

**COURSE
GUIDE**

**TPM 103
MAN, LOCATION AND RESOURCES**

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INTRODUCTION

The course **Man Location and Resources (2 Units) - TPM 103** is a first-semester core course that carries two credit units for first-year level of the Transport Management undergraduate programme in the Faculty of Management Sciences at the National Open University, Nigeria. This course material/guide will enhance students' knowledge towards understanding the relationships between man, location and resources. It examined the scope of human geography concerning man, resources and population issues. This course material is built partly on the notion that the location of resources is inevitable in man's locational discourse. Its simplicity will foster your understanding of different types of environmental resources, population dynamics and how they (man, resources and location) interplay /relate with one and another. Tutorial questions given in the content of this material will allow students to be familiar with likely examination areas. The required time of users for /on each unit is provided towards the accomplishment of aim and objectives of the course.

COURSE CONTENT: TPM 103 MAN, LOCATION AND RESOURCES

Scope and major subdivisions of human geography, relationships between physical geography and human geography. Population growth, demographic and distributional patterns of world populations: developed and developing countries are compared and contrasted. Evolution, patterns and functions of human settlements; concepts of environmental resources, the types and global distribution, population and resource distribution/utilization, Role of movement, flows of people, goods, ideas and energy.

COURSE AIM AND OBJECTIVES

The course aimed at explaining the scope of human geography concerning man. You will understand the importance of resources and settlements. It will also take you through the differences between developed and developing countries. Population issues will be examined. Man locational factors will also be discussed.

This will be achieved through the following objectives:

- (i) discuss the scope of human geography
- (ii) introducing you to the concept of Environment Resources
- (iii) examine factors affecting the distribution of resources
- (iv) discuss the characteristics of Developed Countries
- (v) discuss the characteristics of Developing Countries

- (vi) explain the term Population
- (vii) list and Discuss factors affecting population
- (viii) define the term settlement
- (ix) list and explain types/patterns of settlements
- (x) list and discuss factors affecting settlement distribution.

These are the Specific objectives of the course. Meanwhile, each unit making up the course has specific objectives through which you can examine or assess your level of understanding/progress. These objectives are made available at the beginning of each unit. You are expected to read and understand them before moving to the next unit. Similarly, after completion of each unit, you are expected to check your level of knowledge acquire by going through the objectives.

WORKING THROUGH THE COURSE

To complete this course, you are required to read the study units, referenced books and other materials on the course. Each unit contains self-assessment exercises called Student Assessment Exercises (SAE). At some points in the course, you will be required to submit assignments for assessment purposes. At the end of the course, there is a final examination. This course should take about 10weeks to complete and some components of the course are outlined under the course material subsection.

COURSE MATERIAL

The major component of the course and what you have to do and how you should allocate your time to each unit to complete the course successfully on time are listed as follows:

1. Course Guide
2. Study Unit
3. Textbook
4. Assignment File
5. Presentation Schedule

STUDY UNIT

This course is made up of 14 units as follows:

Module 1 Introduction to Human Geography

- Unit 1 Scope of Geography and Human Geography
- Unit 2 Major Sub-Divisions of Human Geography: Economic, Population, Political, Urban, Cultural, Medical, Social Geography
- Unit 3 Spatial Interactions: Location/Places and Perception of

Environment

Module 2 Population Growth, Distributional Patterns & Characteristics of Developed and Developing Countries

- Unit 1 Concept of Population; Population and Location; Population And Development
 Unit 2 Population Growth And Factors Affecting Population
 Unit 3 Characteristics Of Developed Countries
 Unit 4 Characteristics Of Developing Countries

Module 3 Introduction To Human Settlements

- Unit 1 Evolution and Types/Patterns of Human Settlements
 Unit 2 Urbanisation and Settlement Environment
 Unit 3 Functions and Challenges of Human Settlements

Module 4 Environmental Resources

- Unit 1 Environmental Resources, Types and Distribution: Land, Water, Minerals
 Unit 2 Factors Affecting Resources Utilisation
 Unit 3 Energy Production, Consumption and Development
 Unit 4 Sources of Energy and Problems/Challenges

REFERENCES AND OTHER RESOURCES

The Course contains a reading list or references for further reading or consultations. You are advised to get relevant reading materials towards enhancing your knowledge and a better understanding of the course. Meanwhile, listed textbooks/materials will further add to your understanding or deepen your knowledge of the course. Pertinently, however, you are advised to explore the internet using different search words relevant to the course. This will allow you to continuously have a piece of updated knowledge of the course.

ASSIGNMENT FILE

There are assignments on this course and you are expected to do all of them by following the prescribed schedule. Written assignments will be submitted on or before the stipulated time or deadline. Based on the content of the unit course, assignments will be given on each unit course. Similarly, marks obtained in given assignments will form part of the final assessment for this course. Further information on assignments

will be found in the Assignment File itself and later in this Course Guide in the section on Assessment.

PRESENTATION SCHEDULE

The presentation schedule included in your course materials gives you the important dates for the completion of tutor-marking assignments and attending tutorials. Remember, you are required to submit all your assignments on or before the due date. You should guide against falling behind the schedule.

ASSESSMENT

There are two types of assessment of the course. First are the tutor-marked assignments; second, there is a written examination. In attempting the assignments, you are expected to apply information, knowledge and techniques gathered during the course. The assignments must be submitted to your tutor for formal assessment under the deadlines stated in the Presentation Schedule and the Assignments File. The work you submit to your tutor for assessment will count for 30 % of your total course mark. At the end of the course, you will need to sit for a final written examination of three hours duration. This examination will also count for 70% of your total course mark.

TUTOR-MARKED ASSIGNMENTS (TMAS)

There are four tutor-marked assignments in this course. You will submit all the assignments. You are enjoined to work on all the questions thoroughly. The TMAs constitute 30% of the total score.

Assignment questions for the units in this course are contained in the Assignment File. You will be able to complete your assignments from the information and materials contained in your textbooks, reading and study units. However, you should demonstrate that you have read and researched more widely than the required minimum. You should use other references to have a broad view of the subject and also to give you a deeper understanding of the subject.

When you have completed each assignment, send it, together with a TMA form, to your tutor. Make sure that each assignment reaches your tutor on or before the deadline given in the Presentation File. If for any reason, you cannot complete your work on time, contact your tutor 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.

FINAL EXAMINATION AND GRADING

The final examination will be of three hours duration and have a value of 70% of the total course grade. The examination will consist of questions that reflect the types of self-assessment practice exercises and tutor-marked problems you have previously encountered. All areas of the course will be assessed.

Use the time between finishing the last unit and sitting for the examination to revise the entire course material. You might find it useful to review your self-assessment exercises, tutor-marked assignments and comments on them before the examination. The final examination covers information from all parts of the course.

COURSE MARKING SCHEME

The table presented below indicates the total marks (100%) allocation.

ASSESSMENT MARKS

Assignment (Best three assignments out of the four marked)	30%
Final Examination	70%
Total	100%

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 a time and place that suit you best. Think of it as reading the lecture instead of listening to a lecturer. In the same way that a lecturer might set you some reading to do, the study units tell you when to read your books or other material, and when to embark on discussion with your colleagues. Just as a lecturer might give you an in-class exercise, your study units provide exercises for you to do at appropriate points.

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 is a set of learning objectives. These objectives let you know what you should be able to do by the time you have completed the unit.

You should use these objectives to guide your study. When you have finished the unit you must go back and check whether you have achieved the objectives. If you make a habit of doing this you will

significantly improve your chances of passing the course and getting the best grade.

The main body of the unit guides you through the required reading from other sources. This will usually be either from your textbooks or from a readings section. Some units require you to undertake a practical overview of historical events. You will be directed when you need to embark on discussion and guided through the tasks you must do.

The purpose of the practical overview of some certain environmental issues is in twofold. First, it will enhance your understanding of the material in the unit. Second, it will give you practical experience and skills to man and their relationships with the environment. In any event, most of the critical thinking skills you will develop during studying are applicable in normal working practice, so you must encounter them during your studies.

Self-assessments are interspersed throughout the units, and answers are given at the ends of the units. Working through these tests will help you to achieve the objectives of the unit and prepare you for the assignments and the examination. You should do each self-assessment exercise as you come to it in the study unit. Also, ensure to master some major historical dates and events during studying the material.

The following is a practical strategy for working through the course. If you run into any trouble, consult your tutor. Remember that your tutor's job is to help you. When you need help, don't hesitate to call and ask your tutor to provide the necessary information.

READ THIS COURSE GUIDE THOROUGHLY

- **Organise a study schedule.** Refer to the 'Course overview' for more details. Note the time you are expected to spend on each unit and how the assignments relate to the units. Important information, e.g. details of your tutorials, and the date of the first day of the semester is available from the study centre. You need to gather together all this information in one place, such as your diary or a wall calendar. Whatever method you choose to use, you should decide on and write in your dates for the working breach unit.
- Once you have created your study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their coursework. If you get into difficulties with your schedule, please let your tutor 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. Information about what you need for a unit is given in the 'Overview' at the beginning of each unit. You will also need both the study unit you are working on and one of your textbooks on your desk at the same time.
- Work through the unit. The content of the unit itself has been arranged to provide a sequence for you to follow. As you work through the unit you will be instructed to read sections from your textbooks or other articles. Use the unit to guide your reading.
- Up-to-date course information will be continuously delivered to you at the study centre.
- Work before the relevant due date (about 4 weeks before due dates) get the Assignment File for the next required assignment. Keep in mind that you will learn a lot by doing the assignments carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the exam. Submit all assignments no later than the due date.
- 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 material or consult your tutor.
- When you are confident that you have achieved a unit's objectives, you can then start on the next unit. Proceed unit by unit through the course and try to pace your study so that you keep yourself on schedule.
- When you have submitted an assignment to your tutor for marking do not wait for its to return before starting on the next units. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also written on the assignment. Consult your tutor as soon as possible if you have any questions or problems.
- 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 this Course Guide).

TUTORS AND TUTORIALS

There are some hours of tutorials (2-hours sessions) 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 tutor, as soon as you are allocated a tutorial group. Your tutor will mark and comment on your assignments, keep a close watch on your progress and any difficulties, you might encounter and provide assistance to you during the course. You must mail your tutor-marked assignments to your tutor well before the due date (at least two working days are

required). They will be marked by your tutor and returned to you as soon as possible.

Do not hesitate to contact your tutor by telephone, e-mail, or discussion board if you need help. The following might be circumstances in which you would find the help necessary. Contact your tutor if.

- You do not understand any part of the study units or the assigned readings
- You have difficulty with the self-assessment 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 tutor and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating in discussions actively.

