of social capital captures the ideas that social bonds and norms are important for people and communities (Coleman, 1988). As social capital lowers the transaction costs of working together, it facilitates cooperation. People have the confidence to invest in collective activities knowing that the others will also do so. They are also less likely to engage in unfettered private actions with negative outcomes, such as resources degradation (Pretty and Ward, 2001). As adopted by these authors, the concept of social capital has four important features that facilitate cooperation: relation of trust; reciprocity and exchanges; common rules, norms, and sanctions; and connectedness in networks and groups. In rural areas where use of natural resources has been unsustainable, communities lack social capital, mostly because it was destroyed by unfavorable policies and structures of social relations. Krishna and Uphoff (2002)’s study on watershed development in Rajasthan, India found that an index of social capital is positively and consistently correlated with superior development outcomes, both in watershed conservation and in cooperative development activities more generally. These authors used some concrete and rigorous measures of development performance against which to test and validate the phenomenon of social capital in the very specific rural context. For them, “Social capital is a matter of more than academic concern.” They further argue that an “examination of social capital deserves all of the rigor that academic analysis can bring to them, but this analysis must also contribute to an understanding of social capital that can be applied to real-world setting.”

**2.6 CONSERVATION OF NATURAL RESOURCES**

As the human population is continuously growing the consumption of natural resources is also increasing. With the increasing industrialization and urbanization of the modern human society, the use of all the resources is rising. If they are not properly used and well managed, a serious scarcity will result. Therefore we need to conserve the natural resources. This will also upset the ecological balance. Conservation is the proper management of a natural resource to prevent its exploitation, destruction or degradation. Conservation is the sum total of activities, which can derive benefits from natural resources but at the same time prevent excessive use leading to destruction or degradation.

**2.6.1 NEED FOR CONSERVATION OF NATURAL RESOURCES**

We know that nature provides us all our basic needs but we tend to overexploit it. If we go on exploiting the nature, there will be no more resources available in future. There is an urgent need to conserve the nature. Some of the needs are:

1. To maintain ecological balance for supporting life.
2. To preserve different kinds of species (biodiversity).
3. To make the resources available for present and future generation.
4. To ensure the survival of human race.

**2.6.2 SOIL EROSION**

Erosion literally means “to wear away”. You might have noticed during the summer, when wind blows it carries away sand and soil particles from one place to another. Similarly flowing water removes some amount of soil along with it. This removal of top layers of soil by wind and water is called soil erosion. You know that top layers of soil contain humus and mineral salts, which are vital for the growth of plants. Thus, erosion causes a significant loss of humus and nutrients, and decreases the fertility of soil.

**2.6.3 CAUSES OF SOIL EROSION**

There are several causes of soil erosion, these include:

(a) Natural causes; and

(b) Anthropogenic causes (human generated causes)

**(a) Natural Causes of Soil Erosion:** Erosion of soil takes places due to the effect of natural agents like wind and water. High velocity winds over lands, which have no vegetation, carry away the loose top soil. Similarly in areas with no or very little vegetation, the pouring raindrops carry away the soil.

**(b) Anthropogenic Causes of Soil Erosion:** Besides the natural agents, there are some human activities, which cause soil erosion. Let us know about them.

**Deforestation:** If the forests are cut down for timber, or for farming purposes, then the soil is no longer protected from the effect of falling rains. Consequently, the top soil is washed away into the rivers and oceans.

**Poor farming methods:** Improper tillage and failure to replace humus after successive crops and burning the stubble of weeds reduce the water-holding capacity of the soil. So the soil becomes dry and can be blown away as dust.

**Overgrazing:** Overgrazing by flocks of cattle, buffaloes, goats and sheep leave very little plant-cover on the soil. Their hooves make the soil dry and soil can be blown away easily.

**2.6.4 CONSERVATION OF SOIL**

Soil loses its fertility due to erosion. So we need to conserve the soil. Soil conservation means checking soil erosion and improving soil fertility by adopting various methods. Below are some of these methods.

1. **Maintenance of soil fertility:** The fertility can be maintained by adding manure and fertilizers regularly as well as by rotation of crop.
2. **Control on grazing:** Grazing should be allowed only on the areas meant for it and not on agricultural land.
3. **Reforestation:** Planting of trees and vegetation reduces soil erosion by both water and wind.
4. **Terracing:** Dividing a slope into several flat fields to control rapid run of water. It is practiced mostly in hilly areas.
5. **Contour ploughing:** Ploughing at right angles to the slope allows the furrows to trap water and check soil erosion by rain water.

