



NATIONAL OPEN UNIVERSITY OF NIGERIA

**DEPARTMENT OF PEACE STUDIES AND CONFLICT
RESOLUTION, FACULTY OF SOCIAL SCIENCES**

COURSE CODE: PCR 352

**COURSE TITLE: -SUSTAINABLE
ENVIRONMENTAL DEVELOPMENT AND
PEACE**



PCR 352
SUSTAINABLE ENVIRONMENTAL DEVELOPMENT AND
PEACE

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Course Writer Dr. Ewa Usang
University of Calabar

Course Editor Professor Layi Egunjobi
Dept of Urban Regional Planning
University of Ibadan

Head of Department Iroye Samuel Opeyemi PhD
(Associate Professor of Strategic Studies and Conflict Resolution)
Department of Peace Studies, Faculty of Social Sciences,
National Open University of Nigeria, Abuja

Course Reviewer Dr Amaka Theresa Oriaku Emordi
Obafemi Awolowo University Ile-Ife,
Osun State



NATIONAL OPEN UNIVERSITY OF NIGERIA

National Open University of Nigeria
Headquarters
91 Cadastral Zone,
Nnamdi Azikiwe Expressway,
Jabi, Abuja

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Introduction

PCR 310 Sustainable Environmental Development and Peace is a one-semester course. It will be available for you to take towards the core module of the Bachelor of Arts in Peace Studies and Conflict Resolution. This course is suitable for under graduate students seeking to understand and obtain the required skills necessary for sustainable environmental analysis and peace studies.

This course consists of 25 units, it examines in detail certain key terms and instruments necessary for environmental awareness. Definition/Meaning of concepts such as Environment, Development, Conflict, Peace and Sustainable, Environmental Constraints such as Ozone Depletion, Environmental Pollution, Types of Pollution, Causes/Sources of Pollution, Impact of Pollution on biodiversity, Fresh Water Management, Environmental Conservation and Protection, Rural and Urban Sustainability, Health Promotion; and Environmental factors as causes of Conflict, Violence and War. Human Development within a framework of Ecological Economics, Development, Under-development and Inequality, (Inter-) dependence and (In-) justice in the distribution, use and control of natural and human resource, Poverty Alleviation and Gender Equality, Sustainable Production and Consumption, Use and Control of Natural and Human Resources. It presents an overview of theoretical paradigms in research, the meaning and parts of a theory, the various perspectives in research and why we need research, the research

methods – both qualitative and quantitative in data collection analysis, and the use of the case study method, etc.

There are compulsory prerequisites for this course. The course guide tells you briefly what the course is all about, what you are expected to know in each unit, what course materials you need to use and how you can work your way through these materials. It also emphasizes the necessity for tutor-marked assignments. There are also periodic tutorial classes that are linked to this course.

What You Will Learn in this Course

The overall objective of **PCR 352 Sustainable Environmental Development and Peace** is to acquaint you with the array of organizing themes that could be used in understanding sustainable development with peace and conflict resolution at the nerve centre. The ultimate objective or goal is to develop and enhance your capacity to contribute to ecological balance within the communities.

Your understanding of this course will serve to expose you to a very important part of peace studies that have to do with the very important perspective of consciously building peace in societies in order to prevent wars.

Course Aims

The basic aim of this course is to expose you to the various organizing themes in peace and the environment. Get you to appreciate the various efforts and methods of seeking conflict resolution, and the necessity of good background study of a peaceful ecology to enable us have sustainable development

Course Objectives

Several objectives can be delineated from this course. In addition, each unit has specific objectives. The unit objectives can be found at the beginning of a unit. You may want to refer to them during your study of the particular unit to check on the progress you are making. You should always look at the unit objectives after completing a unit. In this way, you can be sure that you have covered what is required of you in that unit.

Working through this Course

To complete this course, you are advised to read the study units, read recommended books and other materials provided by NOUN. Each unit

contains Tutor Marked Assignment (TMA), which you are required to submit for assessment and for your exercise. At the end of the course, there is a final examination. The course should take you about twenty-five weeks to complete. You need to allocate your time in order to complete the course successfully and on time.

Course Materials

The major components of the course are:

- 1.0 Course Guide
- 2.0 Study Units
- 3.0 Textbooks and References
- 4.0 Assignment File

Study Units

There are twenty-five study units and a study Guide in this course, and they are as follows:

Module 1

3.1 The concept of sustainable environment

3.2 Environmental sustainability

3.3 Biodiversity

3.4 Ecological theory

3.5 Climate change

Module 2

- | | |
|--------|--|
| Unit 1 | Preservation, Conservation and Protection |
| Unit 2 | Attitudinal Imperatives for Sustainable Living |
| Unit 3 | Environment Education for Peace |
| Unit 4 | Coping with Environmental Change |
| Unit 5 | Biodiversity and Ecological Balance |

Module 3

- Unit 1.1 The three mainstays of sustainable environment
- Unit 1.2 Institutionally, the work model or the environment
- Unit 1.3 The social environment
- Unit 1.4 Consequences of unsustainable environment.
- Unit 1.5 Cleaner environment and future prosperity

Module 4

- Unit 1 Rural/Urban Sustainability for Peace
- Unit 2 Environmental Causes of Conflict and their Resolution
- Unit 3 Ecological Economics and the Millennium Development Goals
- Unit 4 Development and Underdevelopment; The Human Security Issues
- Unit 5 Inter-dependence and Distributive (In-Justice and Peace)

Module 5

- Unit 1 Conservation Strategies for Peace
- Unit 2 Planning for Sustainable Production and Consumption Habits
- Unit 3 Capacity Building for Environmental Development and Peace
- Unit 4 Environmental Planning and Poverty Reduction Strategies
- Unit 5 Sustainable Entrepreneurship and Gender Equality

Module 1 gives a conceptual foundation and overview of sustainable environmental development and peace. Module 2 deals with the contextual dimension of the living earth; while module 3 examines the human attitudinal and behavioral ingredients of ecological change and measures for peace. Module 4 highlights the key economic indices of ecological imbalance. Module 5 describes the coping mechanisms in the light of environmental change. Each study unit consists of one week's work.

Textbooks and References

You will find a list of recommended textbooks at the end of each unit. Study them. Make reference to other NOUN publications in your area of study and the Internet and libraries close to you.

Assignment File

There are two aspects to the assessment of this course. In this file, you will find all the details of the work you must submit to your course facilitator for marking: The marks you obtain for these assignments will count towards the final mark you obtain for this course. Further

information on assignment will be found in the Assignment File itself, and later in this one assignment. These assignments are basically meant to assist you to understand the course.

Assessment

There are two aspects to the assessment of this course. First, are the tutor-marked assignments; second, is a written examination. In tackling these assignments, you are expected to apply the information, knowledge and experience acquired during the course. The assignments must be submitted to your course facilitator for formal assessment in accordance with the deadline stated in the Assignment File. The work you submit to your course facilitator for assessment will account for 30 percent of your total course mark.

At the end of the course, you will need to sit for a final examination of three hour duration. This examination will account for the other 70 percent of your total course marks.

Tutor-Marked Assignment

There are 25 sets of tutor-marked assignments in this course. You only need to submit all the assignments. The best four (i.e the highest four of the 25 marks) will be counted. Each assignment counts for 20 marks but on the average when the five assignments are put together, then each assignment will count 10% towards your total course mark. This implies that the total marks for the best four (4) assignments, which would have been 100 marks, will now be 30% of your total course mark.

The Assignment for the units in this course is contained in the Assignment File. You will be able to complete your assignments from the information and materials contained in your set books, reading and study units. However, it is always desirable at this level of your education to research more widely, and demonstrate that you have a very broad and in-depth knowledge of the subject matter.

When each assignment is completed, send it together with a TMA (tutor-marked assignment) form to your Course Facilitator. Ensure that each assignment reaches your course facilitator on or before the deadline given in the Assignment File. If, for any reason you cannot complete your work on time, contact your course facilitator before the assignment is due to discuss the possibility of an extension. Extensions will not be granted after the due date unless there are exceptional circumstances warranting such.

Final Examination and Grading

The final examination for **Sustainable Environmental Development and Peace** will be of three hour duration and have a value of 70% of the total course grade. The examination will consist of questions, which reflect the practice exercise, and tutor-marked assignments you have previously encountered. All areas of the course will be assessed. Use the time between the completion of the last unit and sitting for the examination, to revise the entire course. You may find it useful to review your tutor- marked assignments and comment on them before the examination. The final examination covers information from all aspects of the course.

Course Marking Scheme

Table 1: Course Marking Scheme

ASSESSMENT	MARKS
Assignments	Best four marks of the Assignments @10% each (on the average) = 30% of course marks
Final examination	70% of overall course marks
Total	100% of course marks

How to Get the Most from this Course

In distance learning, the study units replace the university lecturer. This is one of the great advantages of distance learning; you can read and work through specially designed study materials at your own pace, and at any time and place that suits you best. Think of it as reading the lecture instead of listening to the lecturer. In the same way a lecturer might give you some reading to do, the study units tell you when to read, and which are your text materials or set books. You are provided exercises to do at appropriate points, just as a lecturer might give you an in-class exercise.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the unit, and how a particular unit is integrated with the other units and the course as a whole. Next to this is a set of learning objectives. These objectives, lets you know what you

should be able to do by the time you have completed the units. These learning objectives are meant to guide your study. The moment a unit is finished, you must go back and check whether you have achieved the set objectives. If this is made a habit, then you will significantly improve your chances of passing the course. The main body of the unit guides you through the required reading from other sources. This will usually be either from your set books or from a reading section.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your tutorial facilitator. Remember that your tutorial facilitator's job is to help you. When you need assistance, do not hesitate to call and ask your tutorial facilitator to provide it.

The following is a practical strategy for working through the course:

- Reading this Course Guide thoroughly is your first assignment.
- Organize a Study Schedule. Design a 'Course Overview' to guide you and note the time you are expected to spend on each unit and how the assignments relate to the units. You need to gather all the information into one place, such as your diary or a wall calendar. Whatever method you choose to use, you should decide on and write down your own dates and schedule of work for each unit.
- Once you have created your own study schedule, do everything to stay faithful to it. The major reason that students fail is that they get behind with their course work. If you get into difficulties with your schedule, please, let your tutorial facilitator know before it is too late for help.
- Turn to Unit 1, and read the introduction and the objectives for the unit.
- Assemble the study materials. You will need your set books and the unit you are studying at any point in time.
- Work through the unit. As you work through it, you will know what sources to consult for further information.
- Review the objectives for each study unit to confirm that you have achieved them. If you are unsure about any objectives or review study materials, consult your tutorial facilitator.
- When you are confident that you have achieved a unit objective, you can then start on the next unit. Keep to your schedule. When the Assignment is returned, pay particular attention to your tutorial

facilitator's comment, both on the tutor marked as well as written assignment. Consult your tutorial facilitator if you have any problems.

- Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor.
- When you are confident that you have achieved a unit's objectives, you can start on the next unit. Proceed unit by unit through the course and try to space your study so that you can keep yourself on schedule.
- When you have submitted an assignment to your tutorial facilitator for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the Assignment is returned, pay particular attention to your tutorial facilitator comments, both on the tutor-marked assignments form and also the written comments on the ordinary assignments.
- After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives (listed in the Course Guide).

Facilitators/Tutors and Tutorials

There are 12 hours of tutorials provided in support of this course. You will be notified of the dates, times and location of these tutorials, together with the name and phone number of your tutorial facilitator, as soon as you are allocated a tutorial group.

Your tutorial facilitator will mark and comment on your assignments, keep a close watch on your progress and on any difficulties you might encounter and provide assistance to you during the course.

You must mail your tutor-marked assignments to your tutorial facilitator well before the due date (at least two working days are required). They will be marked by your tutorial facilitator and returned to you as soon as possible.

Do not hesitate to contact your tutorial facilitator by telephone e-mail, or discussion board. The following might be circumstances in which you will find help necessary. Contact your tutorial facilitator if:

- You do not understand any part of the study units or the assigned readings.
- You have difficulties within the exercises.

- You have a question or problem with an assignment, with your tutor's comments on an assignment or with the grading of an assignment.

You should try your best to attend the tutorials. This is the only chance to have face to face contact with your tutorial facilitator and ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefits from course tutorials, prepare a question list before attending them. You will learn quite a lot from participating in the discussions.

Summary

This course guide has introduced you to every aspect of your course on Sustainable Environmental Development and Peace. We wish you every success in your studies.

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MODULE 1

Unit 1

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcome
- 1.3 Understanding Sustainable Environment
- 1.4 [Biodiversity](#)
- 1.5 Ecological theory
- 1.6 Climate change
- 1.7 Summary
- 1.8 References/Further Readings
- 1.9 Possible Answer to Self-Assessment Exercise



1.1 INTRODUCTION:

Hello student, welcome to module one titled *the concepts of a sustainable environment*. The module is divided into five units which include, the concept of sustainable environment, environmental sustainability, biodiversity, ecological theory, climate change make ensure you read between the lines of the various units for you to understand the module well. Hence understanding the module would be of great help in your understanding all the other modules. Subsequently, as you progress in the study. I wish you the best as you study the course which is delivered to you in a cascade manner for better understanding.



1.2 Learning Outcome

By the end of studying this unit, you should be able to:

- The concept of sustainable environment sustainable
- [Biodiversity](#)
- Ecological theory
- Environmental sustainability
- Climate change.



1.3: The concept of sustainable environment:

Sustainable development was defined by the Brundtland Commission (1987) in the following way: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This definition has been brought into service in the absence of agreement about a process that almost everybody thinks is desirable. However, the simplicity of this approach is deceptive and obscures underlying complexities and contradictions. It is worth pausing to examine the apparent consensus that reigns over sustainable development. The expression sustainable development has been used in a variety of ways particularly within the context of development studies. In the early 21st century we are confronted with several different discourses of sustainable development some of which are mutually exclusive. For example, campaigners for greater global equality between nations, huge international corporations, and local housing associations have all had recourse to the term ‘sustainable development to justify or embellish, their actions (Desai & Potter (2008).

The Brundtland commission definition is clear and also points to the fact that ‘needs’ themselves change so it is unlikely as the definition implies the needs of the future generations will be the same as those of the present generation. The question then is where does development come into the picture? The development itself contributes to ‘needs’ helping to define them differently for each generation and different cultures.

When we look at the natural environment, we see that it has a rather remarkable ability to rejuvenate itself and sustain its viability. For example, when a tree falls, it decomposes, adding nutrients to the soil. These nutrients help sustain suitable conditions so future saplings can grow. When nature is left alone, it has a tremendous ability to care for itself. However, when a man enters the picture and uses many of the natural resources provided by the environment, things change. Human actions can deplete natural resources, and without the application of environmental sustainability methods, long-term viability can be compromised.

Let us have a little illustration of sustainability to have a good understanding of the concept. It was the first time and the first year Mr. Emeka’s orange tree started fruiting. On this very day, Mr. Emeka needed some oranges. Getting to the orange tree his hands could not reach the tree to pluck the oranges he needed. He didn’t want to bother himself to use a fruit plucking pole to pluck the oranges he needed. He decided to use an ax to cut down the orange tree. Cutting down the tree made him have as many oranges as possible. Yes, that is the truth, Mr. Emeka got many oranges even baskets of oranges, to the extent that he sold some and gave some to

his friends and neighbors. However, Mr. Emeka jeopardized his chances of getting oranges from that tree the next time he would need oranges.

He also stopped the future generation from getting and enjoying oranges from that very orange tree. This means that he also eliminated the chances of his generation as well as the future generation from getting orange because of his actions on that faithful day that he cut down the orange tree. This means that due to his actions the production of oranges from that very tree is not sustained and the contribution of the tree in making the air cleaner and healthier for the people. Cutting down the tree he altered the environment's eco-system somehow

In the 1970s, there was a fear that our major environmental problems will be associated with resource scarcities (Meadows 1972). At the beginning of the 21st-century, we are faced with another challenge: that the means we have used to overcome scarcity, including the substitution of some natural resources, and 'cleaner' environmental products and services, may have contributed to the next generation of environmental problems. This realization provides an enormous challenge to conventional social science problems encapsulated in the term 'sustainable development' which has served as a concept, a policy prescription, and a moral imperative. Again, each scientific problem that is resolved by human intervention, using fossil fuels and manufactured materials is usually viewed as a triumph of management and contribution to economic good, when it might also represent a threat to sustainability.

1.4 BIODIVERSITY

Biodiversity refers to a variety of plant and animal life in the world or in a particular habitat, at a high level which is usually considered important and desirable for living. Biodiversity is the variety of life on earth in all its form and all of its interactions. Biodiversity plays an important role in ecosystem functioning.

The reason for this is that ecosystem processes are driven by the number of species in an ecosystem, the exact nature of each individual species, and the relative abundance of organisms within these species. Ecosystem processes are broad generalizations that actually take place through the actions of individual organisms. The nature of the organisms—the species, functional groups, and trophic levels to which they belong—dictates the sorts of actions these individuals are capable of carrying out and the relative efficiency with which they do so

1.5 ECOLOGICAL THEORY

Biodiversity definition from the above explains the coexistence of a variety of plant and animal life in the world or in a particular habitat which is desirable for living. On the other hand, the ecological theory states that in order to coexist, species must have some level of [limiting similarity](#)—they must be different from one another in some fundamental way, otherwise, one species would [competitively exclude](#) the other. Despite this, the cumulative effect of additional species in an ecosystem is arranged in a straight line or linear hence additional species may enhance nitrogen retention, for example, but beyond some level of species richness, additional species may have a little additive effect.

The addition (or loss) of species that are ecologically similar to those already present in an ecosystem tends to only have a small effect on ecosystem function. Ecologically different species, on the other hand, have a much larger effect. Similarly, dominant species have a large effect on ecosystem function, while rare species tend to have a small effect. [Dominant and principal species](#) tend to have an effect on ecosystem function that is disproportionate to their abundance in an ecosystem. Similarly, an [ecosystem engineer](#) is any [organism](#) that creates, significantly modifies, maintains or destroys

a [habitat](#).https://en.wikipedia.org/wiki/ecosystem#cite_note-chapin265-25

1.6 Climate change

According to NASA climate change” and “global warming” are often used interchangeably but have distinct meanings. Similarly, the terms "weather" and "climate" are sometimes confused, though they refer to events with broadly different spatial- and timescales. Weather refers to atmospheric conditions that occur locally over short periods of time—from minutes to hours or days. Familiar examples include rain, snow, clouds, winds, floods or thunderstorms. Climate, on the other hand, refers to the long-term regional or even global average of temperature, humidity and rainfall patterns over seasons, years or decades. Climate change is a long-term change in the average weather patterns that have come to define Earth’s local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term (Tansley, 1935). Changes observed in Earth’s climate since the early 20th century are primarily driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth’s atmosphere, raising Earth’s average surface temperature. These human-produced temperature increases are commonly referred to as global warming. Natural processes can also contribute to climate change, including internal variability (e.g., cyclical ocean patterns like El Niño, La Niña and the Pacific Decadal Oscillation) and external forces (e.g., volcanic activity, changes in the Sun’s energy output, and variations in Earth’s orbit).