LEARNING OUTCOMES

This course (TPM 103) Man, Location and Resources will give you the opportunities to understand how man relates with location and resources. Particularly, are both affect each other. Consequently, at the end of the course you should be able to:

- Have a good basic knowledge of human geography
- Be acquainted with environmental resources and how they affect the man
- Be familiar with the evolution and patterns of settlements
- Have access to information factors affecting population and resource distribution
- Have a better understanding of the characteristics between developed and developing countries.
- Discuss the concept of human geography
- Discuss the importance of geography
- Identify the classifications of geography
- Distinguish the characteristics and key components of human geography
- Discuss the relationships between man and the environment
- Discuss the focus of human geography
- List the sub-divisions of human geography
- Describe briefly the focus of each division of human geography
- Discuss the basis for spatial interaction
- Define the term's location and place

- Discuss the attributes of locations that can influence spatial interactions
- Introduce the concept of population and related terms
- Discuss the relationship between population and development
- Describe population and Locational Attributes
- Discuss Population Growth
- Highlight Determinants of Population Growth
- Examine factors affecting population
- Mention effects of population growth
- Define the term developed
- Discuss the characteristics of developed countries
- Define the term settlement
- Mention and describe types of settlements
- Discuss the differences between rural and urban settlements
- Discuss Urbanisation and Settlements Development
- Discuss Urbanisation and Settlements Environment

SUMMARY

Humans are an integral part of the ecosystem of nature and there is close interconnection between human beings and the environment. Ever since life existed humans have been depending on their environment for food, shelter, and other necessities. Thus, Human geographers are concerned with the “who”, “what”, “where”, “why”, “when”, and “how” of humans their interrelationships and their relationship to the environment:

The course focuses on the spatial aspects of population growth and distribution, cultural differentiation, urban growth and decline, the spread of ideas and innovations, regional development, and the location of economic activity, as well as problems associated with these processes. This introductory course will introduce students to several subfields of study, including population, urban, economic, cultural, and political geography, as well as fundamental geographic concepts. Human Geography is a broad dynamic domain that reflects the developments and conditions in the contemporary world. It is a field of inquiry and an academic discipline with its traditions, objectives and approaches to the changing world. It involves an examination of the setting in which people live their lives as part of a continual process of struggle and transformation.

The central concern of the course is the analysis of the relationship between society, place and space. It focuses on social, economic, political, cultural and human-environment processes and patterns and how they change over space and time. The course aims to engender a critical geographical perspective on the past, present and future development of the social world. This critical viewpoint is of crucial

importance in the generation of a broad and informed understanding of the world.

**MAIN
COURSE**

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MODULE 1 INTRODUCTION TO HUMAN GEOGRAPHY

Unit 1	Scope of Geography and Human Geography
Unit 2	Major Sub-Divisions of Human Geography: Economic, Population, Political, Urban, Cultural, Medical, Social Geography
Unit 3	Spatial Interactions: Location/Places and Perception of Environment

UNIT 1 SCOPE OF GEOGRAPHY AND HUMAN GEOGRAPHY

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2.0	Objectives
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1.0 INTRODUCTION

Geography is generally known to be the study of man and his environment. It is a discipline that makes man understand the basic attributes of the environment, and how to relate with the environment as well as other components of the environment. In other words, it gives a detailed explanation about location and places. It is never an assuming discipline, it enquires spatial phenomena. For instance, it is interested in where, why, how and when of environmental-related issues/affairs. This unit, therefore, allows you to understand why you should know your environment and yourself better, particularly, why a geographical location differs from another.

2.0 OBJECTIVES

- explain the discipline of geography
- discuss the importance of geography
- identify the classifications of geography.

3.0 MAIN CONTENT

Understanding Geography

Geographers are concerned with locations, directions, distance, distribution, places and regions towards understanding how these phenomena relate to man, and themselves on the earth in general. Getting to know where, people, places, and activities exist where they are, allows us to understand why and how they get to be located where they are and the peculiar attributes or characteristics that establish the variations or differences. Indeed, you might indirectly be involved in the geographical study, but not known to you. Take, for instance, ask yourself about your original location, how did you get to where you came from? why and did you leave where you came from? what makes where you are presently special to you compared to another location? Again, lots of people struggle to change locations; did you ever find out why? Do you border to know the peculiarity of their new or proposed destinations? Invariably, the more you make enquiries about places, locations, regions, the more you are into the geographical study. Indeed, a study of geography focuses on lots of issues that are directly and indirectly connected with locations (where are things e.g rocks, water, etc. located on the earth? Why are things (wild animals, forest, fishes, etc) located where they are? What is responsible for the differences between your country e.g Nigeria and another country e.g Germany? What accounts for spatial differentiation of places. These chains of questions and their answers/responses make geography differs from other disciplines.

Above all, geography can be grouped into two broad categories:

- (i) Physical Geography
- (ii) Human Geography

Physical geography can be divided into many broad categories, these include the following; Biogeography Climatology & meteorology Coastal geography Environmental management Geomorphology Glaciology Hydrology & hydrography Landscape ecology Oceanography Quaternary science. Also of note is the fact that human geography can be categorized into different groups or branches: (population, economic, regional, medical, transport, political geography etc). Interestingly, these categories or branches of geography have their peculiarities, very few of these categories of geography (human geography) will be discussed in this course.

SELF-ASSESSMENT EXERCISE

What is geography?

4.0 CONCLUSION

It is beyond doubt that geography is a transparent discipline based on its approaches to understanding how man relates with the environment, and how various spatial phenomena interplays with one and another on the earth. It is a novel discipline that explores the vast number of issues that occurs on the earth. It is one among others that makes us understand how and why the past spatial features may affect the present, also, how and why the present spatial attributes may affect the past or background. Haven the knowledge of geography as transport managers give the opportunity to know that movement or travelling not only occur on earth but occurs in accordance to various and dynamic factors. Indeed, location, distance, time, place, etc are inseparable from geography as well as man's daily activities or affairs.

5.0 SUMMARY

This unit made it clear that geography is about you and the environment. It made you understand why you need to know or find out about places before any moves. It educates you on understanding the peculiarities of locations or places.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss your understanding of geography as a discipline.
2. List the branches of geography.

7.0 REFERENCES/FURTHER READING

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UNIT 2 MAJOR SUB-DIVISIONS OF HUMAN GEOGRAPHY: ECONOMIC, POPULATION, POLITICAL, URBAN, CULTURAL, MEDICAL, SOCIAL GEOGRAPHY

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- 1.0 Introduction
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- 3.0 Main Content
 - 3.1 Understanding Human Geography
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Geography is an interesting and highly respected discipline based on its focus on areas or location and human analysis. It details relationships between humans and the natural environment. The discipline also explores the spatial system that facilitates man's activities and the surroundings/environment in general. Another area of focus of the subject is its interest in studying the peculiarities of different areas (regional geography). Fellmann, Getis and Gestis, (1995) explained that "human geography deals with the world as it is and with the world as it might be made to be". It gives information or explanations on humans or people concerning the environment. It analyses the spatial dimensions of man. For instance; their location (where they are)- what are their peculiarities (characteristics), how do they connect or relate with the environment, why do they affect or impact the landscape. Indeed, human geography makes understanding man's activities concerning the physical environment possible, and easy. Every step of man, have one or more reasons that are connected with the environment. This area of geography assists us to understand our environment/ world in general. It also made various factors or circumstances that can determine how, why and when a man or human beings relate with the environment. The differences between various countries, regions and locations in particular are often made known or best describe by/through the knowledge of human geography. It is pertinent to note that man's activities are dynamic over space. Thus various areas of the globe or locations have different areas of study.

2.0 OBJECTIVES

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

explaining the meaning of geography, particularly human geography and its subdivisions educate you or enhance your knowledge using familiar illustrations in the environment.

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

- discuss the focus of human geography
- list the sub-divisions of human geography
- describe briefly the focus of each division of human geography.

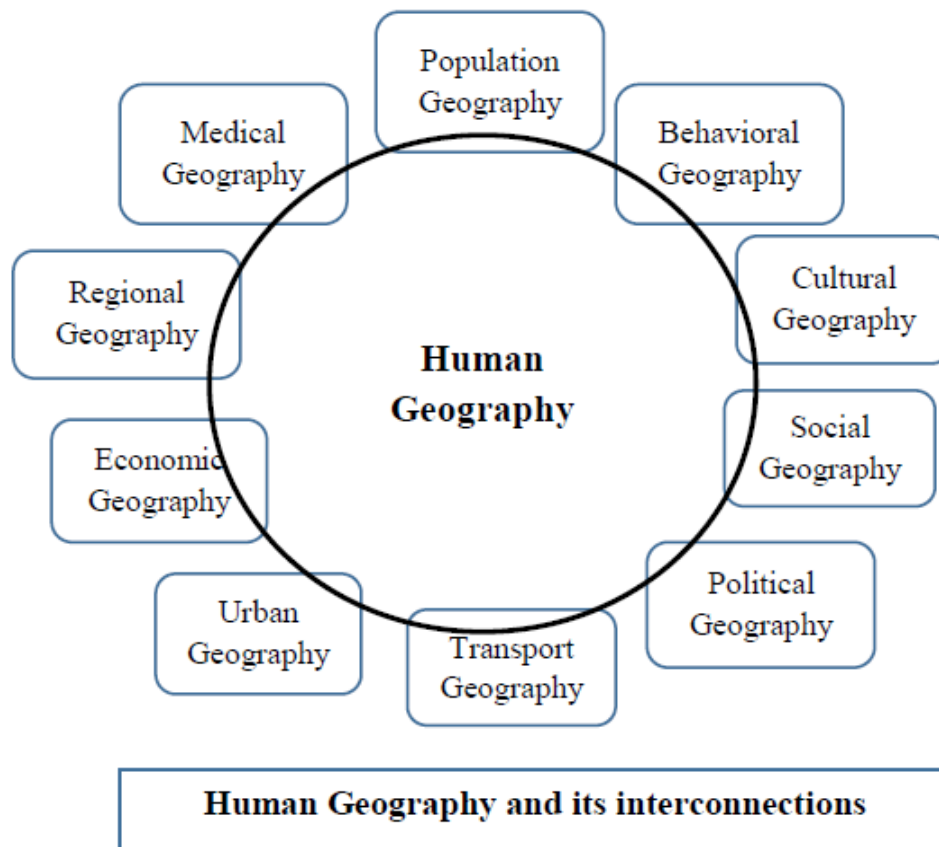
3.0 MAIN CONTENT

3.1 Human Geography

Geography provides us with the opportunity to describe our environment (both physical and human issues) that exist in different parts of the world. It is a discipline that educates us about how physical features and conditions of the environment can affect us, and how human activities shapes the environment. It is worth noting to note that the processes and patterns that shape our society globally are best understood through the study of human geography.

It is pertinent to note that geography, particularly human geography is connected with various disciplines (economics, political, sociology, psychology, history, demography, tourism, urban planning, transport, medicine etc). Therefore, human geography is extremely inevitable in the analysis or discussion of man's spatial activities/issues on the earth surface. The discipline is one of the oldest that explains how, what, when, why and where human and natural activities take place. Indeed, it explains the reasons behind the interconnections of environment features or components and man.

As reiterated earlier, human geography is a branch of geography that sheds light on how different societal patterns and processes shapes our societies in general. Based on this premise, human geography, as depicted in the diagram below captures vast areas of human activities in the society/environment.



Medical Geography: The study of medicine relates to or require some knowledge or understanding of the environment. Seasons of the year goes with different diseases. Similarly, different locations of the earth have various or peculiar diseases. Thus, medical geography adopts the ideology of geography to investigate health-related issues. Indeed, the adoption of geographical perspectives and methods in understanding health-related phenomena is the main focus of medical geography.