**2.7 ENERGY RESOURCES**

We have always been using different form of energy obtained from various sources for our daily activity like cooking, heating, ploughing, transportation, lighting, etc. For example, heat energy required for cooking purpose is obtained from firewood, kerosene oil, coal, and electricity or cooking gas. LPG (liquefied petroleum gas) We use animal power (horse, bullock, etc.) for transportation and for running minor mechanical devices like the Persian wheel for irrigation or for running a “kolhu” for extracting oil from oilseeds. Different forms of these energies are obtained from various sources. We will discuss about them in detail.

**2.7.1 TYPES OF ENERGY SOURCES**

There are two main categories of energy sources:

1. Conventional Sources of Energy, which are easily available and have been in usage for a long time.
2. Non-Conventional Sources of Energy, that are other than the usual, or that are different from those in common practice.

**2.8 CONVENTIONAL SOURCES OF ENERGY**

These have been in use since ancient times. Most important among them are the fossil fuels. So we shall know details about the fossil fuels.

**Fossil Fuels:** Fossil fuels are the fossilized remains of plants and animals, which over millions of years have been transformed into coal, petroleum products and natural gas.

**Coal:** is the most abundant fossil fuel. It is widely used for combustion in cooking and industrial activities. There are different types of coal products such as coal gas, coal tar, benzene, toluene, etc., which are used for various purposes.

**Oil and Natural gases** are formed from plants and animals which once lived in the tropical seas. Oil (or petroleum) is a source of countless products. Apart from petrol, diesel and other fuels, petroleum products include lubricants, waxes, solvents, dyes, etc. Petroleum reserves are supposed to last for another 100 years or so.

**Natural gas** is often found with petroleum. The gas mainly contains methane. Apart from serving as fuel in several industries, it is being increasingly used as domestic fuel in many countries including India. United States of America is the largest producer as well as consumer of natural gas. Now a days in big cities and town it is being supplied through pipelines which is called Piped Natural Gas (PNG). The natural gas is also used as a fuel to run vehicles. It is known as Compressed Natural Gas (CNG). It is accepted as an economical and less polluting fuel for transport. The Liquefied Petroleum Gas (LPG) is the common cooking gas used in Indian homes. It is a mixture of propane and butane gases kept under pressure in liquid form, but they burn in gaseous form. This gas is made available in a specific container for domestic as well as industrial uses. It is a byproduct of petroleum refineries.

**2.8.1 NON-CONVENTIONAL SOURCES OF ENERGY**

We reviewed conventional sources of energy above, whether renewable or non-renewable (coal, oil, etc.), which are fast depleting and will not last long. Therefore, greater utilization of non-conventional sources of energy (solar, wind, hydro, geothermal, etc) will have to be used. We will discuss about some of these energy sources.

**Solar Energy:** Solar energy is the ultimate source of all energies on earth. Firewood, coal, oil or natural gas are the products of plants and other organisms, which had used solar energy for the synthesis of organic molecules during photosynthesis. Even today it will turn out to be the most important answer to problems of energy except nuclear energy. The solar energy has the following advantages:

1. It is abundant
2. It is everlasting
3. It is available almost everywhere.
4. It is free from political barriers.

Various technologies in which solar energy can be, and is being utilised are as follows:

1. Solar cookers
2. Solar hot water systems
3. Solar dryers (used for drying crop yields)
4. Solar air heaters
5. Solar kilns
6. Solar desalination systems
7. Solar batteries

**Hydel /Hydro Energy:** The generation of electricity by using the force of falling water is called hydroelectricity or hydel power. It is cheaper than thermal or nuclear power. For its generation dams are built to store water, which is made to fall to rotate turbines that generate electricity.

**Wind Energy:** Wind as an energy can be utilized in our daily life by converting it into mechanical energy. This mechanical energy is used to generate electricity, raise water from wells and rivers for irrigation and other purposes. Windmills have been in use since early times to provide power for grinding grains. It is also used for grain cutting and shelling. In India a large number of windmills are being constructed on the sea beach and hilly areas.

**Tidal Energy:** Tidal energy is one that is produced by making the use of water movement from a high tide to a low tide. Ocean waves and tides can be made to turn a turbine and generate electricity. Areas where rivers flow into the sea experience waves and tides and electricity can be generated there. It has much potential. As you know we have a large coastline and major river systems in our country, electricity can be generated on a large scale from waves and tides.