Scientists use observations from the ground, air, and space, along with [theoretical models](#), to monitor and study past, present, and future climate change. Climate data records provide evidence of climate change key indicators, such as global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods and precipitation; and cloud and vegetation cover changes, to name but a few. <https://climate.nasa.gov/resources/global-warming-vs-climate-change/>

1.7 Summary

The concepts of environmental sustainability and peace are sometimes used mistakenly and interchangeably in the process of when discussing environmental sustainability. However, they represent different things. By now you should be able to distinguish some of these concepts for proper understanding.

Class Activity

1. Mention and explain three concepts of sustainable environment?



Self-Assessment Exercise

1. Explain biodiversity?
2. Give a clear definition of ecological theory?

Possible Answer to Self-Assessment

1. Biodiversity refers to a variety of plant and animal life in the world or in a particular habitat, at a high level which is usually considered important and desirable for living. Biodiversity is the variety of life on earth in all its form and all of its interactions. Biodiversity plays an important role in ecosystem functioning.
2. Ecological theory states that in order to coexist, species must have some level of [limiting similarity](#)—they must be different from one another in some fundamental way, otherwise, one species would [competitively exclude](#) the other. Despite this, the cumulative effect of additional species in an ecosystem is arranged in a straight line or linear hence additional species may enhance nitrogen retention, for example, but beyond some level of species richness, additional species may have a little additive effect



1.8 References Further Reading/ Web

Desai & Potter (2008) *The Third World, Developing Countries, the South, Poor Countries* in the
Companion to Development studies

Brundtland Commission (World commission on economic and development) (1987) *Our
common future* Oxford, Oxford University press
<https://en.wikipedia.org/wiki/ecosystem/cite/note-Schulz449-23>

<https://climate.nasa.gov/resources/global-warming-vs-climate-change/>

Unit 2: THE BENEFITS OF SUSTAINABLE ENVIRONMENT.

Unit Structure

2.1 Introduction

2.2 Learning Outcome

2.3 The economics of sustainable environment

2.4 industrial revolution

2.5 The second industrial revolution

2.6 The third industrial revolution

2.7 The ecosystem and the sustainable environment

2.8 Summary

2.9 References Further Reading/ Web

2.10 Possible Answer to Self Assessment Exercise



2.1 Introduction

A sustainable environment is of great benefit to mankind. One cannot talk of development and peace without a sustainable environment and peace, good politics, and economy. Development is an attribute of the enhanced standard of living and greater productivity on the part of citizens. Productivity on the other hand involves the reduction of the cost over the profit or increase of profit over its cost. Notwithstanding the benefits that economic growth has brought millions of people in both developed and developing economies—lifting them out of poverty, reducing infant mortality and other preventable deaths, increasing life expectancy, literacy, access to water and sanitation, eradication of diseases—evidence in respect of the environment and natural resources now suggests that this approach has brought human societies to the brink of catastrophe, putting at serious risk all these benefits and, indeed, the continuance of human civilization itself. In this section, we will be discussing some of the developmental stages of the industrial revolution that also changed our environment and production today such as the pre-industrial revolution to the third industrial revolution.



2.2 Learning Outcome

By the end of studying this unit, you should be able to:

- The economics of sustainable environment
- The industrial revolution
- The second industrial revolution
- The third industrial revolution
- The ecosystem and the sustainable environment

2.3 THE BENEFITS OF SUSTAINABLE ENVIRONMENT

When the world is run on a zero-marginal cost, majority of people will benefit against only bourgeoisie. The capitalist system is run by forces of profit making and competition. Adam Smith envisioned that with these forces, the end consumer will later benefit. The competition between producers of similar products, for the loyalty and patronage of customers, will usher in new innovations and counter innovations which reduces marginal cost, in other to deliver lower prices and quality products to consumers. Most consumers are constantly attracted to lower prices, except in instances in demand for luxurious and glamorous items – which only a few can afford. But there's a worry by some scholars that if the competition becomes too stiff, there's a risk that there might a net zero marginal cost which will jeopardize the profit going to be the producers. Because profit comes from the payment of goods and services. The fear

that's borne out of no-profits for producers will pressure these producers to draw a monopoly, thereby controlling prices for profit. In Rifkin (2014) believes that all economic activity comes from harnessing available energy in nature—in material, liquid, or gaseous form—and converting it into goods and services.

2. 4. INDUSTRIAL REVOLUTION

The advent of the steam engine was a precursor to the First Industrial Revolution, referred to as the Age of Mechanical Production in 1760. It was an era when the steam engine was powering everything then from agriculture to textile manufacturing. Beginning with the cotton factories. Consequently, the succession of mechanical inventions, the (First Industrial Revolution) began in England in the second half of the eighteenth century and spread in due course to Belgium, France, and other parts of Western Europe (Appadorai, 2004). In the economic sphere, the revolution substituted machine production for hand production. The small-scale production of goods in private homes was supplanted by mass production in factories. With the new mode of production. People migrate from farm to factories, from country to city, from agriculture to industry. One thing that can be noticed in every industrial revolution is the reduction in the marginal cost used in producing goods and services. This is why Rifkin, (2014) argued that every industrial revolution is accompanied by the convergence of a technology revolution with an energy revolution.

The first industrial revolution which was witnessed between, 1760 – 1830, was a period of great improvements on the former ways of industry and trade. It was a period whereof machines, instead of hand or manual labor, was used in hastening the production base of the textile and steel industry. The improvements in machines were accompanied by major innovations and improvements in the energy and transportation sector. In energy, coal and steam engine helped power industries and locomotives. Ships and trains made use of steam engines and coal to move goods and services. In Britain, the invention of the mechanized spinning machines and water frame in the 1780s, greatly improved the production of thread capacity of a single worker – eightfold and subsequently more. And this made possible the

increase in cotton products. The marginal cost of using hands in the weaving process was reduced and replaced by the invention of water frames and spinning machines, which enabled the increase in output per worker, as Britain led the industrial revolution (Champion 2021).

2.5 THE SECOND INDUSTRIAL REVOLUTION

The second industrial revolution of late 19th century to early 20 century involved the improvement in technological implements and devices. The second industrial revolution which could also be termed as Technological Revolution, benefited almost all industries. This technology revolution involved breakthroughs in communication, the invention of the internet, accompanied with the discovery and wide scale use of crude oil. The internet brought a lot of people together and reduced the cost of trade and commerce. Crude oil replaced coal and steam, which reduced the cost of transporting goods. The textile industry of the first industrial revolution was as result of great innovation and intelligence. It signified a period where the human reason, guided by commercial interest, was highly appreciated. But today the world is in dire need of another economic revolution. What we noticed from all the industrial revolution is a drive for the search and the use of better devices and infrastructure for economic life. The next economic revolution will utterly involve the change from fossil fuels to renewable energy. When the drive for a sustainable environment is being implemented through the wide scale utilization of greener and cleaner energy sources - which in itself has net zero marginal cost, it'll bring another spatial reality and development. The simple question is, how does greener and cleaner energy sources bring net zero marginal cost?

The Second Industrial Revolution was the Age of Science and Mass Production. Things started to speed up with a number of key inventions. Owners of means of production now richer started thinking of gasoline engines, airplanes, chemical fertilizer and inventions that helped us go faster and do more. Scientific principles were brought right into the factories. Most notably,

the assembly line, effectively powered mass production. By the early part of the 20th century, Henry Ford's company was mass producing the groundbreaking Ford Model T, a car with a gasoline engine built on an assembly line in his factories. People follow the jobs, and the early 1900s saw workers leaving their rural homes behind to move to urban areas and factory jobs. By 1900, 40% of the people in the rural areas especially in the US lived in cities, compared to just 6% in 1800. Cities were getting more and more urbanized. Inventions such as electric lighting, radio, and telephones transformed the way people lived and communicated ushered in the modern world- the third Industrial revolution.

2.6 THE THIRD INDUSTRIAL REVOLUTION BEGINNING IN THE 1950S.

Fundamentally changed with the discovery of electricity and mass production which is the Digital industrial Revolution. The third industrial revolution brought semiconductors, mainframe computing, personal computing, and the Internet—the digital revolution. Things that used to be analog moved to digital technologies, like an old television you used to tune in with an antenna (analog) being replaced by an Internet-connected tablet that lets you stream movies (digital). The move from analog electronic and mechanical devices to pervasive digital technology dramatically disrupted industries, especially global communications and energy. Electronics and information technology began to automate production and take supply chains global. With it came the wonders of the digital cloud. With the third industrial revolution came the magical internet which has replaced the steam engines and the Ford Main frame computers with some kind of miniature mobile and handy devices that let you access both the cloud (soft) and the(earth hard copies). The third industrial revolution provided access to gargantuan information explosion and knowledge consumption thereby exacerbating good and bad information consumption especially in the hand of the youth. Each of these first three industrial revolutions represented profound change with major societal transformation of the way people lived and work and communicate. Consequently, at the moment, many of the technologies people dreamed of in the 1950s and 60s have become a reality today() .

2. 7 THE ECOSYSTEM AND THE SUSTAINABLE ENVIRONMENT

An **ecosystem** (or **ecological system**) consists of all the organisms and the physical environment with which they interact *Chapin, F. Stuart, III (2011)*. These biotic and abiotic components are linked together through nutrient cycles and energy flows. Energy enters the system through photosynthesis and is incorporated into plant tissue. By feeding on plants and on one another, animals play an important role in the movement of matter and energy through the system. They also influence the quantity of plant and microbial biomass present. By breaking down dead organic matter, decomposers release carbon back to the atmosphere and facilitate nutrient cycling by converting nutrients stored in dead biomass back to a form that can be readily used by plants and microbes.

Ecosystems are controlled by external and internal factors. External factors such as climate, parent material which forms the soil and topography, control the overall structure of an ecosystem but are not themselves influenced by the ecosystem. Internal factors are controlled, for example, by decomposition, root competition, shading, disturbance, succession, and the types of species present. While the resource inputs are generally controlled by external processes, the availability of these resources within the ecosystem is controlled by internal factors. Therefore, internal factors not only control ecosystem processes but are also controlled by them.

An **ecosystem** is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system. These biotic and abiotic components are linked together through nutrient cycles and energy flows. Energy enters the system through photosynthesis and is incorporated into plant tissue. By feeding on plants and on one another, animals play an important role in the movement of matter and energy through the system. They also influence the quantity of plant and microbial biomass present. By breaking down dead organic matter, decomposers release carbon back to the atmosphere and facilitate nutrient cycling by converting nutrients stored in dead biomass back to a form that can be readily used by plants and other microbes.

Ecosystems are dynamic entities—they are subject to periodic disturbances and are in the process of recovering from some past disturbance. Ecosystems in similar environments that are located in different parts of the world can end up doing things very differently simply because they have different pools of species present.^[5] Internal factors not only control ecosystem processes but are also controlled by them and are often subject to feedback loops

Resource inputs are generally controlled by external processes like climate and parent material. Resource availability within the ecosystem is controlled by internal factors like decomposition, root competition or shading. Although humans operate within ecosystems, their cumulative effects are large enough to influence external factors like climate.

Biodiversity affects ecosystem functioning, as do the processes of disturbance and succession. Ecosystems provide a variety of goods and services upon which people depend.

Ecosystems are controlled both by external and internal factors. External factors, also called state factors, control the overall structure of an ecosystem and the way things work within it, but are not themselves influenced by the ecosystem. The most important of these is [climate](#).

Climate determines the [biome](#) in which the ecosystem is embedded. Rainfall patterns and seasonal temperatures influence photosynthesis and thereby determine the amount of water and energy available to the ecosystem (<https://en.Wikipedia.org/wiki/ecosystem/cite/note-Schulz449-23>). [Parent material](#) determines the nature of the soil in an ecosystem and influences the supply of mineral nutrients. [Topography](#) also controls ecosystem processes by affecting things like [microclimate](#), soil development and the movement of water through a system. For example, ecosystems can be quite different if situated in a small depression on the landscape, versus one present on an adjacent steep hillside (Chapin, 2002)

Other external factors that play an important role in ecosystem functioning include time and potential [biota](#). Similarly, the set of organisms that can potentially be present in an area can also significantly affect ecosystems. Ecosystems in similar environments that are located in different parts of the world can end up doing things very differently simply because they have different pools of species present. The [introduction of non-native species](#) can cause substantial shifts in ecosystem function.

Unlike external factors, internal factors in ecosystems not only control ecosystem processes but are also controlled by them. Consequently, they are often subject to [feedback loops](#). While the [resource](#) inputs are generally controlled by external processes like climate and parent material, the availability of these resources within the ecosystem is controlled by internal factors like decomposition, root competition or shading (Chapin 2002). Other factors like disturbance, succession or the types of species present are also internal.

Class Activity

Explain an ecosystem system in relation to sustainable environment and peace?



Self Assessment Exercise

1. Give a good definition of the term **ecosystem**?
2. Distinguish between the three industrial revolutions?

Possible Answer to Self Assessment Exercise

1. An **ecosystem** is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system. These biotic and abiotic components are linked together through nutrient cycles and energy flows. Energy enters the system through photosynthesis and is incorporated into plant tissue.
2. The advent of the steam engine was a precursor to the First Industrial Revolution, referred to as the Age of Mechanical Production in. It was an era when the steam engine was powering everything then from agriculture to textile manufacturing. The second industrial revolution of late 19th century to early 20 century involved the improvement in technological implements and devices. The second industrial revolution which could

also be termed as Technological Revolution, benefited almost all industries. While third industrial revolution fundamentally, changed with the discovery of electricity and mass production which is the Digital industrial Revolution. The third industrial revolution brought semiconductors, mainframe computing, personal computing, and the Internet—the digital revolution. Things that used to be analog moved to digital technologies, like an old television you used to tune in with an antenna (analog) being replaced by an Internet-connected tablet that lets you stream movies (digital).



2.8 Summary:

When gas or petrol engineered vehicles are driving on the road, it uses its energy by converting fuel or gas, through the combustion engine, to propel the vehicle. This fuel or gas cannot be collected back, but instead will need to be refueled. But when you have a car which is powered by electricity (the electricity being powered by renewables), you will not need to bother about gas or petrol, only for you to charge the vehicle and it's ready for movement. The marginal cost of refueling your car has been adequate replaced by electric cars, making an individual transport their goods and services with a net zero marginal cost.

Currently, electricity which is widely used by industries and households is chiefly powered by fossil fuels. However, fossil fuels are still the backbone of the electricity system, generating 64% of today's global supply (Gross. S, June 2020). Most industries and corporations need electricity to power their machines and devices. But the electricity provided depends on a centralized structure of fossil fuels, which in itself is unstable.



2.9 REFERENCES

Chapin, F. Stuart, III (2011). "Glossary". [Principles of terrestrial ecosystem ecology](#). P. A. Matson, Peter Morrison Vitousek, Melissa C. Chapin (2nd ed.). New York: Springer. [ISBN 978-1-4419-9504-9](#). [OCLC 755081405](#).

Tansley, A. G. (1935). ["The Use and Abuse of Vegetational Concepts and Terms"](#) (PDF). *Ecology*. **16** (3): 284–307. [doi:10.2307/1930070](#). [JSTOR 1930070](#). Archived from [the original](#) (PDF) on 2016-10-06.

Hatcher, Bruce Gordon (1990). "Coral reef primary productivity. A hierarchy of pattern and process". *Trends in Ecology and Evolution*. 5 (5): 149–155. doi:10.1016/0169-5347(90)90221-X. PMID 21232343.

Rifkin, J. (2014, April 1). *The Zero Marginal Cost Society: The Internet of Things, Collaborative Commons, and the Eclipse of Capitalism*. St Martin's publishing Group.

Champion, M. The future of Power Is Transcontinental Submarine Super grids. (2021, June 9). Bloomberg Businessweek. www.bloomberg.com/news/features/2021-06-09/future-of-world-energy-lies-inuhvdc-transmission-lines
Rifkin, J. (2009). *Empathic civilization; the race to global consciousness*. Jeremy P Tarcher Inc.

Chapin, F. Stuart Pamela A., Matson, Harold A. Mooney (2002) *the Principles of Terrestrial Ecosystem Ecology*, (Second ed.) New York: Springer
Tansley, A.G. (1939) *the British Island and their vegetation* (<http://books.google.com/books?id=1ioBAAAJAAJ&pg=PPI>). Cambridge University Press.

Appadorai A. (2004) *the Substance of Politics India* Oxford University Press New

MODULE 2

Unit 1	Preservation, Conservation and Protection
Unit 2	Attitudinal Imperatives for Sustainable Living
Unit 3	Environment Education for Peace
Unit 4	Coping with Environmental Change
Unit 5	Biodiversity and Ecological Balance

UNIT 1 PRESERVATION, CONSERVATION AND PROTECTION

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcome
 - 1.3 Preservation of the Environment
 - 1.4 Conservation and Development
 - 1.5 Environmental Protection
- 1.6 Summary
- 1.7 References/Further Readings/ Webs
- 1.8 Possible Answer to Self Assessment Exercise



1.1 INTRODUCTION

Humanity is fast losing control of the environment. The forces of production, the relations of production and the attitudes, which support production practices, and indeed the methods of resource exploitation are far exerting very great pressure on the environment. The result is that anthropological settings of the environment are passing away. Disappearance of species is on the increase and the potential of the environment for ecological balance to support life is in rapid decline.



1.2 Learning Outcome

By the end of studying this unit, you should be able to:

- differentiate between preservation, conservation and protection of the environment
- identify the modern and traditional methods of environmental preservation
- explain the values of modern environmental conservation practices
- give examples of environmental protection practices.



1.3 Preservation of the Environment

Preservation of the environment means maintaining the present state of something. Preservation of natural resources is mainly focused on resources that have not been touched by humans. The main concern for preserving some resources is that mankind has been excessively utilizing them for housing, farming, industry, tourism, and other human development purposes, which has damaged their natural beauty.