Cultural Geography: This area of human geography describes and analyse our different languages and cultural peculiarities. It made us understand that variations exist in our languages, and how these factors differentiate humans from various continents of the World.

Population Geography: This area of geography deal with population distribution. Population geography plays inevitable roles in infrastructural or planning in general. It is important for transport managers to consider the various dimensions of the population about infrastructure development. For instance, considering the aged, children, women mobility needs indicates that population geography is inevitable. Another interesting example is a rate of migration (movement from one location to another). In some cases, demographical status determines the rate of development or participation in transportation decisions.

Economic Geography: This is an interesting area of study that “All” human beings is directly or indirectly involved. Every human being has reasons to/for using space. In other words, every change of location by man has one reason or the other. Most important of all is an economic reason, we go to markets to get our needs, we visit industries and factories to get raw or finished products. We also do business in different areas of our environment. Thus, what informs our decisions to change location? Why and how do we know about where we do our businesses and interactions? The study of economic geography allows us to best understand the importance of locational features concerning human economic activities. For instance, the ideas of industrial and resource location: locational efficiency; a spatial arrangement of economic activities in different parts of the world etc are best integrated and understood in economic geography.

Social Geography: Take your time to find out why clubs, cinemas houses, tourist centres, etc are important to man. You also need to know the spatial connections of these places to man. Good enquiries about these issues will give you the privilege to understand why, how, when you behave or responds to social issues. This area of geography describes the relation of social phenomena within the context of space. In other words, the spatial dynamics of social phenomena are best understood through social geography.

Political Geography: Obviously, human beings are political animals. Understanding the spatial dimensions of politics is the focus of political geography. All political parties want votes from different communities or areas, this implies that lack of knowledge about an area or communities in political activities is driven into the ocean. This area of geography entails the spatial context of politics. It focuses on differentiating political and administrative regions or areas. This is important because there are always differences in areas/locations. Who are those located in a particular area? What are the political advantages of specific locations? How does area differentiation affect votes? How and why are communities structured? What are the links between government and communities/people? How are boundaries formed and managed? Why are boundaries important in politics?

Settlement Geography: The locality where you live can best be described through settlement geography. It entails the study of a given geographical area. These areas may be described in terms of size, functions, patterns etc. For instance, how will you differentiate between towns and villages; what makes urban areas urban? Why or what makes rural differ from an urban settlement? Description of some areas/settlements as clustered and nucleated is best done in settlement

geography. Interestingly, there is rural geography and urban Geography. These two areas give details about the affiliated term (rural and urban).

SELF-ASSESSMENT EXERCISE

Describe briefly the focus of each division of human geography.

4.0 CONCLUSION

Geography is an interesting discipline that allows us to understand almost all our activities as they relate to space. It is divided into two: physical and human geography. Each can further be sub-divided into different areas of study. However, human geography deals with man related issues and the environment. It focuses on how human and other related forces and processes shapes our lives. Is concern is the built environment, how our activities affect or influence space. This area of geography captures different areas of human life: population, economy, tourism, transport, culture, politics, medical etc. This area of geography assists us to understand our environment/ world in general. It also made various factors or circumstances that can determine how, why and when a man or human beings relate with the environment.

5.0 SUMMARY

In this study unit, attempts have been made to explain geography and ourselves in relation to the environment. It highlighted and discusses different sub-divisions of human geography.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the focus of human geography.
2. List the sub-divisions of human geography.
3. Describe briefly the focus of each division of human geography.

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UNIT 3 SPATIAL INTERACTIONS: LOCATION/PLACES AND PERCEPTION OF ENVIRONMENT

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content:
 - 3.1 Spatial Interactions: Location/Places and Perception of Environment
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Geography as the study of man and his environment made it clear that the environment is important to man, just as man is to the environment. The point of note is that man moves or interact with different components of the earth to sustain livelihoods. Geographical differences of locations/places, and among individuals made interactions a necessity in our environment. Take for instance, if you can get all your needs within your present location, thus there is no need for interaction. However, our needs are not confined to a location/place, therefore there is a need for spatial interactions to fulfil/satisfy our aspirations.

2.0 OBJECTIVES

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

- discuss the basis for spatial interaction
- define the term's location and place
- discuss the attributes of locations that can influence spatial interactions.

3.0 MAIN CONTENT

3.1 Spatial Interactions: Location/Place/Space and Perception of Environment

Just like every other discipline (physics, biology, chemistry etc) using different concepts to provide or describe phenomena, geography also aligned with others in terms of using concepts to describe or discuss issues. Notable among these concepts are space, regions, cities, urban,

rural, places/locations. Place/space is very important to, and not only geographers but also to disciplines that relate or have links with geography. As a transport student, “Space/Place/Locations” are issues or concepts that cannot be ignored in your daily discussion activities. Every human being occupies space, a step you take occurs in space. Thus, the peculiarities of a place/location will/determine how to make use of a space/place/location.

In geography to be precise, location is fundamental to spatial interactions/relationships. The basic attributes of a location are either a magnet that will pull or attract interested people and activities and on the other hand, it could be a repellent that contains certain features that will discourage people or some activities. The most important fact is that a location can never be useless in totality.

An interesting illustration is the sitting of industries or industrial location issues. There is a need to consider certain factors (access to raw materials, topography/land, economic advantages etc). This implies that every location or place has certain attributes that make them important, and which may facilitate the movement of people. Similarly, some places/locations may contain features that can hinder or prevent movement. This corroborates the facts mentioned earlier that peculiarities of place/location determine how human beings can interact over space. Scholars affirmed that place is mixed with human values and principles. In other words, every place has values to the users, it makes meaning to users, and plays vital roles in human life, particularly behaviour.

Scholars conceptualised place as fusions of a human and natural order. This may be described by using human activities and physical or natural features that cannot be ignored in human sustenance. To buttress this point, it was further noted that places are the significant centres of our immediate experiences of the world.

It was exemplified the fact place is an interaction of three components (physical setting, activity and meaning. Is worth mentioning that, size is important in discussing place. Indeed, a place may be small but could possess tangible resources or potential that will make it to be reckoned with. On the other hand, a place may be big but lacks needed resources. As a transport manager to be, you need to know to understand the concept of location/place. Scholars argued that the physical settings of a place/location play significant roles in facilitating the goals and aspirations of users. It was emphasised that the physical environment have very real, immediate or long term impacts on human behaviour and their mental and physical health.

Geography as a spatial discipline is interested in the spatial behaviour of different people in the environment. It should be noted that spatial issues have location, similarly, spatial interactions involve different places/locations, things or activities within the specified area of the earth surface. As a transport student and future transport manager, you should have it in mind as working ideas that:

- (i) Places have the location, direction and distance. A particular place is noted to be situated on/in a specified location. For instance, the place you is located where? In the efforts to describe the place, you will be compelled to give directions and the distance to cover. Meanwhile, this description is in connection with other places. That is, you will end up using a place to locate a place.
- (ii) Every place can be described in terms of size (large or small). Often our different villages are described using the size (small village or big village). Either big or small, every place has a scale.
- (iii) Special attributes (physical, cultural, economic etc) makes it easy to describe a place. Take for example, how will you describe places in the Northern part of Nigeria? What attributes makes a place differs from others?
- (iv) A place is not an island. There is always mutual or interdependency among places. What is available in place 'A' may be lacking in place 'B', thus interactions among places, people are bound to happen.

SELF-ASSESSMENT EXERCISE

Discuss the attributes of locations that can influence spatial interactions.

4.0 CONCLUSION

This unit examines basic concepts that relate or partly influence spatial interactions: location and place. It deals with the ideas surrounding the concept of location and place from geographical perspectives. Human needs or demand is dynamic and tends to be uneven geographically. This reveals that there are spatial variations in human needs and location or place endowment which have remarkable effect or influence on spatial interactions, particularly economic activities. This unit explained that studying spatial interactions is inevitable because it shows how people and places relate to one and another, and to the wider environment in which they find themselves. Geography as a spatial discipline is interested in the spatial behaviour of different people in the environment. This unit emphasised the relationship between location and interactions. This relationship exists or occurs in both directions in

that the importance of a location or level endowment or uniqueness of locations influences spatial interactions. The basic attributes of a location are either a magnet that will pull or attract interested people and activities and on the other hand, it could be a repellent that contains certain features that will discourage people or some activities. The most important fact is that a location can never be useless in totality.

5.0 SUMMARY

In this study unit, attempts have been made to explain spatial interactions concerning basic concepts in geography. The unit made it clear that every location has its basic characteristics or attributes that make it important, specifically to serve as pull or push factors. The unit also established that in a discussion of locations and spatial interactions, directions, sizes, time and transport/movement cannot be waived off.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the term's location and place.
2. Discuss with examples your understanding of spatial interaction.

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MODULE 2 POPULATION GROWTH, DISTRIBUTIONAL PATTERNS & CHARACTERISTICS OF DEVELOPED AND DEVELOPING COUNTRIES

Unit 1	Concept of population; population and Location; Population and Development
Unit 2	Population Growth and Factors Affecting Population
Unit 3	Characteristics of Developed Countries
Unit 4	Characteristics of Developing Countries

UNIT 1 CONCEPT OF POPULATION: POPULATION AND LOCATION; POPULATION AND DEVELOPMENT

CONTENTS

1.0	Introduction
2.0	Objectives
3.0	Main Content
	3.1 Concept of Population; Population and Location;
	3.2 Population Development
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

1.0 INTRODUCTION

It is not mistaken to say that population is the greatest resource on the earth. Take yourself as an example, your importance in the family cannot be ignored. In every society, population-related issues are taken with great importance. In other words, no nation or country toy with her population. Pertinent questions to justify this view are: can other resources be useful without population? How will nations develop in the absence of population? What makes a nation known? The fundamental answer or response to these questions is 'population'. This is simply because 'human-being and other organisms' falls into the discourse of population.

The growth or development of any location, place or nation is a factor of her population. Numerous issues make population a factor of

development. For instance, what can be done without people in a nation? Who is to propel and for who is development meant? It is clear that the population is a notable factor that determines the general development of any nation and region. Indeed, a well-managed population, in terms of growth will have resultant effects on the performance of the country. For example, there should be a relatively balance between population growth and development.

2.0 OBJECTIVES

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

- introduce the concept of population and related terms
- discuss the relationship between population and development
- describe the population and Locational Attributes.

3.0 MAIN CONTENT

3.1 Concept of Population; Population and Development

Population growth and distribution are generally accepted to be a factor in the development efforts of any country. Population growth can be defined as an increase or decrease in the population size of living species including human beings. Human populations are also subject to a natural process of birth and death. There has been a rapid increase in the world's human population over the last few decades (UNFPA, 2011). In most countries, a lot of people lives in urban areas to the detriment of the rural areas. This trend has influenced not just the physical location of the population, but also the organisation and conduct of the economic and social life of most people on the planet-both urban and rural dwellers (Pacione, 2001).