**Nuclear Energy:** Radioactive elements like uranium and thorium disintegrate spontaneously releasing large quantities of energy. This energy can be trapped to produce electricity. 25% of world’s thorium reserve is found in our country, which can be utilised to generate electricity. Most advanced countries have nuclear power stations. We too have some in India, for example, Tarapur (Maharashtra), Kalpakkam (Tamil Nadu), Narora (Uttar Pradesh), Kota (Rajasthan). Approximately 3% of India’s electricity comes from nuclear power and about 25% is expected to come by 2050. Installation costs of nuclear power stations are very high, but maintenance costs are relatively low. If not carefully maintained, these also have an inherent risk of causing radioactive pollution.

**Hydrogen Energy:** Hydrogen is the primary fuel for the hydrogen based fuel cells and power plants. Power can be generated for industrial, residential and transport purposes by using hydrogen.

**Geothermal Energy:** This is the energy derived from the heat in the interior of the earth. In volcanic regions, springs and fountains of hot water called “geysers” are commonly found. These eruptions of hot steaming water can be used to turn turbines and produce electricity in geothermal power plants. In this method cold water is allowed to seep through the fissures in the rocks till it reaches the hot rocks in the lower layers. Water gets heated and gets converted into steam which forces out to the surface to be used in power generation. Besides the superheated steam of hot springs can also generate electricity. There are 46 hydrothermal areas in India where the water temperature normally exceeds 150 degree centigrade. Electricity can be generated from these hot springs.

**Biogas:** Another form of non-conventional energy is biogas. It is produced by the microbial activity on cattle dung in a specially designed tank called digester. A mixture of water and cattle dung is poured in this digester where anaerobic decomposition takes place and biogas is generated. This gas contains 55 – 70 percent methane, which is inflammable and it is generally used as cooking gas and for generation of electricity. The “waste” left in the tank after the generation of biogas is used as manures. Thus, biogas plant provides us both the fuel and the manure. Biogas plants are becoming very popular in rural India.

There are two types of biogas plants:

(a) Family type gas plants- These are small and are used individually by a family.

(b) Community type gas plants- These are large and are used by larger rural populations.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 RESEARCH DESIGN**

The researcher used descriptive research survey design in building up this project work the choice of this research design was considered appropriate because of its advantages of identifying attributes of a large population from a group of individuals. The design was suitable for the study as the study sought to examine the importance of conservation of natural resources.

* 1. **SOURCES OF DATA COLLECTION**

Data were collected from two main sources namely:

1. Primary source and
2. Secondary source

**Primary source:** Personal interview was conducted with selected people in six areas of Ovia South West Local Government Area, Edo State.

**Secondary source:** The secondary formed the major theoretical part that was derived through critical review of library and also other related literature (material written by others researchers).

* 1. **POPULATION OF THE STUDY**

Population of a study is a group of persons or aggregate items, things the researcher is interested in getting information on the study the importance of conservation of natural resources. 200 staffs and students of Udo secondary school, Udo ward, College of Agriculture Iguoriakhi, Iguobazuwa Village, Iguelaho Village, Udo Village, Edo State was selected randomly by the researcher as the population of the study.

* 1. **SAMPLE AND SAMPLING PROCEDURE**

Sample is the set people or items which constitute part of a given population sampling. Due to large size of the target population, the researcher used the Taro Yamani formula to arrive at the sample population of the study.

n= N

1+N(e)2

n= 200

1+200(0.05)2

= 200

1+200(0.0025)

= 200 200

1+0.5 = 1.5 = 133.

**3.5 INSTRUMENT FOR DATA COLLECTION**

The major research instrument used is the questionnaires. This was appropriately moderated. The head of units were administered with the questionnaires to complete, with or without disclosing their identities. The questionnaire was designed to obtain sufficient and relevant information from the respondents. The primary data contained information extracted from the questionnaires in which the respondents were required to give specific answer to a question by ticking in front of an appropriate answer and administered the same on staffs of the institutions: The questionnaires contained about 16 structured questions which was divided into sections A and B.

* 1. **VALIDATION OF THE RESEARCH INSTRUMENT**

The questionnaire used as the research instrument was subjected to face its validation. This research instrument (questionnaire) adopted was adequately checked and validated by the supervisor his contributions and corrections were included into the final draft of the research instrument used.