The words ‘conservation’ and ‘preservation’ may appear to mean the same thing but are actually different in some ways. These are terms commonly used by people who are trying to protect the environment, and are often confused. Although both groups have similar frameworks, tools, and methods, conservation and preservation differ in their main ideologies.

Conservation is the sustainable use of natural resources. Our natural resources include wildlife, air, water, and what we get from earth. Some of our natural resources are renewable, while others, unfortunately, are not. Some examples of renewable resources are water, timber, and sunlight. Conservation of renewable natural resources means limiting their consumption to a rate slower than their replacement rate. Non-renewable natural resources – like our fossil fuels – can be conserved by maintaining a sufficient amount to be utilized by future generations. The focus of natural resources conservation is on the needs and interests of people; these needs may fall under biological, cultural, recreational, or economic

The philosophy behind the conservation of natural resources is that their use is a necessity for human progress and development; however, conservationists' stress that changes should not be wasteful or result in the degradation of the environment. Conservation is aimed at reducing the 'wear and tear' of the Earth. Preservation, on the other hand, aims to keep the resources in a pristine state. Conservationists try as much as possible to manage the resources to make them more abundant and allow people to benefit from them; preservationists want to keep things as they are, in the belief that everything and everyone has the right to live, thus allowing trees, for example, to grow without being touched by humans.

Preservation is a Green-green concept. The green concept is normally applied to describe the pristine nature of the living environment as a harbour of life. A green-green attitude is an approach to environmental protection through the practice of preservation.

Environmental preservation is concerned with the maintenance of the purity of the living environment and its sanctity. It suggests a museum kind of attitude towards the environment. The natural environment is serene, spiritual and aesthetic and should not be distorted by human activity. Thinkers in this line believe we should live the environment that way rather than distort it.

When we enter a museum, we see things of antiquity the way they were without distortion. In the same way, preservation supporters aver that autochthonous environment should be used for recreation and observation instead of being exploited and eventually destroyed. There are two approaches to this traditional environmental knowledge and modern preservation practice.

Traditional environmental knowledge clearly expresses itself through specific traditional practices to protect ecological balance. In some parts of Nigeria and elsewhere in Africa some forests, hills, rivers and streams are identified as evil or sacred places. Such conception conditions the type

of attitude, which the people show towards the area; such places are avoided because of spiritual interpretation and consequently become a haven for plant and animal life.

1.4 Conservation and Development

Conservation and sustainable development are catch-phrases that we constantly come across in the study of the environment. We shall examine conservation and development here. Sustainable development is carefully discussed elsewhere in this course book. As we have seen in the proceeding topic, preservation is a wilderness attitude towards the environment. Conservation on the other hand is a garden ethic towards the environment.

Take a gardener, perhaps a vinedresser, and observe how they work. Their attitude is that of caring for their plants. They do this by performing several functions. They observe the garden closely to protect it from rodents and other unintended incursions. The plants and flowers are cut and pruned to check overgrowth. Unnecessary undergrowth is also checked to reduce competition for food and maintain the garden in its state of beauty and balance. The fruit bearing plants are given an enabling environment to produce fruits of high quality and quantity. The gardener would stretch their wits end to ensure that fruit production becomes continuous and on-going. This guarantees supply to meet consumption needs. In a sense, the target and objective of the gardener is to produce and protect. The gardener fails in the event of production stoppage. In the same way, where the garden is full of thorns, thistles and other weeds due to negligence, inability to protect the garden becomes imminent. Thus, in the final count, it is the protection practices put in place that give rise to the level of production in the garden. The analogy presented here can help us understand conservation as the core of environmental practice in the society. Conservation is driven by principles of sustainability. We need to produce, through guided exploitation, distribute, consume and protect the environment, which is the basis of our support. Through conservation, we plan for the future while at the same time producing for the needs of the present. Conservation enables us to have gainful control of the environmental resources around us. For finite resources, we are through conservation thinking able to conduct guided exploitation to help us develop other renewable resources where the garden ethic applies. As can be seen, the enjoyment of our common future hinges on conservation and sustainable development.

1.5 Environmental Protection

Environmental protection is a composite term. It involves a combination of activities including:

- Preservation
- Conservation

- Resource management
- Environmental economics
- Sustainable development

We have treated the first two earlier in this unit. Resource management helps us to direct our extractive capabilities in a manner that is consonant with the principles of resource renewability, and earth's carrying capacity. Environmental economics which we shall treat in greater detail later helps us to know the cost – benefit analysis of environmental decisions and actions. It provides an audit alarm system between what is natural and what is rational, the ecology and the economy. Through it, the socio-economic and political impact of environmental choices are known and checked.

Environmental protection is sustainable development in practice. It is a network of activities directed at keeping the environment in its state of balance to humanity. It is an insurance for environmental decline and degradation.

In the modern sense, we find wildlife sanctuaries, national parks and other protected sites. This practice allows for wildlife development and therefore becomes a boost to environmental preservation. The promotion and development of tourism, especially eco-tourism gains added potency with environmental preservation practices.

Environmental conservation is a composite concept. It is an agglomeration of some sustainable development principles applied to save the earth. It can be seen simply as a process whereby preservation of nature and conservation of the living resources of the earth are applied to meet the sustainable development needs of people. Environmental protection also includes earth-friendly policies, management, production and consumption processes and their guided impact to make the earth habitable at all times.

Class Activity

2. Present with concrete examples, the differences and similarities between conservation, preservation and environmental protection?



Self Assessment Exercise

1. Differentiate between 'conservation' and 'preservation'?
2. What do you understand by preservation of the environment?

Possible Answer to Self-Assessment

1. Conservation and sustainable development are catch-phrases that we constantly come across in the study of the environment while preservation at the other hand is a Green-green concept. The green concept is normally applied to describe the pristine nature of the living environment as a harbour of life. A green-green attitude is an approach to environmental protection through the practice of preservation.

2. Environmental protection is sustainable development in practice. It is a network of activities directed at keeping the environment in its state of balance to humanity. It is an insurance for environmental decline and degradation.



1.6 SUMMARY

Three key concepts are highlighted in this unit, namely: preservation, conservation and protection. The unit has shown ways by which we can strike a balance between these concepts in order to have a balanced environment. It all depends on us. Our determination to live according to natural laws and principles of survival count in this regard. As equal stakeholders, our commitment to ecological balance cannot be compromised.



1.7 REFERENCES/FURTHER READINGS

Emeh, J. U. Ntia, Usang, E. N. and Eukoha O. I. (1995). *Philosophical Issues in Environmental Education*.

Hannan, Hildegard (Ed) (1997). *People, Land and Community*.
London: Yale University Press.

Ki-Moon, Ban (2007). *Climate Change: A Threat to our Security in UNEP Melting Ice: Hot Topic*. Nairobi: UNEP.

<http://www.differencebetween.net/science/nature/difference-between-conservation-and-preservation/>

UNIT 2 ATTITUDINAL IMPERATIVES FOR SUSTAINABLE LIVING

Unit Structure

- 2.1 Introduction
- 2.2 Learning Outcome
 - 2.3 Environmental Awareness for Sustainable Living
 - 2.3 Motivate Attitude Change
 - 2.4 Policy for Sustainable Living
- 2.5 Summary

1.6 References/Further Readings

1.7 Possible Answer to Self Assessment Exercise



2.1 INTRODUCTION

Attitudinal shift is needed for environmental change and for sustainable living. The way people think determine the things they do. Actions are based on thought patterns. The patterns of social behaviors determine the questions of the environment. The environment is a life-support system. Our well being depends on the state of the living environment.

Everywhere around us environmental change is occurring speedily. There are signs of ecological decline here and there. Besides natural disasters, the rate of environmental dereliction is speeded up by human activity and pressure on environmental resource consumption. There is need for control.

The ecological imperative of our time requires attitude change such as would lead humanity back to sustainable living. Sustainable living can be attained when the state of the environment is considered first in all human activity. It makes us live within the carrying capacity of the environment in a symbiotic way. The economy is manned to the ecology in a continuous producer-provider basis. To operate at this level, the ecosystem (its renewability) at all time.



2.2 Learning Outcome

By the end of studying this unit, you should be able to:

- describe the relationship between learning experience and sustainable living
- explain how attitudes affect the quality and state of environmental resources.
- discuss the influence of environmental policy on alternative livelihoods.



2.3 Environmental Awareness for Sustainable Living

One factor determinant of attitudes for sustainable living is the level of environmental awareness. To be environmentally aware is a function of learning experiences acquired by individuals. It is through education that learning can be acquired by individuals. When acquired, learning leads to a desirable change in behaviour, attitudes and disposition of the mind. Education helps people to be aware of the environment, its life-support systems, carrying capacity, and renewable potential, among others.

When people are environmentally aware, their attitudes and practices are more likely to be environmentally friendly and therefore able to cope with environmental change. Changes taking place in the living environment have made sustainable living a great challenge today.

People need to learn about the environment, learn in the environment, learn of the environment and learn for the environment. In this way they can more meaningfully produce for life and the economy and at the same time, conserve and protect nature and natural resources. Attitudes of people towards nature are dependent in large part on what they know. There are three educational processes through which our attitudes can be challenged and changed. Namely- formal, nonformal and informal education.

As people become more and more literate through schooling and learn more about the environment, waste management, pollution environmental conservation and sustainable development, they begin to behave more and more in environmentally friendly ways. In addition, exposure to organized learning experiences outside the school system can increase awareness about the living earth. Such awareness helps to condition the attitudes of the people towards being friends of the environment. As natural users of the environment also, people interact with the environment through observation, travel, at rest and at play, at work and through the mass media particularly through the Information Communication Technology (ICT)

Experiences gained by people through all these modes of learning help to modify their perception and attitudes towards environmental education. They tend rather to behave in a manner that helps to protect the integrity of the environment.

2.4 Motivate Attitude Change

To change people's attitude towards sustainable living, we must look at where people live, work and play and motivate them on how they expend their leisure work to earn and how they live in the society. A number of other measures can be taken to motivate and reinforce attitude change for sustainable living.

1. Provide alternative coping mechanisms for life skills development in fragile environments and protected areas.
2. Provide and make accessible livelihood projects for poverty reduction especially feminized poverty and reduction of youth unemployment.
3. Reeducate people into our sustainable living and equip them to take necessary action to produce for income and protect to sustain the environment.
4. Equip people with skills for conversion of waste to wealth.
5. Innovation of the school curriculum at all levels of the school system is a key factor. Integrate environmental education into the school experience and through other interdisciplinary approaches.
6. Empower and support community and individual actions, which sustain the integrity of the environment.
7. Identify community training needs, develop work-plan to meet those needs and build and strengthen institutions to sustain the meeting of those needs.
8. Encourage the people to practice teamwork in the use of environmental resources around them. People learn and change their attitudes when they participate in sustainable living activities.
9. Plan and mount activities to encourage the local people on how to care for their environment as a treasure base.
10. Make information, financial and technical support available for sustainable living practices.

2.5 Policy for Sustainable Living

We need to put in place national policy guidelines for sustainable living. An environment protection structure and network to link the national, state, provincial and local areas need to be put in place the existence of such a body must be assigned the task of mainstreaming environment into the sectoral ministries, establishments, agencies and departments to produce a characteristic total effect on sustainable living.

Furthermore, how do we establish which course of action is more sustainable? Recourse to the view that societies must decide for themselves is not very helpful. (Who decides? On what basis are the decisions made?) At the same time, there are problems in ignoring culturally-specific definitions of what is sustainable in the interest of a more inclusive system of knowledge. There is also considerable confusion surrounding *what* is to be sustained. One of the reasons why there are so many contradictory approaches to sustainable development (although not the only reason) is that different people identify the

object of sustainability differently. For Redcift (2008) the question ‘what is to be sustained?’ can also be answered in another way. Some writers argue that it is present (or future) levels of production (or consumption) that need to be sustained. The argument is that the growth of the global population will lead to increased demands on the environment, and our definition of sustainable development should incorporate this fact. At the same time, the consumption practices of individuals will change too. At what point does the conservation of natural capital unnecessarily inhibit the sustainable flows of resources.

Advocacy programmes, capacity development and information sharing should be employed as weapons for changing attitudes in favour of sustainable living. There should also be integrated national plans to promote sustainable living among people. Essential also to note is the crucial need to reduce environmental conflicts and enhance decision-making in order to build a great and dynamic economy. It is the attitudes of the people that can help them to build a strong economic space for sustainable living.

There must be an ecological fund put in place and found working to protect the environment in such a manner that wins the support of the people. When this is found

Class Activity

1. In what ways do learning experience influence attitudes for sustainable use of environmental resources for living?



SELF ASSESSMENT EXERCISE

Explain how policy and decision-making can affect attitudes towards the living environment?

Possible Answer to Self-Assessment Exercise

To secure the economic space of the people and enhance life-support systems, peoples inclinations and /attitudes would less likely be compromised.

Through attitude change people need to reduce resource waste and maintain acceptable levels of resource consumption which are sustainable.



2.6 SUMMARY

It is notable that the state of the environment is declining speedily. This change is occasioned by human activities, and their concomitant pressure on environmental resource base. Actions are a function of the mind and they are propelled by individual perception. When those actions conflict

with the integrity of the eco-system, the very basis of human existence becomes compromised.

The level of knowledge possessed by people can help them change their attitudes and behaviours and act in ways that are less likely to compromise the carrying capacity of the earth. Three dimensions of education (formal, nonformal and informal) are presented here as the lodestars for attitudinal change for sustainable living.

However, attitudes when formed are difficult to change. Thus appropriate actions must be taken to motivate the right type of values and attitudes, which are needed to protect the living environment from its current state of continuous decline. The motivational techniques have been identified touching on individual and collective efforts, decision-making and policy as well as team play. We owe it to ourselves to respond to the new environmental age with requisite sensibility and attitudes for our common future.



2.7 REFERENCES/FURTHER READINGS/WEBS

Best, S. G. (2006). *Introduction to Peace and Conflict Studies in West Africa*. Ibadan: Spectrum Books Ltd.

UNDP (2006). *Sharing Innovative Experiences*. New York: UNDP.

IUCN-UNEP. WWF (1980). *World Conservation Strategy: Living Resource Conservation for Sustainable Development*. Gland: IUCN.

Michael Redcift 2008) in Desai & Potter (2008) *The Third World, Developing Countries, the South, Poor Countries* in the Companion to Development studies

UNIT 3 ENVIRONMENTAL EDUCATION FOR PEACE

Unit Structure

- 3.1 Introduction
- 3.2 Learning Outcome
 - 3.3 Reasons for Environmental Education
 - 3.4 Strategies for Environmental Education
- 3.5 Summary
- 3.6 References/Further Readings/Webs
- 3.7 Possible Answer to Self-Assessment Exercise



3.1 INTRODUCTION

The core of the school system is the curriculum. However, from the curriculum perspective, which comprises the learning experiences taught in schools from the lower levels up to the University system, environmental education is struggling to emerge at the front burner as other subjects of the school programmes of learning.

Environmental concerns, issues and problems are raising audit alarm about the state of the environment and its integrity and resource base. Food security problems, resource depletion, and resources control, unabated pollution, social conflicts, population increases and poverty have signed deeply into the magma of global environmental concerns.

Environmental education is therefore emerging as a strategy for enhancing the integrity and quality of the living environment. Green literacy, environmental education and educology are inter-changeable concepts used to advocate the process of acquiring and transmitting environmental knowledge as an innovation of the school curriculum and programmes of nonformal education outside schooling. Knowledge, awareness, green ethics and attitudinal change, natural and rational use of ecological resource base and competence in environmental resource management cluster in the fist of educology. Many tangents are drawn from and cluster into this understanding. Thus, environmental education makes the school curriculum relevant to environmental concerns and makes environmental issues to become mainstreamed into the school curriculum. Its focus is to green the school curriculum and use the school curriculum to sustain ecological integrity, resource utilization and development. It examines the relationship, reciprocity and responsibility between humanity and the environment.



3.2 Learning Outcome

By the end of studying this unit, you should be able to:

- demonstrate understanding of the meaning of environmental education
- give reasons to support green literacy as a strategy for peace
- plan strategies for educology in the community.



3.3 Reasons for Environmental Education

Improving quality of human life is an over-riding concern of practically all nations of the world and can serve as an index of good governance. At the individual level, people live to learn to earn and to improve their livelihoods. At the community and other social levels, people take necessary actions to steam up economic growth and advance the standard of living. Development policy must thus be based on sustainable environment to reduce poverty, support long and healthy life for all. To enjoy peace in the learning society, actions must be taken to secure life and property through conflict resolution and disaster management.

To this extent, educology is generic. It helps us to know, understand, analyze, synthesize, apply and appraise attitudes and behaviors, which lead to sustainable use of the living resources of the environment. Green literacy enables us to gain this awareness, express it as a concern and take actions to institute plans for environmental change and sustainable living.

Human beings are caretakers of the earth. This means in many ways that human relationship with the earth can be harmful or beneficial to their mutual living. In essence, human beings hold the key to environmental balance and are therefore responsible for the common future of the environment. Humanity must therefore protect the environment of the future by taking responsible actions today. This is where education helps to season the minds of people for conservation of nature.

Environmental education thus provides for human being a process of analytical thinking leading to attitude change, skill acquisition and action plans which help us gain understanding of the world around us, preserve, protect it from harmful abuses and redress existing environmental abuses by sustainable life-styles.

Second, according to what principles are the social institutions governing the use of resources organized? What systems of tenure detective ownership and

management of natural resources? What institutions do we bequeath, together with the environment, to future generations? Far from taking us away from the issues of distributive politics and political economy, a concern with sustainable development inevitably raises such issues more forcefully than ever (Redclift 1987; Redclift and Sage 1999).

This raises the second question, not covered by the definition, of how needs are defined in different cultures. Most of the 'consensus' surrounding sustainable development has involved a syllogism: sustainable development is necessary for all of us, but it may be defined differently in terms of each and every culture. This is superficially convenient, until we begin to ask how these different definitions match up. If in one society it is agreed that fresh air and open space is necessary before development can be sustainable, it will be increasingly difficult to marry this definition of needs with those of other societies seeking more material wealth, even at the cost of increased population. It is precisely this kind of trade-off which is apparent in developing countries today.

Environmental education provides human beings with knowledge which helps them respect and care for the community of life. As we saw in the previous module, such education helps us to develop green ethics for living sustainably; and guides us to mainstream sustainable thinking in all sectors of the economy; and through proper policy safeguard its breaches. Through this knowledge we know what can help or harm human survival.