The United Nations estimates that between 1950 and 2025, the number of urban dwellers would have increased nearly sevenfold, from 738 million to 5.1 billion. Meanwhile, the world urban population is not distributed evenly among regions. Since 1970 the number of urban dwellers in less developed regions has overtaken that of the developed regions, and the gap continues to widen. Recently, about 1.7 billion urban dwellers (60 percent of the world population) live in less developed regions while 968 million live in the more developed regions. By 2025, 4billion of the 5billion urban dwellers are expected to live in the less developed regions (Pacione, 2001). Population variations is an issue that partly gives the picture or status of most countries.

3.2 Population and Development

Persistent population increase or growth poses serious mishaps that can jeopardise the general wellbeing of the country. For example, human beings have intensified efforts towards the provision of food for all categories of the population in different countries, but persistent population increase or unguided population growth can hinder the production. In other words, population increase over time and location/place is expected to measure up with resources, facilities and infrastructure available. As a transport manager, it is necessary to understand the population dynamics, particularly concerning other resources and places.

Population pressure as a result of demands for transport facilities that does not balance with the supply of required needs may lead to infrastructural decay or retards development. Sequel to the foregoing, it is necessary for you to know how effective to manage population growth for fulfilled transport planning. Reporting the importance of population geography, Zelinsky, (1966) viewed population geography as the science that deals with how the geographical character of places is formed by and in turn react upon a set of population phenomena that vary within it through both in space and time, as they follow their behavioural laws, interacting with each other and with numerous non-demo graphical phenomena'. The struggle for sustainable living compels you as a manager to describe transportation phenomena or issues about population variables.

Population and Location

Natural, social and economic factors determine the distribution of population. In Nigeria for instance, the highest population densities are found where land is suitable in terms of soil fertility, appropriate terrain, friendly climate and drainage, and natural resource endowment. Also, high population densities are found in Hausa and Yoruba areas because of their history of domineering kingdoms and aggregation of population. Lastly, areas, where lot of development investments have been made, attract a lot of people. Examples of towns in such areas are Lagos, Ibadan, Kano, Enugu etc. Nigeria's population density is the highest in Africa (Abin, 1994). Spatial distribution of the population reflects a pattern of development and resource distribution and coincides with the homelands of major ethnic groups which dominated the political scene in the past. The creation of states and local governments are attempting to redistribute the populations. However, the densification process continues without radical measures to control the pattern, which have debilitating effects on the spatial economy.

SELF-ASSESSMENT EXERCISE

Discuss the relationship between population and development.

4.0 CONCLUSION

Population geography concerning transportation focused on explaining human and spatial variations or distribution, composition, migration and growth of populations. Population dynamics are intrinsically linked to the economic and social development of any country. Population, particularly population dynamics/attributes have continuously been an inevitable area of study of different disciplines, including geography and transport economics, urban planning and demographic studies as well as regional economics. This fact is based on the importance of population in the developmental efforts of any nation.

5.0 SUMMARY

In this study unit, attempts have been made to explain the term population. It also discussed the relationship between population and development. The interplay between locational attributes and population were examined. Spatial interactions concerning basic concepts in geography. The unit made it clear that any country where population growth is increasing faster than development drives/efforts; is going to face a crisis in almost all sectors. Thus, adequate population growth and management will enhance or facilitate effective planning, development and management.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the term population.
2. Discuss the interplay between population and locational Attributes.

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UNIT 2 POPULATION GROWTH AND FACTORS AFFECTING POPULATION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Population Growth and Factors Affecting Population
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

It is interesting to note that population growth is a function of demographical factors:

marriage, births, illness, deaths, age and sex composition etc. The point of note about this issue is that a good analysis of demographical variables in terms of relation to other environmental development factors assists in decision on provision and management of transportation facilities. Population growth and dynamics center are around demographic characteristics, socio-economic conditions of location/places, transportation/accessibility, natural environment, and land use and development.

2.0 OBJECTIVES

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

- discuss Population Growth
- highlight Determinants of Population Growth
- examine factors affecting population
- mention effects of population growth.

3.0 MAIN CONTENT

3.1 Population Growth and Factors Affecting Population

It is noted out of place to say that population growth is determined mainly by birth rate, death rate, and migration patterns (immigration and emigration). For instance population in developed countries is growing at the rate of only 0.1% per year, while in developing countries the

growth rate is over 1.5% per year. Estimation reveals that by 2050, the world population will be around 9.1 billion. The distribution of the urban population is also changing within the less developed regions and the more developed regions. For instance, Asia is a major region of urban growth; whereas in 1970 Asia was home to 503 million urban dwellers (37 percent of the world total), by 1994, 1.2 billion (46 percent) of the 2.5 billion global urban dwellers were Asian. It is anticipated that 2.7 billion (more than half of the world's urban dwellers) will live in Asia by 2025. Africa indeed exhibits the fastest urban growth rate of any major world region. From 84 million urban residents in 1970, Africa by 1994 had 240 million and by 2025 the number of urban dwellers is expected to reach 804 million (Pacione, 2001).

As managers, transport managers to be specific, it is important for you to be a concern with the increasing population, factors responsible and the effects on the environment or society at large. Increasing population will resultantly lead to increased demand for food, transport, power, water, and other resources. Thus, the impact of population growth can be felt by everyone. The point here is what are the factors that propel or determine population increase? It should be noted that several factors determine population growth, but the explanation of this issue depends on the areas of interest of the concerned stakeholders.

Among the factors that determine population growth include:

- ✓ Industrialisation and urbanisation
- ✓ Natural disasters such as earthquakes, volcanoes, cyclones, landslides and floods
- ✓ Poverty
- ✓ Culture
- ✓ Political & Governance
- ✓ Socio-economic Attributes
- ✓ Social amenities/facilities
- ✓ Climatic and topographical condition
- ✓ Transportation/accessibility
- ✓ Security
- ✓ Cultural attributes

Effects of Population Growth

As the human population increase, there is also an increase in the demand for food and other energy sources. The population must be maintained at a level so that the natural resources are sufficient to meet the requirement for the survival of all living beings.

- ✓ Depletion of natural resources such as water, fossil fuels
- ✓ Deforestation and loss of ecosystems; and
- ✓ Pandemic or disease Outbreaks
- ✓ Food Insecurity
- ✓ Unhygienic living conditions / Slums Development
- ✓ Loss of biodiversity and habitat
- ✓ Insecurity or increase crime
- ✓ Increase unemployment

SELF-ASSESSMENT EXERCISE

- i. Mention Determinants of Population Growth.
- ii. List and discuss factors affecting the population.

4.0 CONCLUSION

Population geography focuses on understanding the distribution of people on the earth surface. Population size, density, migration, composition, fertility, mortality, marital status, gender, workforce and structure are various indicators that enhance how population can impact our development activities.

5.0 SUMMARY

Population geography explains the spatial variations in population attributes and how they relate to various sectors, like transportation. For instance, population information/statistics about different categories of people; aged, married, single, physically challenged, pregnant, sex/gender, fertility, mortality and migration etc will enhance or provide you the required information on these categories and their mobility needs. Indeed, overpopulation can lead to problems in the form of depleting natural resources, environmental pollution and degradation, and loss of habitat.

6.0 TUTOR-MARKED ASSIGNMENT

1. What do you understand by Population Growth?
2. Mention effects of population growth.

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UNIT 3 CHARACTERISTICS OF DEVELOPED COUNTRIES

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Characteristics of Developed Countries
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References /Further Reading

1.0 INTRODUCTION

The terms developed and developing concerning countries or nations globally, is often controversial. In other words, categorising a nation as developed or developing does not have a specific or generally accepted clue. However, different indicators or variables are often used to determine if a nation can be said to be developed or developing. Thus, this unit will allow you to have a clearer picture of where you are or find yourself as a citizen. Therefore, the ability to answer the following questions will give an insight to the fact that you understand where you find yourself better;

- (i) What is developed?
- (ii) What gives you the impression that ‘something’ – ‘You’ is developed?
- (iii) How will you know or identify a developed item?
- (iv) How will you know a developing ‘thing’? or How will you know you are developing?

To make this unit easier, you as a human-being will be good to be used as an example. Trace yourself back to when you are born, can you say you are developed or developing? What has changed in you over time? From the foregoing, it is possible to view developed as “capabilities”, “advanced”, “effective”. This concerning places (nations or countries) can be said to be or refers to countries with capabilities, countries that are advanced, countries that are effective. etc.

Similarly, developing on the other hand implies countries or nations that are managing or struggling to acquire the capabilities, to advance or reach an advanced stage, yet to be effective. Thus, developed and

developing countries have diverse differences, but few similarities. This issue will be addressed in detail in this unit.

2.0 OBJECTIVES

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

- define the term developed
- discuss the characteristics of developed countries.

3.0 MAIN CONTENT

3.1 Characteristics of Developed Countries

Efforts towards development are expected to be a major priority or concern of every nation. Though, the experience of the 1950s and 1960s, when many Third World nations recognised that their economic growth targets were not realised, rather the levels of living of the masses of people remained, for the most part, unchanged, signalled that something was very wrong with the narrow definition of development. During the 1970s, economic development came to be redefined in terms of the reduction or elimination of poverty, inequality, and unemployment within the context of a growing economy. It is also worth mentioning that, development has been treated by economists as if it was nothing more than an exercise in applied economics, unrelated to political ideas, forms of government, and the role of people in society (Edger, 1987 cited in Todaro, 2000). It is however imperative to view development from more dynamic perspectives. This can be accomplished if the following about development is addressed: poverty; security, infrastructure, medical/health, recreation/leisure, unemployment; persistency in regional and human inequality gap etc. Development cannot be said to be achieved in a country or nation where one or two of these central questions or problems have been growing rapidly.

Development, in essence, must represent the whole gamut of change by which an entire social system, turned to the basic needs and desires of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory toward a situation or condition of life regarded as materially and spiritually better. Paul Streeten, an eminent economist and scholar when discussing global development, and thinking about development reiterated that:

“Development must be redefined as an attack on the chief evils of the world today malnutrition, disease, illiteracy, slums, unemployment and inequality. Measured in terms of aggregate growth rates, development has been a great success. But measured in terms of jobs, justice and the

elimination of poverty, it has been a failure or only partial success". (Paul Streeten, 1995).

Based on the above clarification of the term "development"; it is easier to relate the above with countries or nations. Thus, developed countries can be viewed as advanced nations or countries. Different interesting adjectives are often used to describe developed countries, among others include Sovereign state; developed economy; technologically advanced; capable, stabilised nations, sustained economy states/nations; etc. The point of note is that numerous indicators or factors can be used to justify if a country or nation is developed or not. A developed nation or economy is one with sustained economic growth and development, improved security, high per capita income and advanced or improved technological infrastructure/facilities.

As mentioned above, The United Nations, also affirmed that there is no objective way of defining developed and developing countries. However, an array of indicators can be used to describe or identify the developed nations.

- ✓ Political stability
- ✓ Gross domestic product (GDP)
- ✓ Employment/ occupation status
- ✓ Poverty level
- ✓ Infrastructural Technology
- ✓ Services/Facilities
- ✓ Population growth and Development
- ✓ Level of security
- ✓ Sustainable Environment
- ✓ Improved Economy

Partly based on the above indicators, it could be said that developed countries or nations are noted to have the high quality of life and secure economy, efficient economy, improved quality of life/high standard of living, a satisfaction of life, high employment opportunities, good health services, quality education, improved security, high employment opportunities, relatively low poverty level, highly industrialized, high dependence on manufacturing and service opportunities, high technological infrastructural development, etc. Developed Countries or economies include, but are not limited to the following; Japan, Norway, Netherlands, Canada, United Kingdom, United State of America, Belgium, France etc.