**3.6** **METHOD OF DATA ANALYSIS**

The data collected was not an end in itself but it served as a means to an end. The end being the use of the required data to understand the various situations, it is with a view to making valuable recommendations and contributions. To this end, the data collected has to be analysis for any meaningful interpretation to come out with some results. It is for this reason that the following methods were adopted in the research project for the analysis of the data collected. For a comprehensive analysis of data collected, emphasis were laid on the use of absolute numbers frequencies of responses and percentages. Answers to the research questions were provided through the comparison of the percentage of workers response to each statement in the questionnaire related to any specified question being considered.

Frequency in this study refers to the arrangement of responses in order of magnitude or occurrence while percentage refers to the arrangements of the responses in order of their proportion.

The simple percentage method is believed to be straight forward easy to interpret and understand method.

The researcher therefore choose the simple percentage as the method to use.

The formula for percentage is shown as.

% = f/N x 100/1

where f = frequency of respondents response

N = Total Number of response of the sample

100 = Consistency in the percentage of respondents for each item contained in questions.

**CHAPTER FOUR**

**PRESENTATION ANALYSIS INTERPRETATION OF DATA**

**4.1 INTRODUCTION**

Efforts will be made at this stage to present, analyze and interpret the data collected during the field survey. This presentation will be based on the responses from the completed questionnaires. The result of this exercise will be summarized in tabular forms for easy references and analysis. It will also show answers to questions relating to the research questions for this research study. The researcher employed simple percentage in the analysis.

**DATA ANALYSIS**

The data collected from the respondents were analyzed in tabular form with simple percentage for easy understanding.

A total of 133 (one hundred and thirty three) questionnaires were distributed and 133 questionnaires were returned.

Question 1

Gender distribution of the respondents.

TABLE I

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gender distribution of the respondents** | | | | | |
|  | | | | | |
| Response | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 77 | 57.9 | 57.9 | 57.9 |
| Female | 56 | 42.1 | 42.1 | 100.0 |
| Total | 133 | 100.0 | 100.0 |  |

From the above table it shows that 57.9% of the respondents were male while 42.1% of the respondents were female.

Question 2

The positions held by respondents

TABLE II

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **The positions held by respondents** | | | | | |
| Response | | Frequency | Percent | Valid Percent | Cumulative Percent |
| **Valid** | Lecturers | 37 | 27.8 | 27.8 | 27.8 |
| Students | 50 | 37.6 | 37.6 | 65.4 |
| Non-lecturing staffs | 23 | 17.3 | 17.3 | 82.7 |
| ICT personnel | 23 | 17.3 | 17.3 | 100.0 |
| Total | 133 | 100.0 | 100.0 |  |

The above tables shown that 37 respondents which represents 27.8% of the respondents are Lecturers, 50 respondents which represents 37.6 % are Students, 23 respondents which represents 17. 3% of the respondents are Non-lecturing staffs, while 23 respondents which represents 17.3% of the respondents are ICT personnel.

Question 1

Are natural resources useful to mankind?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **natural resources are useful to mankind** | | | | | |
| Response | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Agreed | 51 | 38.3 | 38.3 | 38.3 |
| Strongly agreed | 31 | 23.3 | 23.3 | 61.7 |
| Disagreed | 23 | 17.3 | 17.3 | 78.9 |
| Strongly disagreed | 28 | 21.1 | 21.1 | 100.0 |
| Total | 133 | 100.0 | 100.0 |  |

In the table above, the researcher asked the respondent if natural resources are useful to mankind, it can be seen that 51 respondents which represents 38.3% of the respondents agreed to this fact that natural resources are useful to mankind, 31 respondents which represents 23.3% of the respondents strongly agreed to this fact, 23 respondents which represents 17.3% of the respondents disagreed to this fact, while 28 respondents which represents 21.1% strongly disagreed.

The researcher therefore concludes that natural resources are useful to mankind.

Question 4

Does the conservation of natural resource encourage wildlife continuity?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **there are policies, laws or decrees affecting the operations of the commercial banks involvement in Port-Harcourt Metropolis** | | | | | |
| Response | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Agreed | 51 | 38.3 | 38.3 | 38.3 |
| Strongly agreed | 31 | 23.3 | 23.3 | 61.7 |
| Disagreed | 23 | 17.3 | 17.3 | 78.9 |
| Strongly disagreed | 28 | 21.1 | 21.1 | 100.0 |
| Total | 133 | 100.0 | 100.0 |  |

In the table above, the researcher asked the respondent if the conservation of natural resource encourage wildlife continuity, it can be seen that 51 respondents which represents 38.3% of the respondents agreed to this fact that the conservation of natural resource encourage wildlife continuity, 31 respondents which represents 23.3% of the respondents strongly agreed to this fact, 23 respondents which represents 17.3% of the respondents disagreed to this fact, while 28 respondents which represents 21.1% strongly disagreed.