Sensitivity to problems of the physical environment around us equips us with awareness about ecological life-support systems. The intrinsic beauty of the natural world, its interconnectedness and the mutual exchanges that go on between the human and non-human world give us a sense of bewilderment and awe. The awareness that the earth is an eternal treasure is what environmental education advocates and takes plans to sustain.

Green literacy makes people environmentally friendly in their attitudes, behaviour and life -styles. In this way they learn skills for surviving in and sustaining the environment. It also equips us to work with others to reverse the current state of environmental decline through decisions and programmes which help to protect nature and natural resources. In this way it helps to ensure peaceful coexistence between humanity and the rest of nature.

3.4 Strategies for Environmental Education

Several strategies for environmental education can be identified. The choice of strategy is determined by whether or not the focus of environmental education is on formal education strategies, non-formal or informal approach.

A. When focused on the formal education system the following strategies can be adopted?

1. Permeation: This is a strategy whereby an inter-mix of learning experience or selected contents and didactic techniques and methods of instructional delivery are used to communicate environmental matters. It can be used in any school subject or discipline. Methods such as inquiry, expository, dialogic, can be used to teach and transmit curricular elements dealing with environmental responsibility, conservation, sustainable development and eco-tourism among others.

2. Interdisciplinary: In this approach, plural interdisciplinary strategies are used by the instructor or facilitator through a carefully articulated style to articulate and overlap the subject

matter in a way which embraces educological issues. Sometimes this is also called polydisciplinary, multidisciplinary or transdisciplinary strategy. The learner hearing about the living environment from different angles begin to experience and express attitude change.

3. **Subject Matter Approach:** This is a strategy whereby the teacher or facilitator is trained and the learner is exposed to environmental education as a separate programme of specialization in the school curriculum. This can be at certificate, diploma or degree level.
 4. **Insertion Strategy:** In this strategy, the teacher skillfully inserts some selected learning experiences as lessons to be taught in the syllabus students are exposed to in their study. It is an indirect way of passing environmental messages to learners.
- B. Non-formal education strategies. These are strategies which can be applied in non-school settings to transmit environmental education messages to learners. They include.

1. **TRADITIONAL ENVIRONMENTAL KNOWLEDGE (TEK)**

This is a pervasive, conventional method evolved and devolved by people of a given community to deal with and learn about habitat and species protection in their environment. A greater attention has been given to TEK, elsewhere in this book.

2. **HUMAN SECURITY STRATEGY**

The attention of this strategy is given to identification of fragile and risky environments. In such settings, people are vulnerable and prone to environmental disasters and ecological risks including floods, droughts, hurricanes, hunger, epidemics etc. empowerment approaches are used to teach about risk reduction and response capacity of the affected areas and people. It equips people for humanitarian activities and environmental change.

3. **INNOVATION DIFFUSION**

This strategy helps the identification, transmission, adoption and adaptation of best practices around the world. It is principled upon the global thinking for local action and individual gain. Through it, we can manage knowledge for biodiversity conservation particularly in the

context of high uncertainty. In this way people acquire adaptive capacities for coping with environmental change.

C. Informal Education Strategies

1. PARTICIPATORY APPRAISAL

2. In this strategy we learn from, with the people about an existing environmental matter by moving in and conducting participatory analysis the problems and arriving at agreeable methods of solving the problems.

3. SOCIAL MIXING APPROACH

Attendance at annual, seasonal events provides a strategy for sharing useful knowledge about the environment. Cultural events, guided travels, festivals are some examples.

4. ECO-TOURISM

This strategy develops and shares informal environmental education through eco-tourism. This is promoted by visits to arch ecological sites, museums, botanical gardens, national park projects, wildlife sanctuaries, sites for special ecological, scientific or cultural interest, dump sites, hotels etc. through such activity, participants are able to gain knowledge about the environment and develop sensitivity towards the state of the environment.

Class Activity

1. Explain how environmental education can be used as an instrument of peace and development in your country?



Self Assessment Exercise

1. Discuss three dimensions of environmental education for conservation and development?

Possible Answer to Self-Assessment Exercise

Permeation: This is a strategy whereby an inter-mix of learning experience or selected contents and didactic techniques and methods of instructional delivery are used to communicate environmental matters. It can be used in any school subject or discipline. Methods such as inquiry, expository, dialogic, can be used to teach and transmit curricular elements dealing with environmental responsibility, conservation, sustainable development and eco-tourism among others.



3.5 SUMMARY

We need to be reminded that, in this unit, the educational dimension of conservation for peace and development were the focus. Some concept clusters, clarifications and overlaps were carefully highlighted. We need not forget the concept, curriculum and context for environmental education. It is environmental education which serves as one of the

driving forces for desirable attitudinal change for conservation and development.



3.6 REFERENCES/FURTHER READINGS/WEBS

Busari, A. T. *'Public Awareness on Environmental Issues: A Panacea for Sustainable Environmental Development'*. In *International Journal of Environmental Issues* 3 (1) pp. 34-41.

Dorfman, and Kahkonen (2002). *Genetic Diversity and Food Crops*. Shelburne: OUTREACH.

IBRD (1981). *Accelerated Development in Sub-Saharan Africa*. Washington, D. C. The World Bank.

www.worldbank.org/poverty/strategies/sourcons.intin

Michael Redcift 2008) in Desai & Potter (2008) *The Third World, Developing Countries, the South, Poor Countries* in the Companion to Development studies

UNIT 4 COPING WITH ENVIRONMENTAL CHANGE

Unit Structure

- 4.1 Introduction
- 4.2 Learning Outcomes
 - 4.3 Environmental Change in the Tropical Rainforests
 - 4.4 City Growth and Environmental Change
 - 4.5 Desertification and Environmental Change
 - 4.6 Climate Stability and Environmental Change
- 4.7 Summary
- 4.9 References/Further Readings/ Webs
- 4.10 Possible Answer to Self Assessment



4.1 INTRODUCTION

Research by scientists estimate that a minimum of 72 species are daily extinguished forever by human activity. This can be explained away largely to the increased destruction of forests where over half of the worlds species are found. These vanishing species produce in the main, environmental change, as a result of expanding human activity. Environmental change is a product of human activity.

Governments of the world are considering new negotiations on a forest convention. But that will take years to negotiate. Forests are the main basis of environmental change.

At Earth Summit in Rio in 1992, 157 countries signed the convention on Biological Diversity. The convention was designed to protect disappearing species and ecosystems. There were some commitments. The first was identification of where species are being annihilated. The next among others was to take necessary steps to ensure an end to the destruction of species. However, some governments allow and even aid in promoting environmental change through vanishing of forests and derailment of commitment.

The next focus if we were to protect the diversity of life and reduce environmental change is to protect indigenous peoples ancestral lands. These secluded groups of people in many of the world's forests make far better custodians of the environment than distant bureaucrats. When the rights of these peoples are secured, it would help them to be better able to effectively control environmental change.

There are indeed serious threats to species and ecosystems, which bring about environmental change. Thus, environmental rights need to be defended. To do this would mean that nations implement all conventions, which border on the environment, identify, monitor, assess and regulate all activities and development projects, which are not environmentally friendly.



4.2 Learning Outcomes

By the end of this unit, you should be able to:

- discuss the meaning of environmental change
- describe four factors which produce environmental change in the topics
- explain the relationship between urbanization and environmental change
- highlight ways in which desertification enhances environmental change
- plan an activity profile which can enhance awareness about climate change.



4.3 Environmental Change in the Tropical Rainforests

Threat to the last rainforests is creating a huge amount of environmental change. According to Earth Action (1996), less than 100 years ago, a dense band of undisturbed tropical rainforest spanned the width of central Africa, nearly from sea to sea. These vast jungles of Africa provided home to tribes who had no contact with the outside world. They were a harbour and haven for unique and exotic animals and plants. Giant trees thousands of years old were there. With the current level of environmental change, this has gone into history. Logging has taken its unprecedented toll on the forest resources of central or equatorial Africa, particularly the endemic zones, 5° North and South of the Equator. Foreign direct investment in the timber industry contributes to the daily decline of both timber and non-timber resources in the tropical rain forest zones.

4.4 City Growths and Environmental Change

We are heading towards the end of the first decade in the 21st century. Look around. Over half of the world's population is living in cities. There are multiplied 2.3 mega-cities with over 10 million people. Yet already, over a billion city dwellers of over 3 billion city dwellers are homeless. City growth goes with increasing pollution of the air, water and land, municipal, domestic and industrial waste management is out of hand in

many countries. The world cities are growing by over a million people a week. Crises and crime are in excess for many a mega-city. In developing poor nations, particularly of Africa, 60 % of the urban population lives in abject poverty, in shanty towns, slums and overhead bridges and streets. Yet only 60% can boast of access to safe drinking water and even adequate access to sewage and sanitary systems. Nigeria, which can be studied as paradigm of Africa, shows that all the mega-cities are clogged with traffic.

Put nicely, the results are eventful. The number of children who die each year from drinking unclean water is the equivalent of a jumbo jet full of children crashing every two hours. Untreated sewage returns pollutants to lakes, lagoons, rivers and coastal water bodies. Health hazards draw their tempo from vehicular effluents. Industrial effluents add to the current levels of global warning.

Public transport system has crashed in practically all mega-cities of the world. We need to take urgent steps to address air pollution and congestion.

Housing is an inalienable right even in international law. There are large numbers of people who live in dangerous, threatened urban places. They need priority attention to improve their livelihoods.

Clean water sanitation and municipal waste management need to be provided by government. Sewage treatment needs to be improved; and strategies for waste reduction, recycling and re-use put in place. Then urban factor is a critical social issue in environmental change.

4.5 Desertification and Environmental Change

An International Convention to Combat Desertification was signed at a meeting of top-level governmental officials in Paris, October 1994. Desertification is one of the most serious global environmental problems. Nearly one billion people are at risk due to fragility posed by the danger of their lands turning into deserts.

When we use the term desertification it does not connote the spreading of deserts but the creation of desert-like conditions which change the environment in dry-land areas. Dry lands constitute 36% of the Earth's land surface. Desertification is created and accelerated by:

- Overgrazing
- Over cropping
- Bad irrigation
- Felling of trees
- Climatic variation
- Overall land degradation

With about 100 million people added to the world's population yearly, pressure on land leading to environmental change is quite inevitable. Some people are forced to become environmental refugees. Species endemic or native to the world's dry zones are disappearing.

Why is desertification a problem?

- There are 5, 200 million hectares of agriculturally used dry land in the world.
- Sixty-nine percent of the land is degraded or open to desertification
- In Africa, 73% of all agriculturally used dry lands are degraded. In Asia it is 70% and these figures are growing.
- There is urgent need for sustainable food security in the dry lands for people.
- Hunger, malnutrition and poverty take their toll on about 18 million people, mostly children each year.

Map: Drylands susceptible to desertification.

4.6 Climate Stability and Environmental Change

Climate change is perhaps potentially the biggest threat to the future of the human race and the environment. The increasing scale of human activity on the planet is rapidly changing the atmosphere. There is huge burning of massive amounts of fossil fuels and destruction of our forests. This process leads to rises in global average temperatures and disruption of the earth's climate.

Some of the trouble accompanying the process is rising sea levels, threat to food crops, more severe floods, luminance's, drought, growing poverty, the spread of disease and a threat to the survival of multiplied millions of the world's species. The pumping of the gas called carbon dioxide (Co₂) into the atmosphere through gas flaring, burning of fossil fuels such as coal and oil and the destruction of the world's forests add to the trouble of climate stability.

It is known that the combustion of fossil fuels and deforestation account for 74% of human caused emissions of "greenhouse effect gases". That leads to global warning. To have a peaceful and stable climate, it has become imperative to phase out fossil fuels and preserve our forests. Energy conservation and a switch to renewable energy sources is needed to stop the global warning.

The 1992 Climate Changes Convention Signed by over 160 countries urged governments of the developed countries to commit themselves to reduce their emissions of greenhouse gases to 1990 levels by the year 2000. These developed countries were to cut further their emissions of greenhouse gases to 20% below 1990 levels by 2005.

Class Activity

Desertification is created and accelerated list the Element?



Self-Assessment Exercise

Discuss and Explain Climate Stability and Environmental Change?

Possible Answer to Self-Assessment

Climate change is perhaps potentially the biggest threat to the future of the human race and the environment. The increasing scale of human activity on the planet is rapidly changing the atmosphere. There is huge burning of massive amounts of fossil fuels and destruction of our forests. This process leads to rises in global average temperatures and disruption of the earth's climate.



4.7 SUMMARY

There are behaviours to approbate and behaviours to deprecate for the sake of peace and sustainable development. As humans we hold the key to our inundation and annihilation. Human activity has caused us environmental change to the extent we can no longer be worried about our existence and survival without concern about the environmental change that is taking place not only in the cities but also in the natural environment of forest eco-systems. The consequence is the struggle for peace and ecological balance. We need to learn to live. This in itself means there is need for us to cope with the changing fortunes of the earth. Strategic attention and commitment are required for us to be able to care for the earth in order for the earth to be able to care for us with regard to coping with environmental change. We hold the key to this stimulus-response pattern of relationship in Africa's timber business which goes with export and profit overseas.

The effect of this extractive process is almost like speed-post, measuring Africa against South America and Asia. The demand-driven exploitation of African timber for foreign market is both predatory and horrendous.



4.8 REFERENCES/FURTHER READINGS/WEBS

Anijah-Obi, F. N. (2001). *Fundamentals of Environmental Education and Management*. Calabar: University of Calabar Press.

Anike-Nweze (2006). *The Political Economy of Peace Building*. Lagos: NOUN.

Rist, G. (1999). *The History of Development*. New York: Zed Books.

UNIT 5

MODULE 3

UNIT 5 THREE MAINSTAYS OF SUSTAINABLE DEVELOPMENT**Unit Structure**

- 5.1 Introduction
- 5.2 Learning Outcomes
 - 5.3 The three mainstays of sustainable environment
 - 5.4 Institutional, the work model or the environment
 - 5.5 consequences of unsustainable environment.
- 5.6 Summary
- 5.7 References/Further Readings/ Webs
- 5.8 Possible Answer to Self-Assessment

**5.1 INTRODUCTION**

The Economic: Stressing the environmental and social dimensions of sustainable development without economic neglects the financial capital needed to pay for progress. Building up economics and social pillars and neglecting the environment degrades the natural capital needed for growth. Focusing on the environment without attention to social factors can lead to green growth for a few and these few tend to be men (Candice Stevens 2010). There is no proper development that is not backed by economic components. Unlike growth, development is a multi-disciplinary phenomenon which encompasses several parameters that need to interplay to enable policy makers and development practitioners fashion out realistic and workable development policy that would address the widespread and deep unsustainable development that is plaguing the underdeveloped nations especially Africa today (OECD 2009).

**5.2 Learning Outcomes**

By the end of this unit, you should be able to:

- To explain the three main stay of Sustainable Environment

- Understand Institutional, the work model or the environment



5.3 THE THREE MAINSTAYS OF SUSTAINABLE ENVIRONMENT

Three mainstays of sustainable environment are the economic, the agricultural and the social environment. The Economic: Stressing the environmental and social dimensions of sustainable development without economic neglects the financial capital needed to pay for progress. Building up economics and social pillars and neglecting the environment degrades the natural capital needed for growth. Focusing on the environment without attention to social factors can lead to green growth for a few and these few tend to be men (Candice Stevens 2010). There is no proper development that is not backed by economic components. Unlike growth, development is a multi-disciplinary phenomenon which encompasses several parameters that need to interplay to enable policy makers and development practitioners fashion out realistic and workable development policy that would address the widespread and deep unsustainable development that is plaguing the underdeveloped nations especially Africa today (OECD 2010).

5.4 INSTITUTIONALLY, THE WORK MODEL OR THE ENVIRONMENT:

The Environment aspect involves the raising of eco-consciousness, so that governments, private organizations and individuals should be aware of how their activities are positively or negatively impacting the environment. World development would be sustained if the key government policies, activities of private sector, and the demands civil societies are geared towards improving and preserving the environment. Our world is on the threat of becoming inhabitable. Increased sea levels, longer droughts, instability in crude oil prices, and natural disasters are disturbing our food productions, chasing people from their homes and negatively affecting our economic growth. The earlier we do something to rescue our environment the better we stand the chance to reverse the curve. China, United States, Britain, and European Union have all taken drastic steps to curb the tides of environmental degradation. It's left for other countries, move past the talks and meetings in Paris Glasgow or New York, and begin to pay their full due in averting an environmental crisis by making practical efforts, and avoiding lip-service. The private sector, especially big fossil fuel oil industries will need to begin the phase of positioning themselves to transition to green and clean energy, for improved profit sustainability and to preserve our environment and make it more habitable. The opportunities embedded in a green world are enormous. The jobs to be created are plentiful and our quest for a peaceful and developed society is utterly possible if through our activities, we protect and preserve the environment we all live in. there's no other planet to go. At least for now, so let's make our planet sufficient for us to live, work, relax, and interact.

- **THE SOCIAL ENVIRONMENT:** Another important pillar of sustainable development is the social pillar which cannot be negated. The social pillar is embedded in societal cultures. According to Kasseh Garba (2012) culture, is an institution that tells people what they are supposed to do or otherwise. To the male, this is your role and to the female, this is what is expected of you. Culture stipulates to the individual male or female his or her role in the society and is this why the issue of gender came into the academia in the first place because people are made to do gender activities assigned to them by culture, based on their sex

5.5 CONSEQUENCES OF UNSUSTAINABLE ENVIRONMENT.

In mid-2021, a severe drought hit Southern Madagascar causing hundreds of thousands of people to suffer from food insecurity. The United Nations (UN) estimates that 30,000 people are currently experiencing the highest internationally recognized level of food insecurity – level five – and there are concerns the number affected could rise sharply as Madagascar enters “lean season “before harvest (Harding, 2021). Though Madagascar is not new to natural disasters like cyclones, floods, severe droughts, earthquakes epidemics, and a locust plague, experts say that the 2021 drought was a result of climate change. Rondo Barimalala, a Madagascan scientist who’s working at the University of Cape Town in South Africa said “with the latest IPCC report we saw that Madagascar has observed an increase in aridity. And that is expected to increase if climate change continues. In many ways, this can be seen as a very powerful argument for people to change their ways.”