According to The United Nations Development Report 2019, Statistical Update ranks each country in the world based on its Human

Development Index ranking. The following is the top 10 countries: Norway; Switzerland, Ireland, Germany, Hong Kong, China, Australia, Iceland, Sweden, Singapore, The Netherlands.

SELF-ASSESSMENT EXERCISE

- i. Discuss with relevant examples the characteristics of developed countries.
- ii. List 10 Top Developed Countries.

4.0 CONCLUSION

The terms developed and developing concerning countries or nations globally, is often controversial. In other words, categorizing a nation as developed or developing does not have a specific or generally accepted clue. Developed countries can be viewed as advanced nations or countries. Different interesting adjectives are often used to describe developed countries, among others include Sovereign state; developed economy; technologically advanced; capable, stabilised nations, sustained economy states/nations; etc. Developed Countries or economies include, but are not limited to the following; Japan, Norway, Netherlands, Canada, United Kingdom, United State of America, Belgium, France etc.

5.0 SUMMARY

In this study unit, attempts have been made to explain the term development. It also relates development to/with countries towards pinpointing some characteristics of developed countries. It further identified some indicators of development, the top 10 developed countries based on available sources were mentioned.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the term developed.
2. List the indicators that can be used to a determined the level of development of countries.

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UNIT 4 CHARACTERISTICS OF DEVELOPING COUNTRIES

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Characteristics of Developing Countries
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Based on your understanding of the term developed, and in relation with countries or nations from the previous unit; it is not mistaken to say the terms ‘developed and developing’ are words and opposite. This implies that ‘developing’ can be taken to entail a gradually progressing situation, but not balanced progress. It could be described as growing, but not yet developed or mature. For instance, a newly born baby will continue to grow (depend on others for assistance), get developed/matured (self-sustained, less dependent, improved, capable etc.). This is the situation with countries or nations that are growing, but not developed. It goes beyond the sizes of a nation, but the capabilities or efficiency level of the nation. This unit will detail the characteristics of developing countries/nations, with different examples.

2.0 OBJECTIVES

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

- describe the term developing
- discuss the characteristics of developing countries
- list examples of developing countries.

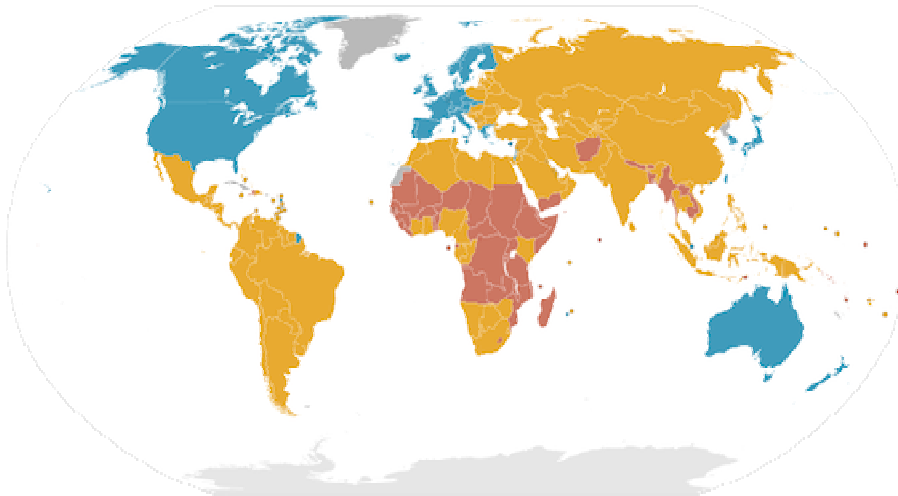
3.0 MAIN CONTENT

3.1 Characteristics of Developing Countries

Sequel to the introductory section, what will you say about a baby when you observe certain changes in his/her appearance? I guessed you will say he/she is developing, but not yet developed/matured. This

illustration gives an insight into the fact that a developed nation or country has or possessed high-quality services, compared with developing ones. This implies that developing countries are those that have not achieved a significant degree of sustainability or self-sustenance.

Developing countries are often called using different names: Least Developed, Third World, Emerging Nations, Low and middle-income country (LMIC), Less developed country, less economically developed country (LEDC), Medium-industrialised country or underdeveloped countries. It is pertinent to note that since the late 1990s, developing countries are associated with higher growth rates compared with developed countries. It is also worrisome to note that developing countries have relatively weak institutional frameworks/compositions/structures that can facilitate stable investment missions. They can be grouped based on geographical location or attributes/features, e.g: Small Island Developing nations and Landlocked Developing Countries. The figure below shows a global view of the location of developed and developing countries.



Source: International Monetary Fund (IMF)

Map by Economic Levels: Blue=Developed, Orange=Developing, Brick=Undeveloped

Some Characteristics of Developing Countries

You need to know that developing countries have some peculiar characteristics in common. These countries have relatively inadequate economic status (low gross domestic product (GDP) per capita and rely heavily on agriculture. Indeed, certain indicators or yardsticks can be

used to determine or describe the situations of countries. These basic features or characteristics include, but are not limited to the following:

- ✓ Low standard of living
- ✓ High rate of unemployment
- ✓ Low or poor access to safe drinking water
- ✓ Poor sanitation and hygiene
- ✓ Inefficient energy
- ✓ High rate of poverty
- ✓ Persistent pollution (e.g. air pollution, indoor air pollution, water pollution)
- ✓ Increased road accident
- ✓ Poor quality education
- ✓ High dependence on agriculture
- ✓ High rate of infectious diseases
- ✓ Poor or inadequate infrastructure and facilities
- ✓ Unstable political institution/governance
- ✓ High rate of corruption
- ✓ Unsustainable environmental management

Examples of developing or least developed countries include Nigeria, Ghana, India, Pakistan, Bangladesh, Angola etc.

SELF-ASSESSMENT EXERCISE

Discuss the characteristics of developing countries.

4.0 CONCLUSION

The growth of the world population since the turn of the 19th century and particularly after World War II has been unparalleled in the history of the world. Reports by WHO-UN-Habitat (2010) and UNDESA (2014) maintained that the overall shifting in the agriculture-based economy to mass industry, technology and service oriented economy is caused by urbanization. The rapid increase in the population of urban residents causes the reduction in transaction costs, as well as facilitate a viable economy on the spending made on public infrastructure and promotes the generation and diffusion of knowledge development, which have fuelled economic growth. Development must be conceived as a multidimensional process involving major changes in social structures; popular attitudes; national institutions; acceleration of economic growth; reduction of inequality, and eradication of poverty. Development, in essence, must represent the whole gamut of change by which an entire social system, turned to the basic needs and desires of individuals and social groups within that system, moves away from a

condition of life widely perceived as unsatisfactory toward a situation or condition of life regarded as materially and spiritually better.

5.0 SUMMARY

In this study unit, attempts have been made to explain the term developing. It also relates development to/with countries towards pinpointing some characteristics of developing countries. It noted that a larger percentage of the world's population lives in developing countries. It listed or mentioned examples of developing countries.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe the term developing.
2. List examples of developing countries.

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MODULE 3 INTRODUCTION TO HUMAN SETTLEMENTS

Unit 1	Evolution and Types/Patterns of Human Settlements
Unit 2	Urbanisation and Settlement Environment
Unit 3	Functions and Challenges of Human Settlements

UNIT 1 EVOLUTION AND TYPES/PATTERNS OF HUMAN SETTLEMENTS

CONTENTS

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Evolution and Types/Patterns of Human Settlement
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References /Further Reading

1.0 INTRODUCTION

The Global Report on Human Settlements (UNCHS, 1986) ascertained that settlement is an assemblage of persons settled in a locality. Interestingly, according to geographers, the term covers all groups of human habitations (Stamp, 1966) ranging from single dwellings (Stamp and Clarck, 1979) to the largest city (Mayhew and Penny, 1992). It should be noted that human settlements are spatially separated from one and another, and thus interactions or linkages between them are important in the planning and management decision-making process. Settlement is a permanent or temporary place where people lives to secure shelter and earn a living. Our different villages are typical settlements; while those in cities or urban areas can also be said to be living in a settlement. The point of note is that settlements have geographical location and performs certain functions depending on the potential of the place.

2.0 OBJECTIVES

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

- define the term settlement
- mention and describe types of settlements

- discuss the differences between rural and urban settlements
- describe Urbanisation and Settlements Development
- discuss Urbanisation and Settlements Environment.

3.0 MAIN CONTENT

3.1 Evolution and Types/Patterns of Human Settlement

Settlement can be viewed as a collection of people living in a particular geographical location or area. Settlement refers to places where people live. They are places that harbour people. They serve as protection or shelter for people. It was posited to be an organised grouping of human habitation. It could be may be temporary or permanent. For instance, refugee camps are a typical temporary settlement, which in most cases transformed into permanent places. Most of you live in one city or the other, similarly; most of us, if not all of us hails or come from one village or another.

The point is that where we come from (village) and where we live presently (cities/towns) are known to be settlements. The settlement pattern is the distribution of population clusters of varying sizes (Johnston, 1981), or the nature of the distribution of human settlements (Mayhew and Penny, 1992). A settlement can be (i) Rural and (ii) Urban. Each settlement has distinctive characteristics that can be used to differentiate them. For instance, size, occupation, structure, administrative issues, etc can be used to describe different settlements. Settlement patterns are influenced or determined by socio-economic, physical, political and network factors. It helps to analyses the relationship between different components or elements of the patterns which may result in a process of intervention through planning. Settlement Pattern analysis can assist planners and policymakers to understand the interrelationships between the pattern of settlement and level of development within the region. It can help to determine the degree of access that people in different parts of the region have to goods and services and to judge whether the access is adequate. More importantly, the analysis can be useful in making decisions about the location of new investments and the potential for clustering services and facilities in new ways towards increasing the capacity of human settlements to stimulate development (Rondinelli, 1985).

The evolution: settlements, urbanisation and development

In different parts of the World, the earliest towns and cities or settlements generally developed independently in various regions. The important point about settlement evolution is the agricultural revolution that involves hunting and gathering of materials for agricultural food

production. It should be mentioned that the earliest evidence for urbanisation can be traced to Mesopotamia and Egypt (both parts of the Fertile Crescent of Southwest Asia), the Indus Valley, Northern China, and Mesoamerica. These notable areas or settlements host the world-empires, and gradually led to the proliferation of urbanisation to the rest of the world. The first regions of independent urbanism were in Mesopotamia and Egypt.

It is imperative to note that cities are the engines of development. However, failure to manage the impacts of rapid and unguided urbanisation is threatening human health, environmental quality and urban productivity. The most notable environmental and developmental problems facing the Third World countries encompass what is referred to as the “brown agenda”-lack of safe water, inadequate waste management and pollution control, accidents linked to congestion and crowding, occupation and degradation of sensitive lands. The challenge of rapid urbanisation will be to sustain economic growth while solving the associated environmental and social equity problems. Tackling the “brown” environmental problems, therefore, presents a unique opportunity to improve health and living conditions as well as increase macroeconomic performance in the rapidly growing cities of the Third World. Sommers, (2010) affirmed that African cities have perplexed and dismayed many visitors and scholars. Similar to his view is the assertion of Simone, (2004) that African cities “*don’t work*” and that for many urban residents “*life is reduced to a state of emergency*”.