The researcher therefore concludes that the conservation of natural resource encourage wildlife continuity.

Question 5

Does conservation ensure continuous sources of minerals for energy and foreign exchange?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **conservation ensure continuous sources of minerals for energy and foreign exchange** | | | | | |
| Response | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Agreed | 51 | 38.3 | 38.3 | 38.3 |
| Strongly agreed | 31 | 23.3 | 23.3 | 61.7 |
| Disagreed | 23 | 17.3 | 17.3 | 78.9 |
| Strongly disagreed | 28 | 21.1 | 21.1 | 100.0 |
| Total | 133 | 100.0 | 100.0 |  |

In the table above, the researcher asked the respondent if conservation ensure continuous sources of minerals for energy and foreign exchange, it can be seen that 51 respondents which represents 38.3% of the respondents agreed to this fact that conservation ensure continuous sources of minerals for energy and foreign exchange, 31 respondents which represents 23.3% of the respondents strongly agreed to this fact, 23 respondents which represents 17.3% of the respondents disagreed to this fact, while 28 respondents which represents 21.1% strongly disagreed.

The researcher therefore concludes that conservation ensure continuous sources of minerals for energy and foreign exchange.

**CHAPTER FIVE**

**SUMMARY CONCLUSION AND RECOMMENDATIONS**

**5.1 INTRODUCTION**

It is pertinent to note that this research was aimed at cross examining the how relevance it is to conserve natural resources, thus the topic “important of conservation of natural resources”.

In the preceding chapter, the relevant data collected for this study were presented, critically analyzed and appropriate interpretation given. In this chapter, certain recommendations made which in the opinion of the researcher will be of benefits in addressing the challenges associated with conservation of natural resources in Nigeria.

**5.2 SUMMARY**

The study highlights the importance of natural resources and their utilization right from ancient to modern times in addition to an inalienable relationship between human beings and natural resources.

The findings of the study revealed that, conservation management is created through a process of ecologically based planning and design, whereby planners assess the state of natural resources in the environmental context and use their knowledge for conservation to minimize the environmental impacts. Participatory resource management is often seen as an appropriate approach to reducing rural poverty and resource degradation. A long held perception is that common property resource appropriators can create local management institutions that can ensure an equitable access to the locally based natural resources.

**5.3 CONCLUSION**

Being earth friendly is very essential as this will save our planet at the time making a better place to live in for us, for future generations.

The responsibility lies more on the human population because they have got the thinking power and the wisdom to judge good and bad, man should realize that he is not alone in this world. There are others to use the available resources. The first forest policy of 1894 had upheld the right of the state to an exclusive control over the forest resources. There is a need for promoting social and economic infrastructure development for realizing the potential benefits of the market economy through natural resource policies that incorporate the environment as well as local people’s rights and local economies. Farmers in the developing countries possess a fairly sophisticated knowledge of agriculture and natural resource management which is recognized as being more eco-friendly and sustainable. Reforming and strengthening of forest governance and the forest industry sector is essential for ensuring a sustainable forest resource use and forest conservation through promoting the modernization of forest conservation. Because, development with an industrial emphasis coupled with a reckless resource use can further weaken the interrelationship between the local people and forest resources.

**5.4 RECOMMENDATIONS**

Form the findings of this study, the following recommendations were suggested by the researcher;

1. Regulations and laws should be enacted for the preservation of natural resources.
2. Responsibility should be for all human being for an equitable use of natural resources for sustainable use of natural resources for sustainable life styles of all in this mother earth.
3. Since ecology is all about an interrelated existence of living beings and natural resources, an integrated natural resource management policy can be an ideal directive principle of the State policy for states to administer and the Centre to monitor and evaluate.
4. Policies and institutions need to provide the enabling environment and incentives for managing natural resources to reflect scarcities and their full ecological and social values.
5. Strategies for conserving, protecting and enhancing the natural resources should be based on the specific resource constraints faced in any given location, as well as the current and desired improvements in reversing depletion and degradation.

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