In 1824, Joseph Fourier calculated that an Earth-sized planet, at our distance from the Sun, ought to be much colder. He felt that there’s something like an insulating cover, protecting us from the sun. In 1860, physicist John Tyndall observed that the earth’s natural greenhouse effect and slight changes in the atmospheric composition could bring about climatic variation. In 1896, Svante Arrhenius, a Swedish scientist first predicted that changes in atmospheric carbon dioxide levels could alter ground temperature through the greenhouse effect – carbon emissions

All these observations and predictions from the above scholars seem to be true today. Today, there’s no doubt that human activities have caused serious damage to our climate. The year 2020 is tied with 2016, as being the hottest year since record-keeping began in 1880, (NASA). Our atmosphere, ocean, and land are becoming warmer than before. The effects of depletion of the ozone layer, which acts as a protective cover (an insulator) from the sun is causing an increase in surface temperature. The increase in surface temperature is increasing

the rate of evaporation from the ground, making agriculture more expensive, causing expedited aridity and longer rainfalls, which could lead to flooding. These are happening. Due to the activities of humans.

When the temperature of the world increases it melts the ice cores from the Greenland, Antarctica, and tropical mountain glaciers. Data coming from NASA showed 279 billion tons of ice per year between 1993 and 2019, while Antarctica lost about 148 billion tons of ice per year. As the ice sheets and glaciers melt, the sea level rise. When sea-level rise, it leads to flooding on the coastal and inland region, displacing people away from their homes and making people homeless.

The Intergovernmental Panel on Climate Change (IPCC) estimated that 150 million will migrate away from their homes due to climate change by the year 2050. The world humans live in is becoming thinner. Human activities like the cutting of trees and the use of fossil fuels have increased desertification ravaging the Sahel. The report of the United Nations claims that there are about 40% of people in African and Asia threatened by desertification. Due to this, about US\$65 billion, annual income loss is accrued and this does not include the costs incurred in social and environmental aspects.

When the activities of man, reduce the arable land that will be used for people to live and work, it diminishes the opportunities for sustainable development. As people get crammed in a little hole, they compete for scarce resources. I call this the “shrinking effect.” And when these resources are scarce it increases the likelihood of social disharmony. The resources become scarce due to several factors which heavily include unsustainable ways we treat our environment. When the increase in desertification is eating up more arable land, there will be less land to use for our agriculture practices, therefore threatening a food crisis. When people live their homes because of erosion, climate-induced disasters, and diseases, it puts pressure on available resources like shelter, available jobs, and food, which will render millions of people starve and be homeless.

The world needs all the resources that it can muster to avert the future collapse of the economy. The economy of the world is under threat due to environmental crises ravaging various parts of the globe. Land is a major economic resource, which gives life to other economic activities, and when land becomes less due to environmental degradation, it diminishes the economic prospect of other resources, by increasing its cost. We depend on land for setting up our industries, farming, and leisure. Though there are innovations where individuals can farm without land, a large percentage of farmers still depend on land for their agricultural activities.

80% of the food that is produced in the world is produced by agricultural land. This is to say that land is a major feeder of the world population.

Just recently, on November 2, 2021, the OML 29 Wellhead, owned by Aiteo group, in the Santa Barbara South field in Nembe, Bayelsa State, blew spilling a huge amount of crude oil to the rivers and creeks. It has yet to be accounted for how many barrels of crude oil were spilled. But the effects of spillage have chased people away from their homes and the contaminated rivers cannot be looked in for fish and other aquatic life. People that depend on fishing for their livelihoods are left dismayed. An indigene of the area, Tonye, had this to say “we cannot fish and it’s riskier to embark on the fishing expedition because of the polluted water and charged atmosphere. We are the worst hit since our existence revolves around the water. The stench from the river is horrible.”

The activities of oil firms in Nigeria have continually destroyed the livelihoods of people in the Niger Delta zone. Not only is it due to spillage of crude oil, but the environmental impacts of oil firms is worsening the socio-economical improvements of the Niger Delta. Rivers state, an oil-producing state in Nigeria, will not be of a surprise to experience plumes and pollution, due to the high concentration of refineries and other oil firms and multinationals. But over the years, Port Harcourt and other cities in Rivers state, have experienced the rise of a black substance that has been polluting the air. This black substance is called “soot.” Soot is a deep powder or flaky substance consisting largely of amorphous carbon produced by the incomplete burning of organic matter. According to the Nigerian Federal Government, the soot is caused by illegal oil refiners, bunkers, and the burning of tires. The soot has made the environment inhabitable because of the harmful effects on the body system. Soot contains injurious gaseous particles that affect the optimal functioning of the lungs. Experts say the soot contains Sulphur dioxide and nitrogen dioxide which cause acid rain when combined with moisture.

The geopolitics that goes between the fossil fuel industry and renewable energy is a threat to world peace and development. In 1971, President Richard Nixon took a decision to support Israel with \$2.2 billion military aid, in the Yom Kippur war, fought against the Israeli Arabian neighbors. The Arabs with the instrumentality of Organization of Petroleum Exporting Countries (OPEC) reiterated by placing a crude oil embargo on the US. With the scarcity of crude oil, the prices of crude oil products (gas, petrol, diesel, plastic, fertilizers) went up. US economy that became increasingly dependent of foreign oil, was strained causing a steep recession accompanied by rising inflation. Businesses were folded, unemployment was increased and most people found it hard to buy necessities of life.

Class Activity

What is carrying capacity? In what ways do human activities affect the carrying capacity of the environment?



Self-Assessment Exercise

1. Mention and explain the three mainstays of the environment?
2. Give an explanation of the consequences of unsustainable environment?

Possible Answer to Self-Assessment Exercise

1. Three mainstays of sustainable environment are the economic, the agricultural and the social environment. The Economic: Stressing the environmental and social dimensions of sustainable development without economic neglects the financial capital needed to pay for progress. Building up economics and social pillars and neglecting the environment degrades the natural capital needed for growth. Focusing on the environment without attention to social factors can lead to green growth for a few and these few tend to be men (Candice Stevens 2010). There is no proper development that is not backed by economic components

2. In mid-2021, a severe drought hit Southern Madagascar causing hundreds of thousands of people to suffer from food insecurity. The United Nations (UN) estimates that 30,000 people are currently experiencing the highest internationally recognized level of food insecurity – level five – and there are concerns the number affected could rise sharply as Madagascar enters “lean season” before harvest (Harding, 2021). Though Madagascar is not new to natural disasters like cyclones, floods, severe droughts, earthquakes epidemics, and a locust plague, experts say that the 2021 drought was a result of climate change.



5.6 SUMMARY

In this unit the carrying capacity of the lithosphere, atmosphere and hydrosphere were examined in line with the impact of human activities on the environment.



5.7 REFERENCES/FURTHER READINGS/WEB

DVV (2004). *Adult Education and Development* (64). Bonn: DVV.

UNDP (2004). *Sharing Innovative Experiences: Examples of the Successful. Conservation and Sustainable use of Dryland Biodiversity*. New York: UNDP.

UNDP. (2005). *Cooperation South: Eliminating Extreme Poverty*. New York: UNDP

Harding, A. (2021, Aug 25). Madagascar On The Brink of Climate Change-induced famine. BBC news. www.bbc.com/news/world-africa-58303792

Kassey Garba in an interview in March 2012, at the Economics Department University of Ibadan Nigeria

Organization for Economic Co-Operation and Development (OECD 2010) A Family Affair: Intergenerational Social mobility Across OECD Countries.

Organization for Economic Co-operation and Development (2009), Income Distribution and Poverty Growing Unequal? Income Distribution in OECD Countries.

Sevens, Candice 2009, Guest Editor Special Issue on Gender and Sustainable Development International Journal Of Innovation And Sustainable Development (IJISD) 4 (2-3)

Elkington, J. (2018, June 25). 25 Years Ago I Coined the phrase “Triple Bottom Line.” Here’s Why It’s Time To Rethink It. Harvard Business Review. www.hbr.org/2018/06/25-years-ago-i-coined-a-phrase-triple-bottom-line-heres-why-im-giving-up-on-it

Frontstream. (2013, Sept 25). Three pillars of sustainability. Nonprofit Fundraising Blog, Frontstream. www.frontstream.com/blog/the-three-pillars-of-sustainability

Joseph, A. Balachandra, P. (2020, August). Energy Internet, the Future Electricity System: Overview, Concept, Model Structure, and Mechanism. Researchgate.

Yong, T. Chen, H. Bu, X. Breaking Into the ‘Energy Internet’ Era in China: an Analysis of China’s Smart Grid Development. L.E.K Consulting.

Amadeo, K. Boyle, J. (2020, Aug 30). OPEC Oil Embargo, Its Causes, and the Effects of the Crisis. The balance. www.thebalance.com/opec-oil-embargo-its-causes-and-the-effects-of-the-crisis-3305806

Fossil fuels and climate change: the facts. (2020, Nov 11). ClientEarth. www.clientearth.org/latest/latest-updates/stories/fossil-fuels-and-climate-change-the-facts/

MODULE 4

- Unit 1 Rural/Urban Sustainability for Peace
- Unit 2 Environmental Causes of Conflict and Their Resolution
- Unit 3 Ecological Economics and the Millennium Development Goals
- Unit 4 Development and Underdevelopment; The Human Security Issues
- Unit 5 Inter-dependence and Distributive (In-Justice and Peace)

UNIT 1 RURAL AND URBAN SUSTAINABILITY FOR PEACE

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
 - 1.3 Nature of the Rural Environment
 - 1.4 Characteristics of Urban Environment
 - 1.5 Strategies for Environmental Peace and Sustainability
- 1.6 Summary
 - 1.7 References/Further Readings/ Webs
 - 1.8 Possible Answer to Self Assessment Exercise



1.1 INTRODUCTION

One simple way to understand social change is to examine the evolution of rural and urban areas and their growth trend. From such a prism, some interesting scenarios can be identified for careful study. In both developed and developing countries with corresponding high and low income, there exist some features of urban life as opposed to life in the rural areas.

Those features, which make life seemingly different in both areas, are what we shall attempt to identify and present in this unit. However, in doing so, it is vital to show how those characteristics relate among themselves and their implications for communal peace and sustainable development.



1.2 Learning Outcome

By the end of this unit, you should be able to:

- differentiate between rural and urban life
- examine the specific characteristics of the rural environment
- identify the features, which make the urban area an environmental concern
- develop strategies that can be used to tackle ecological problems in habitable areas.



1.3 Nature of the Rural Environment

The nature or features of rural environment can be looked at from two perspectives; namely:

- The core or universal nature, and
- The residual – peculiar nature

- **The core or universal features**

- i) The rural areas are transitional. This means they are in a continuous state of change to embrace the forces of modernization.
- ii) Rural areas are basically agricultural and fishing communities.
- iii) There is often a resistance to change traditional patterns and culture of life.
- iv) Rural areas are basically isolated with low population density.

THE PERCULIAR CHARACTERISTICS

There are residual features of rural life, which are largely common in the low-income countries. These are:

- i) The population profile is made up of the very young and the very old.
- ii) There is high level of ignorance and low formal education and basic literacy.
- iii) Material poverty is one chief feature of the rural areas; income is low.
- iv) Roads communication and rural infrastructures are inadequate or lacking.
- v) Basically subsistence farming is pervasive.

- vi) There is high level of organic solidarity and communal ties among inhabitants. This also includes collective social insurance.

1.4 Characteristics of Urban Life

The chief features of urban life are:

- i) Luxury, extravagance and wasteful consumption of resources.
- ii) There is crowd mentality, yet growing isolation of people. Life is highly individualized.
- iii) There is high crime rate, violence and drugs.
- iv) There is high incidence of noise and environmental pollution.
- v) In most developing countries, waste management is a daily problem.
- vi) There is high city growth, industrialization and corporate living.
- vii) It is a place where knowledge and social relations rule and guide life.

1.5 Strategies for Environmental Peace and Sustainability

To reduce the mismatch between the rural and urban areas is a Herculean problem. However, that problem must be addressed through some conquering strategies in order to build and enhance peace and sustainable development.

1. Green Policies

Development policy of nations must place environment at the front burner. This implies that our ultimate goals, our proximate plans, and our immediate development objectives must rest upon the well being of the living environment.

2. Attitude Change

Beyond utopia, we need to inculcate in our people, an environmentally friendly attitude of mind. This is to ensure that immediate and future practices, economic process and indeed livelihoods are hinged upon the sustainable use of nature and natural resources.

3. Hedonistic Strategy

Human beings are pleasure-seekers. Simulation and other environmental games, cultural displays, drama, poetry, art, painting, advertisement industrial designs should be awakened for environmental awareness. This will cause people to see the practical side of the environment in all they do.

4. **Traditional Environmental Knowledge**

Traditional Environmental Knowledge (TEK) should be kept alive. There are age-survived means of protecting nature including regulated use of streams, rivers, forests, and the like. Abuse of TEK means abuse of the environment. Promotion of TEK means promotion of sound environmental practice.

5. **Community Education**

People must be taught to live together, learn together and take actions together to protect their environment. Awareness must be acquired on how they can use what is available to obtain what they need. In the event of change, people need to learn how to cope with a changing environment.

6. **Sanitation**

In urban and rural areas, people have to know how to clean up their environment, beautify it and make it convenient for living. Both the people and the environment would relate in a healthy way in a sanitary and sanitized context.

Pearce (1991) believe that the current context of global efforts in the pursuit of sustainable development can be characterized by the perception of the scientific-technological losses of ecosystems and ecosystem services and their consequences for the survival of humanity in the face of threats of imbalances in the basic conditions for survival such as food production, the environmental quality, natural control of pests and diseases, loss of biodiversity and climate changes. Some recent initiatives at global, regional, and local levels are pointed and some conceptual trends and deployment strategies advance towards the consolidation of the principles of sustainable development, despite several difficulties for effectively reaching its goals. The trend of gradual changes in the models of developing nations and in the patterns of production and consumption is portrayed objectively, seeking to correlate with principles of environmental economics and green economy.

There are other approaches, however, some environmental economists argue that I'm not sure stock of resources or critical natural capital needs to be given priority over the flows of income that depend on it (Pearce 1991). Give me the points that human-made capital cannot be an effective substitute for natural capital. If the objective is this sustainable yield of renewable resources, then sustainable development implies the management of these resources in the interest of the natural capital stock this raises a number of issues that are both political and distributive: who owns and controls genetic materials, and who manage the environment?

We have people who live either in urban or rural areas. In both locations, there is great use being made of the environment and its natural resources. The nature of those locations, whether urban or rural, determines and influences the pressure, which is being exerted on the environment. As the characteristic features of urban and rural areas are different so are the life-styles and livelihood practices. In all societies, we need environmental practices which sustain human live and protect nature.

Peace is a commodity, which everybody seeks. Conflict does good to no man. Environmental strategies for peace-building which have been identified and presented in this unit can help us in our journey to peace and sustainable development.

Class Activity

1. Why do we need environmental peace and sustainable development?



Self Assessment Exercise

What ecological characteristics would guide in implementing strategies for peace and the environment?

Possible Answer to Self-Assessment Exercise

There are residual features of rural life, which are largely common in the low-income countries. These are:

- i) The population profile is made up of the very young and the very old.
- ii) There is high level of ignorance and low formal education and basic literacy.
- iii) Material poverty is one chief feature of the rural areas; income is low.
- iv) Roads communication and rural infrastructures are inadequate or lacking.
- v) Basically subsistence farming is pervasive.



1.6 SUMMARY

The dichotomy between urban and rural societies has been presented in this unit. Effort was made to establish the nature and characteristics of

those societies and the strategies that we can use for promoting peace and sustainable human development in those communities.



1.7 REFERENCES/FURTHER READINGS /WEBS

Ehrenfeld, D. (1997). *The Management Explosion and the New Environmental Crisis*. In H. Hannum (Ed) *People, Land and Community*. London: Yale University Press.

Bakut, B. (2006). 'The Environment, Peace and Conflict in Africa'. In S. G. Best (Ed). *Introduction to Peace and Conflict Studies in West Africa*. Abuja: Spectrum Books.

Pearce, D.W. and Turner, R.K. (1991) *Economics of Natural Resources and the Environment*. The Johns Hopkins University Press, Baltimore.

UNIT 2 ENVIRONMENTAL CASUES OF CONFLICT AND THEIR RESOLUTION

Unit Structure

- 2.1 Introduction
- 2.2 Learning Outcomes
- 2.3 Environmental Causes of Conflict
- 2.4 Environmental Conflict Resolution
- 2.5 Summary
- 2.6 References/Further Readings
- 2.7 Possible Answer to Self Assessment Exercise



2.1 INTRODUCTION

Conflicts are part of human life. They are integral to it. Conflicts may not be permanent, but they are phenomenal in the society. Within and between patterns of human relationships, there are often differences in opinions, beliefs, values, aspirations, pursuits, and aspirations. Sometimes human perception and understanding situations may be at variance with each other. All these may engender disputes or lead to conflict.

Disputes and conflicts are relational. They differ in degree not really in kind. A dispute is a temporary conflict over a matter. A conflict on the other hand is a seemingly permanent, recurrent dispute over a matter or combination of matters. Most conflicts begin as dispute and some disputes degenerate into a conflict.

As humans interact with the living resources of the environment, their interaction may precipitate conflict. When that arises, it is difficult to guarantee peace and sustainable development. Thus, there is need to identify and resolve environmental conflicts and build-up peace in the society.



2.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- state the difference between a dispute and a conflict
- identify and comment on at least four causes of environmental conflicts

- present a reasoned strategy for resolving environmental conflicts in your locality
- state in clear terms, how conflicts can infringe upon ecological rights.



2.3 Environmental Causes of Conflicts

As we stated earlier, conflicts are phenomenal in the society and they have several underlying causes. The causes of environmental conflicts in our own case can be identified and presented.

1. **Human Survival Needs:** We saw earlier (module 1, unit 3) that human beings are ethically prior. They are an end, not a means to an end. Their survival is paramount need. Thus, anything that touches on such needs of survival is bound to precipitate conflict. Basic human needs of food, shelter, clothing and security and air, can never be compromised without conflagrations of conflict. Thus, environmental stability depends in large part on the protection given to human survival needs.
2. **Human Interests:** All humans have varying and competing interest, which must be articulated for social harmony. Individuals differ in their interest; so do groups. At individual and social levels, therefore, the management of interest is crucial to the ability of people to enjoy environmental harmony. It must be noted that individuals who pursue their interests must do so while accommodating the interests of others. Groups also have defined interest, which they aspire to attain, but not in exclusion of the interests of other social groups.