Ritner, (1960) posit that African cities “...work, but they work for decay instead of growth.” Hope, (1998) also contends that African cities make no sense in economic terms, as they are more urbanized than their level of economic development would justify. Kaplan, (1996) also describes West African cities as“*high-density concentrations of human beings who have been divested of certain stabilising cultural models, with no strong governmental institutions or communities to compensate for the loss.*”

Urbanisation is often linked to economic growth and in turn, contributes to increased environmental degradation. Again, however, there is not necessarily a causal link. Some environmental degradation linked to water pollution and poor sewage treatment tends to increase with urbanisation because the increased concentration of people strains the natural environment’s capacity to assimilate the human population’s waste products. Urbanisation is an irreversible process of social, economic, cultural and political change affecting all nations and indeed the entire world. It is often characterised by the creation of large urban agglomerations either by migration from rural to urban areas, the growth

of the urban population itself, or the re-designation or reclassification of rural to urban.

Types of Settlements

Settlements can broadly be classified into two:

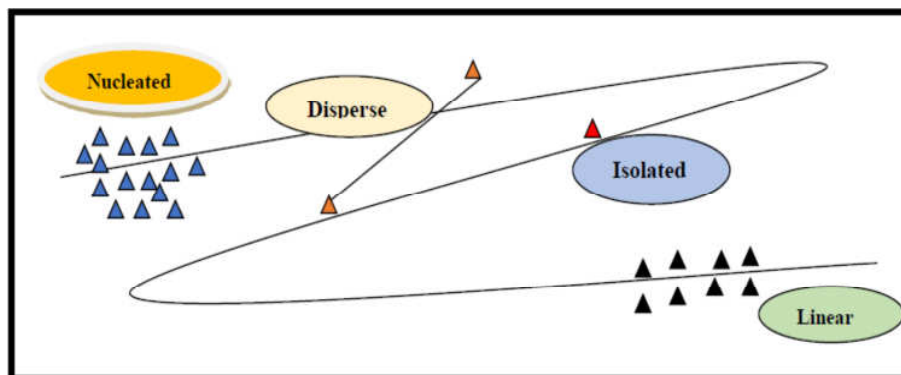
- (i) Rural Settlements
- (ii) Urban Settlements

Each of these settlements exhibits different patterns that can be used to describe them. For instance, most rural areas are noted for various settlement patterns using the shape, internal structure, and streets layout, like:

- (i) **Clustered:** This is a typical rural settlement where different families live close to each other. Houses or buildings are surrounded by bushes, grasses or fields. The setting of this type of village is a reflection of the layout of historical situations, nature of the land, economic issues and local/cultural attributes.
- (ii) **Dispersed:** This pattern is often used to describe rural-based settlements. It involves isolation or scattered buildings or structures. There is a wide gap between buildings or structures. It should be mentioned that residents of these settlement maintain their tradition/culture.

In most of our villages, lots of space separate buildings or structures, in some houses are close to each other, and in some areas buildings/houses are built along with the road network or existing streets. Each of these, depict different types of settlement as revealed in the diagram below. Invariably, settlements can be 'dispersed, nucleated, clustered, and linear.

Figure 2 below shows the pictorial views of these settlement patterns.



SELF-ASSESSMENT EXERCISE

1. List the functions settlements.
2. Discuss the relationships between urbanisation and settlements development.

4.0 CONCLUSION

Understanding the size, pattern and spatial distribution of human settlements is fundamental for distributing resources, settlement management and socio-economic development. Different indicators can be used to categorize settlements, among others include; population size, the status of infrastructure, political, administrative, physical factors, etc. Settlements can be grouped into two: rural and urban settlements. Indeed, settlement can be nucleated, dispersed, linear, clustered. The function of settlements generally is a provision of shelter (protection). However, the potential of some settlements makes them perform other functions apart from protection (tourism, industrial, mining, port, administrative, etc.).

5.0 SUMMARY

Settlement refers to places where people live. They are places that harbour people. They serve as protection or shelter for people. Each of these settlements exhibits different patterns that can be used to describe them. For instance, most rural areas are noted for various settlement patterns using the shape, internal structure, and streets layout.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define the term settlement.
2. Mention and describe types of settlements.

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UNIT 2 URBANISATION AND SETTLEMENT ENVIRONMENT

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Urbanisation and Settlement Development/ Environment
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References /Further Reading

1.0 INTRODUCTION

The strive for development is a major priority of every nation. The correlation of urbanisation and national development is attracting growing interest, as well as heated debates simply because of the lack of consensus on the effect of the relationship and that urbanisation for most countries of the world is a contemporary and ongoing process. In most of the low-and middle-income nations, urbanisation in the last few decades has been driven by investment patterns that have increased the proportion of production in industry and services (mostly located in urban areas) and then underpinned the increase in the proportion of the economically active population working in industry and services. It is imperative to note that cities are the engines of development. However, failure to manage the impacts of rapid and unguided urbanisation is threatening human health, environmental quality and urban productivity. The most notable environmental and developmental problems facing the Third World countries encompass what is referred to as the “brown agenda”-lack of safe water, inadequate waste management and pollution control, accidents linked to congestion and crowding, occupation and degradation of sensitive lands. The challenge of rapid urbanisation will be to sustain economic growth while solving the associated environmental and social equity problems. Tackling the “brown” environmental problems, therefore, presents a unique opportunity to improve health and living conditions as well as increase macroeconomic performance in the rapidly growing cities of the Third World.

2.0 OBJECTIVES

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

- describe urban settlement
- explain the term urbanisation
- discuss the relationship between urbanisation and settlement development/environment.

3.0 MAIN CONTENT

3.1 Urbanisation and Settlement Development/ Environment Urban Settlements

Defining urban settlements differs based on different factors or indicators that are used. For instance, population size, facilities/infrastructure available, functions (administrative) of the area, political attributes. It could also be viewed as a spatial or physical location where different and over 20,000 people reside to earn their living. In other words, it contains a dense population with varieties of social amenities and services. It could also be called a town, city, metropolis, conurbation, and megalopolis. It is worth mentioning that highly populated places or areas that host a certain percentage of people engaging in factory/ engineering works, possesses the diverse cultural background and perform administrative functions. Indeed, the population is the notable attribute used to determine the type of settlements (urban or rural). Further clarification shows that a densely populated geographical location hosting different/ diverse physical fabrics/structures serves as administrative local, and rendering cultural, religious responsibilities. The point of note is that urban settlement could be defined or described based on population size only. For example, in more civilized nations, a locale cannot be called urban unless the population is at least, 20,000 people. More importantly, the larger percentage of the residents should engage in services and administrative jobs, and not agricultural.

Urbanisation and Settlement Development/ Environment

The strive for development is a major priority of every nation. Wirth (1938) pioneered the concept of urbanisation as a behavioural process and argued that urbanisation is concerned with changes in experience and associated patterns of behaviour that individuals go through overtime. From the 1960s, global ecological problems started to be revealed and discussed, pointing to the fact that primarily the sheer numbers of people potentially have negative impact on the earth (Newman, 2006). Cities were seen as unnatural and unsuitable for

humans, and a range of authors have supported this anti-urban, anti-density model (Suzuki and Dressel 2004). Childe (1968) also opined that urbanisation is a structural process whereby structural changes take place in the activities of the whole population as well as the economy in which they engaged; the migration of people from rural or agricultural regions into urban or non-agricultural locations is a reflection of increasing economic specialisation and advancement in technology. The third concept of urbanisation as explained by Lampard, (1955) sees urbanisation as an important demographic process where the population concentration becomes a way of order to attain a certain level of subsistence in a given environment. These views gave rise to different explanations of urbanisation, and what cities and central places are. However, they portray urbanisation as a complex process that manifests in various dimensions.

The point that can be deduced from the foregoing views is that the advantage of the concentration of people and economic activities in the urban areas concerning urbanisation is based on the notion that new activities spring up in urban areas (Oyesiku, 1998). Industrial activities and services are localised due to changes in production modalities. This economic rationale concerning economies of scale and the need to earn a living forces activities to be concentrated in cities (Oyesiku, 1991; 1998 and Mabogunje, 2002); an unguided population increase that has resultant effects on every sector of the country. Urbanisation can be beneficial to all sectors, like health, transport, environment, power supply, housing, etc. if properly managed. This stem from the fact that, if urban areas can provide healthy living environments; indeed, they can improve health via their various materials, service provision, cultural and aesthetic attributes. Inequalities in health in urban settings reflect great extent inequality in economic, social and living conditions, which have been a hallmark of most societies since urbanisation began (Kjellstrom and Mercado, 2008). Thus, urbanisation is a major public health challenge for the twenty-first century; populations are increasing rapidly, basic infrastructure is insufficient and social and economic inequalities in urban areas result in significant health inequalities (Vlahov, Freudenberg, Proietti, Ompad and Galea, 2007).

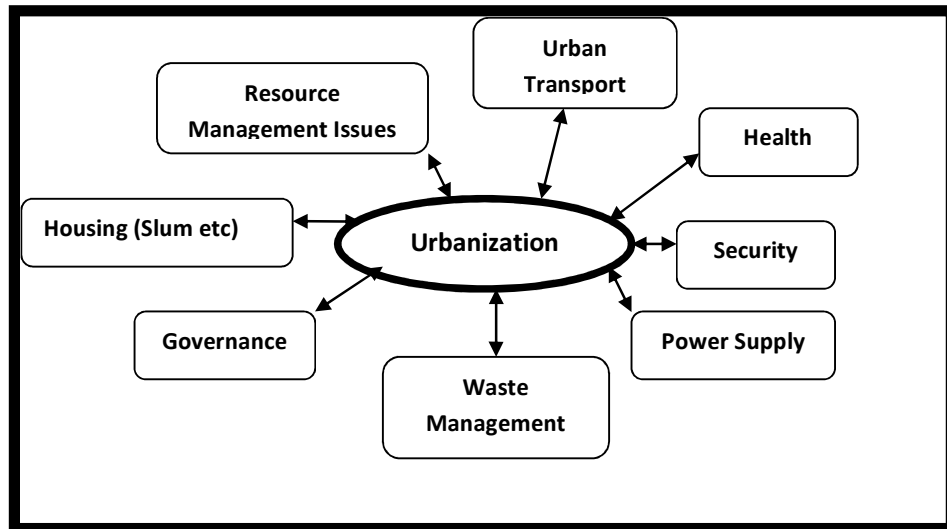


Figure 1: Manifestations of unguided Urbanisation on Settlements

Source: Based on author's literature review

SELF-ASSESSMENT EXERCISE

Discuss the relationship between urbanisation and settlement development/environment.

4.0 CONCLUSION

Urbanisation is often linked to economic growth and in turn, contributes to increased environmental degradation. Again, however, there is not necessarily a causal link. Some environmental degradation linked to water pollution and poor sewage treatment tends to increase with urbanisation because the increased concentration of people strains the natural environment's capacity to assimilate the human population's waste products. Other environmental degradation, such as increased emissions of particulate matter can more appropriately be attributed to economic growth, or at least to the growth of specific economic activities and/or consumption, rather than to urbanisation. That the overall environmental problems are usually worse in cities is partly because urban populations are more concentrated and partly because incomes are frequently higher.

5.0 SUMMARY

Urban settlements are increasingly attracting population or people from rural areas, and also from other urban location. Thus, urban development is rapidly expanding in most nations of the world; these areas are however notable drivers of environmental challenges. Globally, particularly in most developing countries urbanisation is often attributed

to negativity in cities (pollution, crime, unemployment, poverty etc). This unit made it clear that built-up areas (locations that host the vast number of administrative offices, companies, organisations, factories etc.) are often called urban settlements. It also made it clear that this said area (urban) can be described using different criteria: population size, occupation, political, responsibilities/functions etc. Above all, urban settlements are densely populated, contains clustered shelters, and people engages more in administrative or services occupations; not agriculture.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe urban settlement
2. Explain the term urbanisation

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UNIT 3 INTRODUCTION TO HUMAN SETTLEMENTS FUNCTIONS OF SETTLEMENTS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Functions of Settlements
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

It is quite interesting to note that every geographical location that plays host to people have one or more functions apart from creating shelter. In other words, peculiar issues of interest (that can foster development) are often attributed to different settlements. This is the premise on the notion that a particular settlement cannot have all required facilities, services, resources for human use. Indeed, not all components of services, resources, facilities etc are available in each settlement. Generally, it is noted that rural settlements are blessed with the vast amount of natural and cultural landscapes. Thus, the peculiarities of settlements determine their functions/roles in society. Villages with large forests or farmland, parks/tourist centres could be noted to be performing agricultural processing roles (farming), tourism, holy pilgrim (Mecca, Jerusalem).

2.0 OBJECTIVES

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

- discuss the term settlement
- identify key (factors) services or resources facilities that determine the functions or roles of settlements
- list the challenges of human settlements.

3.0 MAIN CONTENT

Functions of Settlements

Sequel to the introduction and unit 6 lecture, it is clear that rural and urban settlements have different characteristics or features. However, as mentioned earlier, settlements perform different functions based on their

potentials (Physical, Economics, Political, Administrative, Culture, etc: this among others include;

- (i) Provides shelters/security/protection for people.
- (ii) Facilitate trading or economic activities (Market Settlements- Aba in Nigeria).
- (iii) Promote industrial productions due to existing potentials (Agbara, Sheffield) Facilitate international trades -Port Settlements (Rotterdam in the Netherlands).
- (iv) Tourist attraction settlements (Abeokuta- Olumo Rock, Erin-Ijesha Water Fall).
- (v) Religious settlements (Holy lands- Jerusalem, Mecca).
- (vi) Enhances cultural or traditional activities (Oyo, Ile-Ife etc.
- (vii) Historical development (Egypt etc.,).

Challenges of Human Settlements

From a historical perspective, the evolution of human settlements involves hunting for animals, picking nuts and fruits and clearing of forest for cultivation/farming, employment opportunities and eventually settling down of people in different places. Regardless of the historical background of human settlement, it is obvious that human settlements are faced with different challenges that include;

- ✓ Traffic congestion
- ✓ Housing deficit (Slums; sub-standard housing etc.,)
- ✓ High unemployment rate
- ✓ Environmental Pollution
- ✓ High rate of insecurity.

4.0 CONCLUSION

Settlements study is a sub-set of human geography. This is remise on the relationships of people (inhabitants) with the environment. Interestingly, people generally live in one geographical location or the other that can be referred to as settlement. These habited or habitable places or locations could be a permanent or temporary places. Your typical village for instance is a settlement. This invariably could be rural or urban settlements. The notable point is that each settlement (rural or urban) have peculiar attributes or characteristics that can be used to describe the settlement. Regardless of the type, it is obvious that settlements provide shelter or serve as protection for people or inhabitants. Interestingly, this unit emphasized that the functions or roles of settlements depend on the potentials of the concerned location. Indeed, settlements can serve as security, tourist area, promote religious rites, enhance cultural/traditional activities, fosters international trade etc. Scholars pointed to the fact that

“human settlement systems are usually understood to include the systemic (regularized) ways in which settlements (hamlets, villages, towns, cities) are linked with one another by trade and other kinds of human interaction”.

5.0 SUMMARY

A geographical location that provides shelters for people also performs other functions that facilitate enhanced living standards of people in general. This unit made it clear that settlements perform the vast number of roles that include: international trades, promoting cultural activities, religious activities, industrial productions etc.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the term settlement.
2. Mention and discuss the roles of settlements.
3. List and discuss briefly the challenges of human settlements.

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MODULE 4 ENVIRONMENTAL RESOURCES

Unit 1	Environmental Resources, types and Distribution: Land, Water, Minerals
Unit 2	Factors Affecting Resources Utilisation
Unit 3	Energy Production, Consumption and Development
Unit 4	Sources of Energy and Problems/Challenges

UNIT 1 SOURCES OF ENERGY AND PROBLEMS/CHALLENGES

CONTENTS

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Sources of Energy and Problems/Challenges
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

1.0 INTRODUCTION

Energy consumption in Africa is largely dominated by combustible renewable resources (biomass, animal wastes, municipal and industrial wastes). Energy from biomass accounts for more than 30% of the energy consumed in Africa and more than 80% in many SSA countries. Biomass constitutes the main energy resource for the large majority of African households for cooking, drying and space heating (United Nations Economic Commission for Africa, 2005). Indeed, Global energy consumption has increased steadily for much of the twentieth century, particularly since 1950. Today, the world consumes approximately 320 billion kilowatt-hours a day, the equivalent of 22 bulks non-stop for every person on the planet (Asthana, et al; 2003). One of the most notable developments in recent years has been the explosion of growth in energy demand. Much of this increase in demand came from China and India. In the last few years, China has catapulted itself into second place behind the United States in global ranking with Russia, Japan, India, Germany, Canada, France, the United Kingdom, and Brazil distantly behind (Asthana, 2003). Although China is still far behind the United States, its total consumption is increasing at breakneck speed. Concerning oil, for example, although China's share of global

consumption was only 8 percent in 2004 it accounted for 35 percent of the world's increase in annual demand compared with only 25 percent for the United State. Meanwhile, there is high concern about the general implications of the exponential increase in energy consumption and the use of alternative sources of energy. Though, alternative sources of energy are rapidly becoming acceptable by most households. From the foregoing, it is obvious that energy consumption will continue to increase if the rate of population and industrial development is on the increase. To avert the implications of misuse of energy and facilitate sustainability for now and future use, this unit will allow you to know the available sources of energy and the challenges facing energy production and consumption.

2.0 OBJECTIVES

This unit aim at educating you on the sources and challenges of energy consumption. It attempts to use familiar illustrations in the environment.

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

- list and Discuss the sources of energy
- mention and discuss the challenges of energy production and consumption.

3.0 MAIN CONTENT

3.1 Sources of Energy and Challenges Sources of Energy

It was reported that energy is one important element that guarantees the sustenance of the World economies. To affirm this notion Alam, (2006) posit that, “energy is the indispensable force driving all economic activities.” This implies that energy availability/accessibility and consumption is a determinant of vibrant economic activities. It should however be mentioned that there is variation in types of energy available for people. For instance, studies noted that energy resources (oil, gas and coal etc) in Africa are not evenly distributed in the continent. In Africa, energy is produced mainly from biomass (47%), oil (24.8%), coal (16.5%), gas (10.4%), and other renewable sources, such as large and small hydro dams, solar, and geothermal sources (1.3%). Interestingly, conventional sources of energy for human society are those which have been in use for a long time and have become a convention. Since times immemorial man has been using diverse sources of energy. However, most of the energy that mankind has been using is derived directly or directly from the sun.

Important sources of energy for human society can be summarised as follows:

- (i) Biomass or Dried Organic Matter
- (ii) Hydropower
- (iii) Fossil Fuels Coal Oil and Natural Gas
- (iv) Wind power
- (v) Natural Gas
- (vi) Geothermal power
- (vii) Nuclear Energy
- (viii) Solar power

Challenges of Energy Consumption

Based on the notion that energy resources are not evenly distributed there are diverse factors affecting sustainable use of energy, these include but are not limited to the following:

- (i) Inadequate Technology Diffusion
- (ii) Unstable Government Policies
- (iii) Illiteracy
- (iv) Imperfect or Unstable Energy Market
- (v) Poor Funding
- (vi) High Rate of Corruption

SELF-ASSESSMENT EXERCISE

Mention and discuss the challenges of energy production and consumption.

4.0 CONCLUSION

The availability of energy resources gives affected countries/nations opportunities for economic development. Energy resources are unavoidable in any nations struggle for socio-economic development. However, based on the importance of energy resources to the nation, the various government needs to foster energy production and management. Important sources of energy for human society include Biomass or Dried Organic Matter; Hydropower; Fossil Fuels Coal Oil and Natural Gas; Wind power; Natural Gas; Geothermal power; Nuclear Energy; Solar power etc. Despite the importance of energy resources, different factors are affecting the effective use of energy resources, these include, but are not limited to: Inadequate technology diffusion; unstable government policies; illiteracy; imperfect or unstable energy market; poor funding; high rate of corruption etc.

5.0 SUMMARY

This unit introduced you to energy resources and factors militating effective use of energy resources. This unit made it clear that energy resources are not evenly distributed across the globe. With the growing population and increasing energy demands, various sources of energy are noted. However, various challenges are affecting the sustainable use of energy resources. The unit explains why energy resources are important; the linkages between energy resources and economic development was highlighted in this unit. The unit provides an overview of key issues relating to/with types/sources of energy resources and the environment.

6.0 TUTOR-MARKED ASSIGNMENT

List and Discuss the sources of energy.

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UNIT 2 ENVIRONMENTAL RESOURCES, TYPES AND DISTRIBUTION: LAND, WATER, MINERALS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Environmental Resources, Types and Distribution: Land, Water, Minerals
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

You need to understand that the environment is germane to man. In other words, all activities of man take place in the environment, thus man and environment are inevitable. The environment needs man, and so man needs the environment. The environment is viewed by the scholar as “complex of physical, chemical, biotic and abiotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community that surrounds man. The term environment also entails the sum total of all surroundings of living and non-living organisms that support or provide opportunities for growth and development. It should be mentioned that there are diverse views of the term environment, the pertinent idea is that it refers to the total of conditions within which organisms live. It could also be conceived as everything that surrounds you as a man. Interestingly, Asthana and Asthana, (2003) explained that everything which surrounds us may collectively be termed as the environment.

Sequel to these views, biotic and abiotic elements of the environment can generally be referred to as resources. The air we breathe, the water we drink, trees/timber we use for building/constructions, the land/soil used for farming and lots of resources that can directly or indirectly be linked to the environment and useful to man can be termed environmental resources. This unit will allow you to know or have detailed knowledge about environmental resources.