However, when individuals or groups adopt hard-line positions in attainment of their interests, then, conflicts become inevitable. Can people be willing, and ready to sacrifice some of their interests sometimes for the sake of environmental peace? This therefore remains a probing question.

3. **Human Values:** Needs and interests are residuals when compared with core values of individuals and place. Values determine and influence needs as well as interests of people. Values constitute an intrinsic quality or virtue of goodness placed upon something. Values override a lot of other considerations in life. For instance, the value placed on public peace can out-worth any personal need or interest, and thus, over-ride it. There is also value placed on group identity, culture, traditions and social norms, etc.

Those who attempt to counter veil those values would surely be treading upon the slime-pits of conflict. Thus, it is inescapable to deride or despise or trample down the values of people without the response of conflict. The values of nationalism for example have led to several conflicts and are still pulling on several conflicts around the world.

4. **Resource Control:** Resource control is gaining recognition as an environmental right. You cannot dismember people from their environment of ages. People and the living environment are inextricably linked together. The environment sustains them through the resources which nature bequeathed and endows in it. The people explore, exploit, utilize and control those resources as their loom from nature. To disadvantage the people in the benefits of those resources or a commendably fair share of the resources has the indubitable effect of sparking conflict, which may take a lot of other resources to calm down. To undermine the people's access to available resources in their environment is indeed a violation of their fundamental rights. It can be equated to a sentence of collective suicide passed on them. Their resistance can therefore lead to interminable conflict.
5. **Livelihood Practices:** In a competitive social situation where human needs are many but satisfaction of the needs is scarce, how can people meet those needs? Individuals derive means of satisfying their needs in order to lead.

2.4 Environmental Conflict Resolution

1. **Negotiation Skills:** Apply the skills of negotiation, persuasion and plausible and convincing argument to modify attitudes and the interest of parties to a matter. The objective is to help all sides reach a compromise and make resolution(s) toward peace.
2. **Needs Meeting Approach:** Never block the survival needs of the people. Help them to maximize their needs meeting capabilities. However, where there are higher level needs to be considered, then present to them an acceptable alternative. You may work out compensation and other support mechanisms for existence and survival. Do not abandon people who are helpless, desperate and disadvantaged.
3. **Values of a Common Humanity:** Human beings are relational. The value of a common humanity is what propels the turbines of globalization. Beyond race, age, creed and gender, we share a

common humanity. Mutual cooperation, partnership and assistance to enable all people everywhere attain good life and actualize their set values is the new frontier in the world. Terms like corporate governance, tripartism and democracy all attest to the fact that we all need each other. The promotion and advocacy of those values can help to engender peace and vitiate conflict.

4. **Resource Indices:** The resource base constitutes the life-wire of people's existence. It follows that no attempt should be made to ravage the living resources of the people by any means. Availability of resources is one thing; the exploitation of resources for the maintenance of livelihoods of the people is another. When resources are tapped for the common good of the majority, then it must be noted that adequate derivation and plough back must be put in place in order not to deny the owners, adequate enjoyment of the benefits arising from these sources found in their area.

These measures taken together can help us to maintain and sustain peace in a competitive environment with many stakeholders.

Class Activity

1. From your understanding of human conflicts and your local environment, plan some possible activities that can mitigate environmental crisis.



Self-Assessment Exercise

1. Give reasons to explain why we find environmental conflicts around the world.

Possible Answer to Self-Assessment Exercise

The causes of environmental conflicts in our own case can be identified and presented;

a. Human Survival Needs: We saw earlier (module 1, unit 3) that human beings are ethically prior. They are an end, not a means to an end. Their survival is paramount need. Thus, anything that touches on such needs of survival is bound to precipitate conflict. Basic human needs of food, shelter, clothing and security and air, can never be compromised without conflagrations of conflict. Thus, environmental stability depends in large part on the protection given to human survival needs.

b. Resource Control: Resource control is gaining recognition as an environmental right. You cannot dismember people from their environment of ages. People and the living environment are inextricably linked together. The environment sustains them through the resources which nature bequeathed and endows in it. The people explore, exploit, utilize and control those resources as their loom from nature. To disadvantage the people in the benefits of those resources or a commendably fair share of the resources has the indubitable effect of sparking conflict, which may take a lot of other resources to calm down. To undermine the people's access to available resources in their environment is indeed a violation of their fundamental rights. It can be equated to

a sentence of collective suicide passed on them. Their resistance can therefore lead to interminable conflict.



2.5 SUMMARY

Conflicts are inevitable in human relations. However, it is the ability to manage and resolve the conflicts, which counts. Conflicts were understood as phenomenal and differ only in degree and not in kind. The causes of environmental conflicts have been presented to give an overview of the changing nature of its epidemiology. Efforts have also been made to help understand how to treat conflict and how to prevent and control conflicts. All of these point to the need for us to have an enduring peace in the environment.



2.6 REFERENCES/FURTHER READINGS

Best, S. G. (2006). *Introduction to Peace and Conflict Studies in West Africa*. Ibadan: Spectrum Books Ltd.

Faleti, S. A. (2006). 'Theories of Conflict' in. S. G. Best (Ed). *Introduction to Peace and Conflict Studies in West Africa*. Ibadan: Spectrum Books Ltd.

George, S. (1999). *The History of Development. From Western Origin to Global Faith*. Cape Town: University of Cape Town Press.

UNIT 3 ECOLOGICAL ECONOMICS AND THE MILLENNIUM DEVELOPMENT

Unit Structure

- 3.1 Introduction
- 3.2 Learning Outcomes
 - 3.3 Maximizing the Use of Ecological Resources
 - 3.4 Minimizing Resource Waste and Depletion
 - 3.5 Controlling Green Capitalism
- 3.6 Summary
- 3.7 References/Further Readings
- 3.8 Possible Answer to Self-Assessment Exercise



3.1 INTRODUCTION

There are indices, which show us that there is ecological balance and sustainable development. These dualistic processes are very much needed for the prevalence of peace in the society in which we live. The quality of life enjoyed or denied are by-products of individual and collective decisions affecting environmental-well-being. Development practices, which vitiate and compromise a garden ethic of protecting the environment is indeed development driven by questionable attitudes and suspicious economic motives. Such development derives on destructive greed and unacceptable environmental change.

All this suggests a new way of evaluating our ecological economics. The ecology and the economy exist in reciprocity. One is a producer the other is the produced. Thus, we cannot afford to allow what is produced to erode the pristine value and regenerative potentials of the producer-ecology. This understanding denotes socio-economic cost-benefit analysis and implication. Between monetisation of the resources of nature and endangerment of human life and other life forms, is a choice we must make for our common future. Essentially, we need to resolve this apparent conflict for us to live in peace now and in the future. Rethinking such a choice means undertaking three forms of judgements in dealing with the natural environment. We go into those concerns next.



3.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- explain the environmental justification of ecological economics
- describe steps that can be taken to maximize the use of ecological resources for the benefits of human beings
- identify the measures that can be taken to reduce environmental resource depletion
- suggest strategies for regulating environmentally harmful practices in your country.



3.3 Maximizing the Use of Ecological Resources

Resources have values that transcend political dimensions. Resources may be abundant, but they are of no value when they are abandoned and unexploited. However, the power, consideration, influence and recognition which people can have depend in part on how they are able to explore, exploit and even distribute and utilize resources to meet the ends of human beings.

For those whose primary interest is in ecological systems and conservation of natural resources, it is the natural resource base that needs to be sustained. The key question usually posed in the following is how can development activities be designed which help to maintain the ecological process, such as soil fertility, the assimilation of waste, and water and nutrients recycling? Another, related, issue is the conservation of genetic materials, what's in themselves, and perhaps more importantly as part of a complex and vulnerable system of biodiversity. The natural resource base needs to be conserved because of its intrinsic value (Timothy, 2013).

As presented in earlier units, there are two types of resources: Finite and Renewable resources. Both provide the material basis for improvement of human standards. Finite resources may appear as hydro-carbons-petroleum or crude oil, others are mineral deposits including gold, coal, copper, cobalt, tin, iron and steel, lime-stones, granite, laterite, etc. These non-renewable finite resources when open to exploitation have estimated extractive potential after which they become exhausted. Accordingly, the surplus values from their extraction need to be invested into other productive sectors in order to reap its dividend for the future. To mismanage such resources would make to risk a potentially secure future.

On the other hand is found a range of renewable resource base in the environment. These include the forests and other associated resources such as wildlife, fisheries, exotic species, biodiversity, the rivers, seas and the atmosphere including energy from the sun (solar energy) and wind.

For us to maximize the use of those resources require a shift in our current perceptions about the environment to adopt a garden ethic or an attitude of caring for the earth and its abundant resources. Protection must be the chief principle in dealing with the environment. Whatever, we do to the environment; we must and should be able to account for its impact level. The potential damage or harm to the environment must not be in excess of its carrying capacity.

3.4 Minimizing Resource Waste and Depletion

Wanton exploitation is one chief reason for resource depletion and waste. It would be difficult for people to understand, appreciate and value what they did not work for. Environmental resources are naturally endowed upon us as humans. They are an inter-generational gift. What this means is that, the use of such treasure base of nature must be guided with ethics. This means in utilizing the natural resources, effort must be made to protect the regenerative potential of the environment. Thus, garden ethics supposes that we make use of resources in the environment to meet existential needs around us. In doing this, we must not allow the resources to become exhausted and reach a level of decline that makes it difficult to replenish itself.

We need to tame our appetites. The propensity to over-exploit the natural resources, over consumption and waste leads to speedy decline and depletion of renewable resources. It therefore stands to reason that our attitudes must change so that the resources continue to be available and adequate to meet human needs. Consumption patterns both at individual and social levels should be based on needs and not on wants. There should be strategies deliberately put in place to allow the renewable resources to regenerate themselves and be restored.

3.5 Controlling Green Capitalism

In capitalist thinking, every resource has value, can be utilized, and a monetary price can be placed on it. Everything is seen in terms of monetisation. The tendency to monetise every available resource encourages people further to think in terms of surplus value. However, the desire to create surplus often tilt towards materialism. Once the monetary reward begins to trickle in, there could be no end to extraction and exploitation. This results in green capitalism.

Green capitalism is therefore a concept, which tries to explain the practice by which forest resources especially of poor nations and indeed, their environmental resources are open to undeterred exploitation. To this extent, it opens up demand for heavy investment in the natural resource sectors to deepen their exploitation. This pervading process

needs to be controlled. Without institutional control mechanisms to stem this level of exploitation, soon, a lot of resources would be devastated, degraded and species would readily become extinct. It is to this extent that all people everywhere, economic and development planners must sit up to this needs to control the exploitation of nature.

Class Activity

The formula MAX-MIN-CON can be used to explain the concept of ecological economics. Discuss in full.



Self Assessment Exercise

discuss the role of control green capitalism in ecological resources?

Possible Answer to Self-Assessment Exercise

Green capitalism is therefore a concept, which tries to explain the practice by which forest resources especially of poor nations and indeed, their environmental resources are open to undeterred exploitation. To this extent, it opens up demand for heavy investment in the natural resource sectors to deepen their exploitation. This pervading process needs to be controlled. Without institutional control mechanisms to stem this level of exploitation, soon, a lot of resources would be devastated, degraded and species would readily become extinct. It is to this extent that all people everywhere, economic and development planners must sit up to this needs to control the exploitation of nature.



3.6 SUMMARY

The presentation in this unit can be summarized as MAX -MIN-CON for MDG (i.e. maximizing, minimizing and controlling our attitudes to be compliant to or environmentally friendly to achieve the Millennium Development Goals. In this way we can contribute to sustaining the environmental balance.



3.7 REFERENCES/FURTHER READINGS/WEBS

DVV (2004). *Adult Education and Development* (64). Bonn: DVV.

Federal Environmental Protection Agency (1989). *National Policy on Environment*. Lagos: FEPA.

IUCN-WWF-UNEP (1980). *World Conservation Strategy*. Gland

Switzerland: IUCN

Timothy, K. (2013). The vulnerability of biodiversity to Rapid climate change,
Journal of Climate vulnerability: Understanding and Addressing Threat
to Essential Resources Vol 4

UNIT 4 DEVELOPMENT AND UNDERDEVELOPMENT: THE HUMAN SECURITY ISSUES

Unit Structure

- 4.1 Introduction
- 4.2 Learning Outcomes
 - 4.3 The Meaning of Development
 - 4.4 Underdevelopment Problems and Peace
- 4.5 Summary
- 4.6 References/Further Readings
- 4.7 Possible Answer to Self Assessment Exercise



4.1 INTRODUCTION

It is not an easy task to make attempt at explanation of the concept of development or underdevelopment. One reason for this owes to the point that they are an all-comer concept for nearly the entire human activities. But this is precisely what we shall delve into in this unit. Whatever our concept of development it would amount to little without synergies drawn to human security.

These three concepts of development, underdevelopment and human security, help us to understand the quality of human life and its associated existential conditions in a given place at a specific time. The knowledge we gain from the concepts is not static. Understanding them is pragmatic and relative to the social and political environment in operation at any time. They are all human needs and their provision or lack of it, can lead to peace or lack of peace respectively.



4.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- discuss in clear terms the meaning of development
- differentiate between development and underdevelopment
- show the relationship between human security and development

- explain how underdevelopment and human security can affect environmental peace.



4.3 The Meaning of Development

There can be no unilateral approach to the description of development as a concept. Development is a composite term. Different people have different interpretation of the concept. However, there are common overlaps, which can guide our understanding of the concept. Development practitioners may not agree on the definition of development but they may not be so divided in their description.

Development begins from the human mind. It is a process, which helps us to turn our intentions into inventions. Once things are invented, we then invest our time and energies in those inventions to create surplus value from them. Development practitioners then distribute and circulate those values of development from their area of surplus to the area of deficit for the benefit of human beings.

Development is a qualitative process. J.J. Rousseau for instance looked at it from the perspective he called five stages of economic growth. However, what can be ascribed to development as a qualitative process is that it begins from traditionality to modernity. Between these extremes of the continuum, many complex activities are involved which have positive impact upon the lives of people in the society. It widens opportunity and prospect for better life. It creates and makes materials possessions abundant for people.

Development enables us to have increased control of the environment. It helps us to design and invent scientific contrivances with which to conquer nature. It is indeed, a multi- faceted process which impinges upon all aspect of human life.

Development makes the industrialized countries and the emergent nations resemble in terms of quality of life or human development index. A simple measure of it is to assess how much the rural areas look like the urban in terms of quality of life not size. It can also be examined from how far the poor and the rich live closely together in terms of their socio-economic status and social distance. People who have overcome hunger, clothing and shelter (the basic necessities of life) are on their path to development.

Development does not mean a crime-free society in fact it increases it. It does not guarantee peace either. However, development enables us to regulate society and social conduct in line with tenets of civilized behaviour.

4.4 Underdevelopment Problems and Peace

It is almost impossible to discuss development without mention of underdevelopment. Both concepts are the opposites of the same coin. However, whereas development is positive, underdevelopment spells a negative connotation. Such negative connotations may be about people or places, which make it hardly possible for the people to understand and control their environment to human advantage.

There is always a measure of contented domesticity embedded in underdevelopment. People accept their adverse situation as given. They resign to it as fate and do little of their own to change it. They are tradition-bound and conservative. Characteristic of underdeveloped settings is unsustainable development practices with resultant gross ecological abuses. Provision for the needs of the society of the future is pretty much lacking. In many of such places the people engage in harmful traditional practices that are inimical to acceptable rules of civilized conduct.

The life expectancy in underdeveloped settings is unacceptably low. Majority of the adult population is illiterate and the provision of basic education for all poor democratic culture is a major problem in the underdeveloped countries. Accompanying this is unbridled corruption, lack of transparency and accountability on part of the leadership.

Class Activity

1. Discuss the view that human security is the preoccupation of development practice and struggles against underdevelopment.



Self-Assessment Exercise

Discuss the meaning of Development?

Possible Answer to Self-Assessment Exercise

Development begins from the human mind. It is a process, which helps us to turn our intentions into inventions. Once things are invented, we then invest our time and energies in those inventions to create surplus value from them. Development practitioners then distribute and circulate those values of development from their area of surplus to the area of deficit for the benefit of human beings.



4.5 SUMMARY

Attempts have been made to clearly describe the three concepts elucidated in this unit. The concepts are development, underdevelopment and human security. What makes development and what reduces underdevelopment is the optional push towards strengthening human security in the society.



4.6 REFERENCES/FURTHER READINGS

Okebukola, P: A (1997). *Strategies for Environmental Education*.
Onitsha: African FEP Publishers Ltd.

Okpala, J. (1996). “Enhancing Environmental Protection in Nigeria Through Environmental Education”. In E. O. Aina and N. O. Adedipe. *The Petroleum Industry and the Environment Impact in Nigeria*. Ibadan: Fairchild Designs and Prints. P. 199.

Ukpong, E.M; Ntia, N. U. Obot, A; and Usang, E. N. (1995). *Community Environmental Education*. Lagos: Macmillan Nig. Ltd.

UNIT 5 INTER-DEPENDENCE, DISTRIBUTIVE JUSTICE AND PEACE

UNIT STRUCTURE

- 5.1 Introduction
- 5.2 Learning Outcomes
 - 5.3 Dependence and Interdependence
 - 5.4 Distributive Justice
- 5.5 Summary
- 5.6 References/Further Readings/Webs
- 5.7 Possible Answer to Self-Assessment Exercise



5.1 INTRODUCTION

Delving into the seasonal conflicts between development and underdevelopment is not necessary. However, we need to understand the naturalness of stages of economic growth and modernization within the fabric of capitalist calculations. We cannot really over simplify by arguing that the development of the metro pole centers was a function of underdevelopment of the periphery satellite areas especially in the developing countries. We need also to understand that the level of a country's external dependence or independence is rather difficult to quantify. Moreover, changes in the international system have effects upon domestic social conditions.

If nations cannot truly decline from the dominating effects exerted at the international system, what then is the situation? The world requires collective self-reliance. This can be promoted through economic growth, expansion of world trade and increased global cooperation and donor assistance. The common interest of humanity and international cooperation is required for world peace. Such a situation must see people as great actors in global events.

There must also be concerted efforts to address global inequalities and existing injustices to accelerate development for human security. Furthermore, the seemingly irreversible strength of a few nations in the international system should be harnessed for international peace, justice and security.



5.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- describe the international arena to justify the need for interdependence.
- explain the connections between dependence and interdependence
- why should we work towards re-distributive justice in the world?
- in what ways does injustice hinder environmental peace?



5.3 Dependence and Interdependence

Dependency theory focuses normally on the unequal and uneven relationship between the North and South; that is, the developed and the developing countries.

Countries of the South are perceived to be locked in the sensibility of dependence on the North. Much of what the South has in offer to the international system had a characteristic value tag which lacks competitive advantage. The history of development has proved this phenomenon to be true.

Within the global structure of international relations therefore, the resources are lacking in strength for the South to be able to enjoy comparative choice or even significantly influence or deter the course of action in the international arena. Instead, they are whimsically resigned to the turn of events.

The history of the South shows that most of the nations were colonized by Western powers. Colonialism brought into those nations a centripetal wind, which disparaged the covalent force among the people. It caused things to fall apart for many a nation. Dependency is therefore viewed as rooted in the internal inequalities of the nations of the South. For the overly dependence of the South to be corrected, the state must serve as an instrument of change.

Dependence is always to the disfavour of the dependent state in the sense that at both vertical and lateral levels, the dependent state remains an object of exploitation. The relationship is one of uneven pattern and unequal exchanges. One side loses the other gains. Under such context, it is supposed that dissociation would be the answer. But within a global system of complex relationships, how is this workable. Thus what nations really need is interdependence.

Interdependence is concerned with common interests and cooperation. Of course at the international system there are no permanent friends but

permanent interests. The cleavage between nations is based on interests. Once common interest is identified, nations coalesce over and around such interests. Such interest could be economic, political, social, military or environmental.

Under interdependence, the world community is seen as a global village or even super-street with a common humanity sharing only one earth. Prosperity needs to be shared and poverty and ecological problems tackled in order to have world security and peace. Interdependence thus insinuates a humanitarian approach to development where nations mutually contribute for global peace and cooperate towards it human improvement.

5.4 Distributive Justice

The history of interdependence can be traced. Before the European intervention into Africa, everything was working well at least at the level of subsistence. At the dawn of European expansionism, the white man came to Africa during the voyages of discovery to discover the new world. They landed the ports of Africa with three items in their briefcases: Gold, God and Gun (3Gs) or business, book and bullet (3Bs) respectively.

The Europeans came to open up drainpipes into Africa. First as traders in communities vital to European interest, they began to cooperate with Africans. Gradually but steadily they began to entrench themselves into the economic activities in the continent and increasingly gained control, influenced and dictated its international context and direction. Plantation agriculture and single-track railways were opened up. Investment in mining activities developed extraction of the wealth of the continent increased and the commodities were expropriated overseas.

The second article that was brought into Africa was religion. The African traditional religion was seen as repugnant to civilization and pointed to a false god. The Koran and the Bible were introduced apparently as the Holy Spirit and constitution of God and heaven. Churches, mosques and schools were opened up. The aim to win souls for God, to teach European values, to promote literacy; and to develop a cream of educated African elite who would partner to accelerate and strengthen European socio-economic interests in Africa.

Thirdly, we must note that European presence in Africa had an article of colonial rule. There were reasons for that. The use of the gun and superior weapons were applied to put opposition in check. Also, they needed political power (colonial rule) to protect the economic interest of the white man in Africa. They also needed to promote the glory of Europe in Africa.

Through colonialism, Africa went full scale as a peripheral center of European influence. With the end of colonialism and the entrenchment of politically independent nations in Africa, neo-colonial activities, which

tied Africa to the apron strings of Europe, emerged a hybrid form of colonialism.

The new International Economic Order (N.E.O) later came up to address the injustices of the international system in favour of the third world. But the human factor of development was inconclusively attended to in that order. Information communication technology (ICT) soon began to rule the world; riding through the wings of globalization as a new frontier. Added to this, is the strong wind of democracy and participatory development, which have become the reality of our age.

Relationship, partnership and team play have become the new order to which nations and people must yield themselves. None, no nation can ever more live in isolation. We need each other. Beyond race, age, time and distance or location we are all one people, one blood in one world. The well being of all is the justice of one; the problem of one is the concern of all. This is the essence of interdependence.

Discuss four ingredients which create the need for interdependence at the international level?



Self Assessment Exercise

Discuss Distribution justice?

Possible Answer to Self-Assessment Exercise

The history of interdependence can be traced. Before the European intervention into Africa, everything was working well at least at the level of subsistence. At the dawn of European expansionism, the white man came to Africa during the voyages of discovery to discover the new world. They landed the ports of Africa with three items in their briefcases: Gold, God and Gun (3Gs) or business, book and bullet (3Bs) respectively.

The Europeans came to open up drainpipes into Africa. First as traders in communities vital to European interest, they began to cooperate with Africans. Gradually but steadily they began to entrench themselves into the economic activities in the continent and increasingly gained control, influenced and dictated its international context and direction. Plantation agriculture and single-track railways were opened up. Investment in mining activities developed extraction of the wealth of the continent increased and the commodities were expropriated overseas.



5.5 SUMMARY

The peace anticipated in this unit is one that makes the environment a good life-support system and people serving as mutually dependent on each other to advance their socio-political and economic goals.

Attempts were made here to show how inextricably nations and people need each other. The problems of dependency were presented and the values of interdependence exposed. It is hoped that the dream of a common humanity would be realized when the human heart is circumcised to think and act as an interdependent factors in peace and development.



5.6 REFERENCES/FURTHER READINGS

George, S. (1999). *The History of Development. From Western Origin to Global Faith Cape Town*: University of Cape Town Press.

NEST (1991). *Nigeria's Threatened Environment: A National Profile*. Ibadan: NISER.

NEST (1992). *Challenges of Sustainable Development in Nigeria*. Ibadan: Inter Printers Ltd.

UNDP. (2005). *Cooperation South: Eliminating Extreme Poverty*. New York: UNDP.

MODULE 5

- Unit 1 Conservation Strategies for Peace
- Unit 2 Planning for Sustainable Production and Consumption Habits
- Unit 3 Capacity Building for Environmental Development and Peace
- Unit 4 Environmental Planning and Poverty Reduction Strategies
- Unit 5 Sustainable Entrepreneurship and Gender Equality

UNIT 1 CONSERVATION STRATEGIES FOR PEACE

UNIT STRUCTURE

- 1.1 Introduction
- 1.2 Learning Outcomes
 - 1.3 Conservation Strategies for Peace
 - 1.4 Educational Strategies
 - 1.5 Media Advocacy
 - 1.6 Eco-Tourism
 - 1.7 Government Policy
 - 1.8 Traditional Environmental Knowledge
 - 1.9 Alternative Livelihoods
- 1.10 Summary
 - 1.11 References/Further Readings
 - 1.12 Possible Answer to Self Assessment Exercise



1.1 INTRODUCTION

In module II unit I, effort was made to clearly explain the concept of conservation and its associated terms such as preservation and protection. In this unit, it shall be obvious that actions must be put in place to enable us succeed in conservation activities. Conservation and sustainable development have become the catch phrase of development work in contemporary times.

To live in harmony with the environment and keep economic and productive activities within its carrying capacity, some measures have to be put in place. Those measures are the focus of this unit, as we shall present shortly.



1.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- examine specific ways that educational intervention approaches can be used for conservation and sustainable development
- describe the role of the multi-media in conservation for peace
- discuss the contributions of eco-tourism
- design specific programmes to aid conservation practices in your local area
- suggest some alternative coping strategies in the light of environmental change.



1.3 Conservation Strategies for Peace

There is environmental peace when people are able to earn their living without significant ecological damage, which compromise the start of the environment and development in the future. Five main strategies are here presented to help us achieve that condition in the environment.

1.4 Educational Strategies

If we refer to unit 3 of module II of this course book, environmental education was discussed as a method for environmental peace. One of the strategies in this regard is to design and mount environmental education, science, protection management and its allied areas as academic disciplines to be studied at degree and post-graduate levels.

At the lower levels of the formal school system, knowledge about the state of the environmental should be part of what students learn in all subjects. Teachers should be exposed to environmentally based knowledge. School competitions needed to be made an annual event by managers of school. Environmental clubs should be made part of every school life to raise students to become friends of nature. Through such clubs, ecological games can be designed and employed by them.

1.5 Media Advocacy

Radio jingles and promotions can be used to raise awareness of people about the state of the environment. Television and radio programmes, which discuss pressing environmental problems and concerns, should be sponsored to help us control the environment. Cartoons, traditional media like town criers at the rural level would count in spreading the values of environmental protection to the people.

1.6 Eco-Tourism

The promotion of tourism in general and eco-tourism in particular can help us optimize conservation efforts. Mountains, rivers, lakes, oases, the forest and its rich nature reserve with its exotic species variety as well as monoliths, indigenous people, festivals and so on can constitute a gamut of reserves for eco-tourism. Eco-tourism makes people attract global attention to peculiarities of this environment. It makes them earn money from tourists and live better.

1.7 Government Policy

Government policy enactments are vital to success of conservation activities for peace. Measures in this direction may include, establishment of disaster management and emergency response agencies, an ecological fund, and ministry of the environment. Also in this direction, government may make deliberate effort to create national park projects for protection of nature; as well as the establishment of wildlife sanctuaries and sites for special scientific and ecological interests.

1.8 Traditional Environmental Knowledge

There are some traditional environmental practices, which helped to protect nature and may still subsist or be made relevant in today's world. Such practices can help us cope with and control ecological change. Social forestry, community forestry, holy grounds, evil rivers are some examples which can help us protect nature.

1.9 Alternative Livelihoods

One main reason for environmental problems is poverty. Thus, plans must be made to support and empower people in a manner that enables them to open up new ways of survival, which are environmentally friendly.

Class Activity

From your study of this unit, identify community, attitudinal and policy strategies, which can be used to promote conservation for peace. How can those strategies be made to work?



Self-Assessment Exercise

Discuss and explain Educational Strategies?

Possible Answer to Self-Assessment Exercise

If we refer to unit 3 of module II of this course book, environmental education was discussed as a method for environmental peace. One of the strategies in this regard is to design and mount environmental education, science, protection management and its allied areas as academic disciplines to be studied at degree and post-graduate levels



1.10 SUMMARY

Strategies for environmental conservation and peace are many and varied. However there are no watertight strategies for achieving that purpose. In this unit, we presented key strategies that can help us achieve the goal of ecological peace. The strategies range from attitudinal, media, community oriented to policy measures.



1.11 REFERENCES/FURTHER READINGS/WEBS

Anijah-Obi, F. N. (2001). *Fundamentals of Environmental Education and Management*. Calabar: University of Calabar Press.

Gumut, V. (2006). *Peace Education and Peer Mediation*. In S.G. Best (Ed). Introduction to Peace and Conflict Studies in West Africa. Ibadan: Spectrum Books.

Sale, K. (1997). "The Colombian Legacy and the Ecosterian Response. In H. Hannun (Ed). People, Land and Community. London: Yale University Press.

Todd, J. (1977). An Ecological Economic Order. In. H. Hannun (Ed). People Land and Community. London: Yale University Press.

UNIT 2 PLANNING FOR SUSTAINABLE PRODUCTION AND CONSUMPTION HABITS

UNIT STRUCTURE

- 2.1 Introduction
- 2.2 Learning Outcomes
- 2.3 Planning Dimensions for Sustainable Production
- 2.4 Summary
- 2.5 References/Further Readings/Web
- 2.6 Possible Answer to Self Assessment Exercise



2.1 INTRODUCTION

Prepare or repair. There is more to that statement than a mere declaration when people do not prepare for the future, they hardly can handle any exigency with readiness and promptness. When they do, the results may fall far short of expectation. It is even worse when it comes to matters of the environment because they extend far into the future.

The whole essence of sustainability dovetails into ensuring the future well being of humanity. When we plan for sustainable production, we do so to meet current life needs and put in place productive practices, which ensure the continued availability of what we produce and access to their use by people in the future. Sustainable production is production, which is based on the needs rather than ostentation and waste. Planning in this sense would mean, producing to consume, and consuming what is produced wisely, so as to continue to produce for consumption.



2.2 Learning Outcomes

BY the end of studying this unit, you should be able to:

- describe clearly, the meaning of sustainable production
- present steps that can help people plan activities for sustainable production
- identify those appetites, which need to be controlled to help maintain proper consumption habit in the society.



2.3 Planning Dimensions for Sustainable Production

Planning is a management function comprising six parts: planning etc. In fact the entire activity can be understood by applying the acronym POSDCOORB

PLANNING

Planning is a mental activity. It involves putting ideas together to show in hypothetical or skeletal form how those ideas can be made to work. Planning helps us to project our thoughts in a structured form. It specifies step by step what is to be done and how. Planning means prepare or repair. When people fail to plan how to use environmental resources for production of economic and social values, they are actually planning for crises. Planning is an activity, which helps us to picture our future and the direction of its events.

ORGANIZING

To organize is to turn plans into specific schedules. It shows in vertical and lateral order, the steps to be taken to solve a problem, or serve a need or attain an objective. Organizing means to show the connections that are to be made as a means to an end.

Organizing means the assignment of responsibility to those who stand to work, do, implement a project or programme such as would lead to the production of either goods or services.

In organizing for the production of environmental resources, we align ourselves with the natural pattern of carrying capacity of environmental resources, the productive capacity of ecosystems and the natural balance of ecological resources. The ability to organize, lays the foundation stone for sustainable use of environmental resources.

SELECTING

Choices have to be made to stir up production. There are people, ideas, strategies, plans and resources to be chosen in a manner that leads to attainment of productive purposes. Target audience group must be selected.

- The purpose of production must be known.
- The time frame to produce what is a selection activity.

- People with the requisite skills and ability must be known.
- The science and technology and expertise required needs to be identified and garnered together.
- Selection is in fact a choice making process to achieve target goals and plans.

DIRECTING

To guide, order, authorize, warrant, back-up and determine what is to be done with recognized influence is a directing function. You cannot direct people who are not ready, willing and able to perform. When every preparation has been made to ensure production take-off, directing comes in. When directed people are placed in check of what people are placed in check of what is done or to be done.

COORDINATING

Coordinating is not only systems thinking but also systems processing. It involves articulating the entire units which make up an establishment, organization or system in such a manner that those activities run efficiently. To produce in excess in wanton disregard to needs would amount to wasteful consumption. It is therefore crucial to play both the extraction of ecological resources and their needs meeting potentials such that we waste not and want not. Chemical fishing and the use of bushfires for hunting game or bush animals would negate and contradict the entire essence of coordinating production and consumption habit in regard to natural resources.

BUDGETING

Budgeting entails planning how to manage. Management of time is one critical thing that we must learn in order to harmonize production and consumption habits of people. Every human being must know and understand the value of time. Time cannot be wasted because all time is used. However, it can be misapplied, and misused. Time misused is time lost. We must understand the new environmental imperative. Learn when to plant and when to harvest. Understand how to produce and conserve and plan strategies to protect the resource we consume around us.

Class Activity

Demonstrate with clear example how we can plan to stabilize the consumption and production of a vital resource in your country

Self-Assessment Exercise

Differentiate between Directing and Coordinating?

Possible Answer to Self-Assessment Exercise

To guide, order, authorize, warrant, back-up and determine what is to be done with recognized influence is a directing function. You cannot direct people who are not ready, willing and able to perform. When every preparation has been made to ensure

production take-off, directing comes in. when directed people are placed in check of what people are placed in check of what is done or to be done. At the other hand Coordinating is not only systems thinking but also systems processing. It involves articulating the entire units which make up an establishment, organization or system in such a manner that those activities run efficiently. To produce in excess in wanton disregard to needs would amount to wasteful consumption.



2.4 SUMMARY

The inseparable link between the need to produce and the need to protect has been presented in this unit. Our future hope rests upon what we do with our present situation. This is why planning is key to how we explore the resources of nature. The rate of resource consumption must be controlled and the pace of environmental decline slowed. To do otherwise would mean to endanger the condition of species on earth.



2.5 REFERENCES/FURTHER READINGS

Anderson, J. A. (2003). *Accountability in Education*. Paris: International Institute of Educational Planning.

Bisong, F. E. (1995). *Managing the Earth in Environmental Education*. Lagos: Macmillan Nigeria Publishers Ltd.

Jaja, S. O. (1995). *Planning and Process in Environmental Management*. Ibadan: Macmillan Nigeria Publishers Ltd.

UNIT 3 CAPACITY BUILDING FOR ENVIRONMENTAL DEVELOPMENT AND PEACE

UNIT STRUCTURE

- 3.1 Introduction
- 3.2 Learning Outcomes
- 3.3 Types of Capacity Building
 - 3.3.1 Carrying Capacity
 - 3.3.2 Potential Capacity
 - 3.3.3 Incremental or Renewable Capacity
 - 3.3.4 Sustained Capacity
- 3.4 Principles of Capacity Building
 - 3.4.1 Analysis of the Environmental Components
 - 3.4.2 Comprehensiveness of Thought
 - 3.4.3 Aggregation of Relevant Ideas and Strategies and Methods and Factors
 - 3.4.4 Consistency in Focus on Key Variables
 - 3.4.5 Control against Eroding Forces
 - 3.4.6 Inspiration of Personal Interest
 - 3.4.7 Horizontal Impact Making (Life wide)
- 3.5 Summary
- 3.6 References/Further Readings/Webs
- 3.7 Possible Answer to Self Assessment



3.1 INTRODUCTION

Before action is taken, preparation precedes it. That preparation is a process of gathering momentum. Capacity building is a process of acquiring knowledge, information, skills, understanding and competences, which equips people with the required disposition for the accomplishment of a task goal or objective. The attainment of development goals generally, the ultimate goals of environmental protection and the prevalence of peace in the society means that we help people to acquire capacity and develop their potentials in order to perform those roles.

Human capacity building is therefore one vital area of focus in sustainable environmental development for global peace. The living environment is multi-dimensional. Thus, several tangents of capacity development need to be put in place in order to be able to deal with all phases of environmental problems and concerns.



3.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- explain the meaning of capacity building
- identify the types of human capacity-building for environmental development and peace
- state clearly the principles, which can be used for human capacity building in the area of environmental development
- justify capacity building as human resource development relevant to environmental protection.



3.3 Types of Capacity-Building

Let us make an attempt to look at the types of capacity building and principles for capacity building.

Four types of capacity building have been identified and isolated for treatment in this unit. They are:

3.3.1 Carrying Capacity

A growing babble must be able to maintain itself in a steady state freely. An aero plane must be able to overcome gravity in order to fly. So is the earth. The living earth must be able to keep itself in a continuous state of living supply balance for it to serve all the life-support systems in it. Carrying capacity is therefore the intrinsic capacity for self-regulation in a manner that the rate and speed of destruction of resources do not accelerate and exceed the potential of the earth to renew itself.

3.3.2 Potential Capacity

For humans, there are billions of neuron cells in the brain. These cells make human beings to be Homo sapiens with the endowed capacity to think logically and create things, discover and invent. Similarly, there are millions of known and undiscovered species of plants and animals in the living environment. Those species have limitless potentials in the creating ecosystem balance and a network of life-support systems. This potential capacity of life forms can be discovered and harnessed to the advantage of nature.

3.3.3 Incremental or Renewable Capacity

The forest ecosystem and indeed the oceans have regenerative capacity to restore themselves. This means that they replenish themselves at about the same rate of their depletion and destruction. This is called renewable or Incremental Capacity. It is to be added that environmental capacity building at two levels, the finite and renewable resource levels. For resources that can become extinct, proceeds from them need to be invested in other development programmes. For the renewable resources, effort should be to decrease their rate of depletion and increase their regenerative potential.

3.3.4 Sustained Capacity

Renewable capacity is also called sustainable capacity. It is different from sustained capacity. The latter is the capacity to sustain economic growth as a by-product of the use of environmental resources which have a predictable and definite life span. Mismanagement of finite resources leads to environmental and peace problems for generations of the future and our common humanity.

3.4 Principles of Capacity Building

What we present next are eight principles for capacity building, which can help us create and sustain environmental peace.

3.4.1 Comprehensiveness of Thought

This principle requires that attempt must be made to brainstorm and think about all possible aspects of the environment, which require human capacity building for their development. Air, water and land, their associated features and resources must be thought about in the widest order.

3.4.2 Analysis of Environmental Components

The principle of analysis means we must identify environmental components and specify the elements, which interact within the air, water and land components. The degree of interaction and impact arising from the interaction would all aid our building strategies.

3.4.3 Aggregation Principle

There is need for the aggregation of ideas, methods, materials, factors and strategies in a manner that helps the articulation of the processes for

human capacity development. This principle creates the experiences, which are vital to capacity building in the area of environmental development.

3.4.4 Consistency of Focus on Key Variables

Key variables stand out when we carefully analyze and aggregate ecological ideas and factors. Variables include interest in a commitment to improving human awareness about the environment around us, habit of inquiry and understanding of the relationship between human beings and the living environment. To veer off from them means to deviate from what is necessary and needful for life.

3.4.5 Control against Eroding Forces

There are several competing factors, which need to be controlled for proper capacity building to take place. These include unfriendly environmental practices by groups and individuals, greed for ecological resource exploitation, and vested interest of the powerful in society.

3.4.6 Inspiration of Personal Interest

All stakeholders must be inspired to show interest in and commitment to the environment. It is the basis for our existence. Everybody is a stakeholder in the environment. We need to demonstrate to the people how interest in ecological peace and balance can produce dividends for our economy and society. Such interest forms a major starting point for capacity building.

3.4.7 Horizontal Impact Making

Capacity building must be principled upon best practices. We can replicate experiences in our capacity building designs or projects. We borrow experiences to improve our practices. This way we can learn from the successes of other people around us.

3.4.8 Inter-Generational Principle

In planning for capacity building, the principle of inter-generational equity must be our guide. We all share a common future. That future needs to be protected through our current practices and preparations. How we get there depends on how we get started.

Class Work

1. Present and discuss with specific local examples four types of human capacity development relevant to ecological peace?



Self Assessment Exercise

1. Demonstrate the principles, which you would use to mount a capacity building programme in the area of environmental peace?

Possible Answer to Self Assessment Exercise

Comprehensiveness of Thought This principle requires that attempt must be made to brainstorm and think about all possible aspects of the environment, which require human capacity building for their development. Air, water and land, their associated features and resource. There are several competing factors, which need to be controlled for proper capacity building to take place. These include unfriendly environmental practices by groups and individuals, greed for ecological resource exploitation, and vested interest of the powerful in society.



3.5 SUMMARY

Between effort and effect is a world of capacity. It is the strength of our capacity that turns human effort into an effect whether desirable or otherwise. Four types of capacity building processes were identified in this unit. They were closely woven to show their characteristic effect on environmental resources development.

Related to these types of capacity-development are eight principles presented as guide to the capacity-building process. As advocates of peace, the environment is our starting point; and capacity building our potential weapon.



3.6 REFERENCES/FURTHER READINGS/WEBS

Ehrenfield, D. (1997). *The Management Explosion and the Next Environmental Crisis*. In H. Hannum (Ed.) *People, Land, E and E Community*. London: Yale University.

Gavau, P. (2005). *Improving the Lives of Slum Dwellers*. In *Cooperation South: Eliminating Extreme Poverty*.

Seely, M. K. and klintenbera, P. (2004). 'Solving Environmental Problems: Namibia'. In *Sharing Innovative Experiences* 9. P 87-95.

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UNIT 4 ENVIRONMENTAL PLANNING AND POVERTY REDUCTION STRATEGIES

UNIT STRUCTURE

- 4.1** Introduction
- 4.2 Learning Outcomes
Main Content
- 4.3 The Millennium Development Goals as Poverty Reduction Strategy
- 4.4 Principles for Environmental Planning
Conclusion
- 4.5 Summary
Tutor-Marked Assignment
- 4.6 References/Further Readings/Webs
- 4.7 Possible Answer to Self Assessment Exercise



4.1 INTRODUCTION

Environmental goals are ambitious-goals. The means of achieving them is the main clicker for their attainment. Those means and strategies for getting what is desired would continue to remain an important consideration for success in ecological management.

What we require is the development of sensitivities to environmental imperatives and to rethink every action that can impact upon environmental balance. This is so because environmental planning is a holistic process, and a guarantee for sustainable development and indeed poverty reduction. Poverty has many dimensions. Poverty is also many-sided. The former provides the context in which the latter can be treated. Herein lies the need for a thinking globally and acting locally in a manner that maintains a planned environment for the improvement of living standard.



4.2 Learning Outcomes

By the end of studying this unit, you should be able to:

- explain the need for environmental planning
- discuss how the Millennium Development Goals are formidable in poverty reduction efforts
- identify the principles that can be used for environmental planning in a local context.

It is needful for us at this level to present in clear ways how the Millennium Development Goals (MDG) applies to environmental planning and poverty reduction.



4.3 The Millennium Development Goals (MDG) As Poverty Reduction Strategy

Goal 1

Eradicate Extreme Poverty and Hunger. This very first goal recognizes the weight which extreme poverty places on people of the world. It suggests the need for poverty reduction and the attacking of hunger through adequate planning for food security. We must be challenged to come out with those environmentally friendly strategies that are humane and supportive of life.

Goal 2

Achieve Universal Primary Education. Educational Institutions have to be provided in adequate number and even spread across all society. At the primary school level, the goal of making it universal means reducing inherent attendance difficulty to minimum. Through these institutions, people can learn how to be positive in attitudes towards the living environment and take friendly actions to plan it.

Goal 3

Remove Gender Equality and Empower Women. When we eliminate gender disparity and encourage partnership which integrates women in development, women as environmental users would become properly informed and encouraged to plan how to use the environment in a friendly way.

Goal 4

Reduce Child Mortality. Child mortality is an environmental problem, which hinders peace. It disrupts the harmony in family life. To this extent, all effort must be made to reduce the deaths of children less than five years through policy direction and political commitment.

Goal 5

Improve Maternal Health. Maternal mortality (death of mothers at delivery point) must be seen as a serious problem and attention paid to

stem it. Like goal four, when attended to, it will enhance peace for humanity and thus stabilize man-environment relationship.

Goal 6

Combat HIV/AIDs, Malaria and Other Diseases. All nations and people must help to stop the spread of the HIV/AIDS pandemic as an approach to environmental peace.

Goal 7

Ensure Environmental Sustainability. In relating with the biosphere, (air, water bodies and land), there is great need to reverse the trend of resource decline and accelerate adherence to principles of sustainable development.

Goal 8

Develop a Global Partnership for Development. On all matters of environment and development all people are equal stakeholders. Thus, there is the utmost need to integrate all people within and between nations in the global agenda for peace, ecological balance and sustainable development.

4.4 Principles for Environmental Planning

Three principles, which indicate good environmental practices, are highlighted next.

1. Comprehensiveness

Planning the environment for poverty reduction is a total approach. The comprehensive principle suggests that all aspects and dimensions of the environment must be taken into consideration when planning. The plans must be life-wide such that success can be replicated elsewhere with characteristic success.

2. Aggregation

Environmental indicators, inputs, outputs, pressures on resources and collective responses must be articulated to the effect that their aggregate impact helps to improve humanity and sustain environmental balance.

3. Consistency

To reach where we are going, we must picture our future. There must be a head and land connection to make for vertical and horizontal balance in planning the ecosystem. Our ideas and practices must not deviate or derail.

Class Activity

Explain in your words how the principles of planning can be used to attain poverty reduction within the context of the millennium goals?



Self-Assessment Exercise

Discuss and explain the three principles, which indicate good environmental practices?

Possible Answer to Self-Assessment Exercise

1. Comprehensiveness

Planning the environment for poverty reduction is a total approach. The comprehensive principle suggests that all aspects and dimensions of the environment must be taken into consideration when planning. The plans must be life-wide such that success can be replicated elsewhere with characteristic success.

3. Aggregation

Environmental indicators, inputs, outputs, pressures on resources and collective responses must be articulated to the effect that their aggregate impact helps to improve humanity and sustain environmental balance.

4. Consistency

To reach where we are going, we must picture our future. There must be a head and land connection to make for vertical and horizontal balance in planning the ecosystem. Our ideas and practices must not deviate or derail.



4.5 SUMMARY

It is almost impossible to control the past. But we can take steps to gainfully control what happens today. In this unit, attempt was made to show how the need for environmental planning has become an imperative for poverty reduction. The relevance of planning to attainment of the millennium goals were presented as well as the principles for planning in relation to poverty reduction.



4.6 REFERENCES/FURTHER READINGS/WEBS

- Botinan, E. K., Honazarow and Kaymon, A. K. (2004). Protecting Forest Stands: Uzbekiston. In *Sharing Innovative Experiences* 9. P. 103-106.
- Jodha, N. S. (1995) *Sustainable Development in Fragile Environments*. Ahmedabad-India: Centre for Environmental Education.
- Lenton, R. (2004). Water and Sanitation for the Unserved Poor. In UNDP: Cooperation South. P. 37-46.
- Onyiahchi, J.C. (2004). Eradication of Poverty Through Women's Participation in Adult and Non-Formal Education: A Study of Nsukka in Enugu State of Nigeria. In German Adult Education Association. *Adult Education and Development*. (62), P. 25-32. Bonn: DVV.

UNIT 5 SUSTAINABLE ENTREPRENEURSHIP AND GENDER EQUALITY FOR PEACE

UNIT STRUCTURE

- 5.1 Introduction
- 5.2 Learning Outcomes
 - 5.3 Women as Endangered Species
 - 5.4 Inhibitions of Earnings
 - 5.5 Sustainable Entrepreneurship and Livelihoods
- 5.6 Summary
- 5.7 References/Further Readings
- 5.8 Possible Answer to Self Assessment Exercise



5.1 INTRODUCTION

There are many sides to peace. One of these is sustainable entrepreneurship. As we bring this book, indeed this course to an end, enterprise building for women comes to mind. We cannot truly be talking about women participation in development if we are unable to empower them as a marginalized, sometimes neglected species.

In fact, one way to address the problem of feminized poverty is to pay attention to sustainable development of entrepreneurship for women. In this way we shall be working towards an environment of peace. To discriminate against women in the area of productive skill attainment is to further deepen the propensity for feminized poverty and throw women into social exclusion and economic binge.



5.2 Learning Outcome

By the end of studying this unit, you should be able to:

- identify the various categories of women that can be selected for participation in sustainable entrepreneurship
- discuss the reasons responsible for narrowing down the earnings of women in your country
- make a presentation on the potential income generation opportunities, which are open to women in your society
- explain how gender inequality is entrenched in society and how it can be tackled for sustainable peace and development.

5.3 Gender inequalities engender high economic costs. It also leads to social inequalities and environmental degradation around the world. Candice Stevens (2010) thus observed that the economic crisis of today has brought about heightened criticisms of the capitalist model, where growth is fueled by competition and quest for profit. Future development planners cannot afford the consequences of marginal representation of women in sustainable development thinking and actions if they have to chart endeavoring road map for sustainable development. It must be stressed that the economic empowerment of women is central to the achievement of political empowerment of women and institutional development of Nigeria. (Hoffman, 2011). To build the capacity of society to absorb shock while maintaining function, as a result of change is for the world policy makers and academics to bring women into sustainable development programs and strategies. Institutionally, the work model or the environment has not been adjusted to fit into the needs of women; rather it is embedded in the traditional work environment that only fit the world of men. All over the world, women bear most of the responsibilities for children and households and thus suffer from time poverty and lack of mobility. Women often times drop out of labor force to have children at the same time their male counterparts will be climbing to the top, without waiting for their female colleagues to return. Furthermore, if a woman continues with job without bearing children her male counterparts will brand her iron-lady, barren, dry wood, misfit, oddity, and eccentric of a woman and possibly prostitute. If a woman drops out of job for childbearing she tends to return at older age and peak later, that is, if she would eventually peak because most of the time their husbands and childrearing responsibilities will forbid them from coming back to work and if they do come back these extra burdens also constraint them from expending much time on the job. Invariably what this means is that women have different career trajectory than men and also need to have flexible hours and schedules to accommodate the heavy demands on their time. But this should be considered by sustainable development planners and not be reason for women marginalization in sustainable development plans and programs

Women as Endangered Species

It is difficult to talk about marginalization, discrimination, neglect, and abuse or even social seclusion without a topical focus on women. All over the world, women are considered as the weaker sex and the less privileged compared to the male counterparts. The double bind of nature or biological characteristics and nurture social reproduction of identities account in large part for that. The result is that in some parts of the world,

women are apparently seen as sub-human and less able to compete with the men in several social and economic settings.

Women have continued to be regarded as less privileged in the society. The entire women folk, particularly the girl-child and widows have less competitive social and economic opportunities. Within the family configuration, for instance, the girl-child is the normal and to wait for the male-child to be enrolled in school. Sometimes those enrolled are withdrawn as young brides for potentially milling men.

Widows on their part have a limited number of economic opportunities. The loss of a husband means the loss of economic support for a great number of women. Where tradition of denying women the right of inheritance is in vogue, widows quickly turn a beggarly life and are left at the mercy of in-laws. In some cases, they have to be bundled home to their kith and kin especially if they had no child at the time of spousal death.

The same situation applies to women in purdah. In insular societies where religion propels and influences, it is difficult for women to utilize or even maximize their potentials. In some industrial and economic systems, working class women pay higher tax than men. Also, there are deliberate policies designed to preclude women from decision-making positions in some public and private sectors. An elite discrimination, you may call it.

5.4 Inhibition of Earnings

Income generation potentials of women suffer a drawback. The reason for that is not far-fetched.

Self-reliance for women is highly compromised. Some men do not believe or support the financial independence of a woman. Others go further to frustrate them. Thus, when a woman is married, her self-

reliance rests in part upon what her spouse wants from her. It is often a compromise between marriage and work life. The consequence is that we still find in our society, women who are educated unemployables due to spousal influence.

Some women are unable to utilize their qualifications and paper credentials because they are more or less mis-educated. Though educated, such women suffer a mismatch between their potential resources and the challenges of marriage and family life. The result is they cannot be in productive employment; and therefore remain dysfunctional. They do other things outside their training and competence.

5.5 Sustainable Entrepreneurship and Livelihood

All the categories of women so far presented in this unit, require livelihood skills and sustainable entrepreneurship. This is to address the disarticulation, which their position in society brings upon their life.

One answer is through re-education and alternative livelihood. Re-education takes women beyond idealism to the reality of womanhood in a male-dominated social context. Beyond their developed and existing capacities, women need mode of earning a living acceptable to their spouse. Such a re-engineering process can reposition the women for productive living.

Women caught in the labyrinth of that social context need alternative livelihood skills. There are many of such skills-acquisitions. In our environment we can find, local ceramics and pottery, beading, hat production, and making of local cakes and confectionery. Other enterprises are, decoration and even management sales representation, investment business, wearing and crafts work. In addition, women could be empowered for poetry, novel and book writing as well as music for talented ones. At the grassroots, women could be empowered for bee keeping (for honey production) snail farming, mushroom cultivation and other forms of petty business.

Class Activity

1. Design a programme on entrepreneurship for a group of local women in your area. Explain how your programme can improve their livelihoods?



Self Assessment Exercise

1. In what ways is gender a problem to peace in your country?

Possible Answer to Self-Assessment

It is difficult to talk about marginalization, discrimination, neglect, and abuse or even social seclusion without a topical focus on women. All over the world, women are considered as the weaker sex and the less privileged compared to the male counterparts. The double bind of nature or biological characteristics and nurture social reproduction of identities account in large part for that. The result is that in some parts of the world, women are apparently seen as sub-human and less able to compete with the men in several social and economic settings.



5.6 SUMMARY

As homosapiens, human beings have billions of neuron cells in their brain. This makes it possible to think and create. There are multiple ways humans can direct their thought processes. To be enterprising, people have to be able to cope with changing environmental challenges and by being able to develop productive tasks to earn a living even in the midst of unfriendly circumstances.

To be unable to do so would mean inability to cope with economic challenges in the society. Consequently the inhibitors to women earning potentials have been identified in this unit. Attempts were also made to show what can be done to improve the earning potentials of women to enhance their livelihoods, and to redress the problems created by gender-stereotyping in the society. That strategy is presented here as a panacea for sustainable, gender friendly peace in the society.



5.7 REFERENCES/FURTHER READINGS/WEBS

Bhola, H. S. (1990). *Evaluating Literacy for Development Projects, Programs and Campaigns*. Hamburg: Unesco Institute for Education.

Griffin, C. (1983). *Curriculum Theory in Adult and Lifelong Education*. Kent: Groom Helm Ltd.

UNDP (2004). *Sharing Innovative Experiences*. New York: UNDP.

Hoffman, A. (2011). Talking past each other? Cultural framing of skeptical and convinced logics in the climate change debate. *Organization & Environment*, 24, 3-33