2.0 OBJECTIVES

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

- define the term Environmental resources
- list types of Environmental resources
- discuss the importance of Environmental resources: Raw materials, labour supply, solar energy, hydroelectric power, food for man.

3.0 MAIN CONTENT

3.1 Environmental Resources, Types and Distribution: Land, Water, Minerals

Definitions/Description of Environmental Resources

Human being generally needs different things or needs to use or enjoy different things for them to have a good quality of life. Almost, all elements or components of the environment are useful to man. This usefulness could be direct or indirect, but the point remains that various components of the environment are essential for human livelihoods. Based on this notion, it is pertinent for you to have adequate knowledge about environmental resources.

What is a resource?

What are environmental resources?

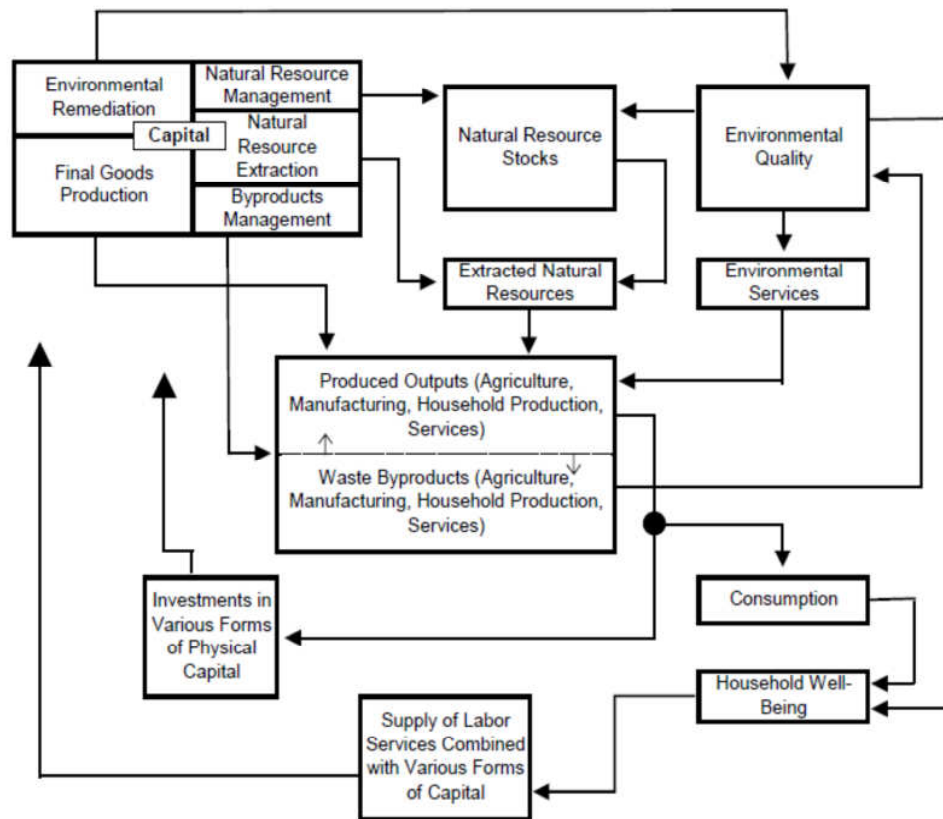
What are the different types of environmental resources?

How do environmental resources matters to us?

There are divergent views on the concept of environmental resources. The point of note in most views to be discussed is that environmental resources refer to materials (biotic and abiotic environmental components) that have value or potentials to enhance the existence of people and the community or society at large. You as a human-being is a resource (human resource). You have a value that could be displayed or used in different ways. The skill/experience of a man of getting things done, of making things work/function etc makes you (man) a resource. It is a very simple issue to understand, take, for instance, the hydro-power from water body gives us the opportunity to have power/electricity supply, the timbers (forest) supply with tress for our furniture, medical practitioners support or maintain our health situations, etc. The point of note is that materials (human or non-human) that are found in the environment that can be readily be drawn upon when needed can be termed resources. Nigeria for instance is noted for different resources, the major of these is oil. This directly becomes the wealth of the country. The availability of these resources (oil) surely allows the country to generate more wealth that will enhance the socio-economic development of the country in general.

Interestingly, Toman, (2003) explained that the environment is essential for the general sustenance of man and society. It was emphasized that the environment provides or renders some services for our good “environmental services”. It was noted that "environmental services" entails an array of responsibilities that makes or will compel us to value or appreciate the importance of the environment. For clarity, climatic conditions, including temperature and rainfall, are more or less conducive to agricultural activities/production. Water bodies (rivers, lakes, estuaries, wetlands) of certain water quantity, turbidity, flow rate, temperature, and chemical composition provide more or less fruitful habitat for valued aquatic organisms (shrimp, fish, plant life) as well as water for human consumption and manufacturing. Similarly, biodiversity contributes to ecological stability as well as to tourism, long-term agricultural productivity, and possibly pharmaceuticals/medicals. The weather, air quality and broader climatic conditions affect ambient temperatures, health conditions, and affect the productivity of various household and manufacturing activities. Also of relevant or reference is the view of an international organisation-International Fund for Agricultural Development IFAD, (2002) on managing our environment: “the thin layer of soil that covers most of the earth’s land surface is the key to human well-being and survival. Without it, there would be no plants, no crops, no animals, no forests and no people” From these cases/examples you should understand that every component of the environment are/is important to man. Toman, (2003) while examining the importance of the environment to different economic activities makes valuable submissions on connections or importance of environment, resources and development. (see fig. 1 below).

Figure 1: Links Connecting Natural and Environmental Resources, Economic Growth, and Social Well-Being: The Importance of Various Investments.



Source: Toman, (2003): *The Roles of the Environment and Natural Resources in Economic Growth Analysis. Discussion Paper 02-71; p.17.*

From the foregoing, environmental resources can be defined as any material, service, or information from the environment that is valuable to man/society. This captures anything in the environment that is useful to people and their environs/surroundings. Examples include food from plants and animals, wood for cooking, heating, and building, metals, coal, and oil land, water, etc.

Types of Environmental Resources

As mentioned above, environmental resources is a very broad concept with different views. Indeed, anything that can be considered to have value or useful can be taken to be a resource. Environmental resources can be classified into:

- (i) Natural Resources
- (ii) Man-Made Resources

Similarly, environmental resources can be classified as:

- (i) Renewable (those that can be renewed within a relatively short time, e.g water through water cycle; plants, animals and marine life through reproduction)
- (ii) Non-renewable (These are resources that cannot be replaced or reproduced)

Based on the focus of this course/unit the natural resources shall be our focus. Resources are anything that possesses or has utility and adds value to human life. Apart from this, anything that can be used to impact (positively) or enhance the existence of man or users generally can be termed a resource. From our examples above; air, water, food, plants, animals, minerals, metals, etc are resources. The importance of each depends on its utility and other factors. For instance, water is recommended for every being (man-higher animals and Lower/wide animals), if you can live without water, then it can rightly be said 'to you, water is not a resource'. Similarly, the availability of oil, metals, gold, silver, copper or bronze in some countries is a pointer to the economic potentials of these countries. Thus, resources have values and these are based on the type of uses/utility. It should be noted that not all resources have economic values, but they could be useful or have other values apart from economic. Among these types of resources are mountains, rivers, sea or forests.

Above all, environmental resources can be grouped:

- (i) Atmospheric Resources: Oxygen, Carbon-dioxide, Nitrogen, Water-vapour
- (ii) Mineral Resources: Rocks, Gold, Silver, metals, petroleum, coal etc.
- (iii) Water Resources: Fish, Water, potash, etc
- (iv) Vegetation resources: Timber, crop, tourism, etc
- (v) Human resources
- (vi) Historic and cultural resources.

SELF-ASSESSMENT EXERCISE

What are the different types of environmental resources?

4.0 CONCLUSION

Environmental resources are fundamental for the sustenance of human life and livelihood generally. The availability of different types of environmental resources is not equal over the globe. Some regions are blessed with mineral resources, while some are blessed with human

resources. However, available resources in any area of the world are expected to be treated as valuable elements, not only because of the utility value but based on the fact “resources not well kept could be well lost”. Thus, distribution, allocation, and management of resources remain a noteworthy concern for most governments. Environmental resources is a very simple issue to understand, take, for instance, the hydro-power from water body allows us to have power/electricity supply, the timbers (forest) supply us with tress for our furniture and medical practitioners support or maintain our health situations, etc. The point of note is that materials (human or non-human) that are found in the environment that can be readily be drawn upon when needed can be termed resources. Nigeria for instance is noted for different resources, the major of these is oil. This directly becomes the wealth of the country. The availability of these resources (oil) surely allows the country to generate more wealth that will enhance the socio-economic development of the country in general. Above all, environmental resources could be renewable and non-renewable. It could be natural and man-made resources.

5.0 SUMMARY

According to Zimmerman, (1951) a resource is not a substance or a thing, but the term resource relates to “A function which a thing or substance may perform”. In this unit, you must have understood the fact that you as a being is a resource if the value in you is exhibited towards enhanced livelihood. Environmental resources generally have one or more functions to perform that will make them be known or reckoned with as a resource. In other words, they must satisfy wants or demands. Indeed, water, forest, soil, human, rocks, soil, etc are resources if and if they can satisfy human wants or demands. This unit made it clear that environmental resources are inevitable for human sustenance.

6.0 TUTOR-MARKED ASSIGNMENT

1. What are resources?
2. What do you understand by environmental resources?

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UNIT 3 RESOURCES UTILISATION, IMPORTANCE AND FACTORS AFFECTING RESOURCES UTILISATION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Resources utilisation, Importance and Factors Affecting Resources utilisation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References /Further Reading

1.0 INTRODUCTION

It is not our place to say that human-being is material using animal. As mentioned in the last unit, man is a notable user of almost everything in the environment. The food to sustain life, objects fabricated for different uses, etc. Presently, waste products are now being transformed for other uses. Thus, waste is resources, when found useful for other purposes. The relationship between man's behaviour in regards to resources utilisation cannot be ignored anywhere in the world. Over time, the cry is on the sustainability of resources. Particularly, sustainable environment for all, green environment etc. This idea aims at preventing unnecessary uses, wastage, exploitation or overuse, abuse of resources. In other words, a nation that aimed at securing a good future for the next or coming generations is expected to make wise use of available resources.

It is imperative to note that the postulation of man relation to/with resources was emphasised in the Holy Book: Genesis (1, 28-29) "be fruitful and increase, fill the earth and subdue it, rule over the fish in the sea, the birds of heaven and every living thing that moves on the earth". This quote affirmed that men are bound users of various environmental resources. Resources are parts of nature that humankind considers to be useful or valuable. Usefulness in the context entails the production of material benefits, this includes our food, power supply, minerals, soil, oil etc. Indeed, there have been increasing awareness of the importance of environmental resources. This is based on the notion that inadequate management of environmental resources could affect human livelihoods and the economy generally.

2.0 OBJECTIVES

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

- discuss resources utilisation
- discuss the importance of environmental resources
- list and discuss with examples factors affecting resource utilisation.

3.0 MAIN CONTENT

3.1 Resources Utilisation, Importance and Factors Affecting Resources Utilisation

Resources Utilisation and Importance

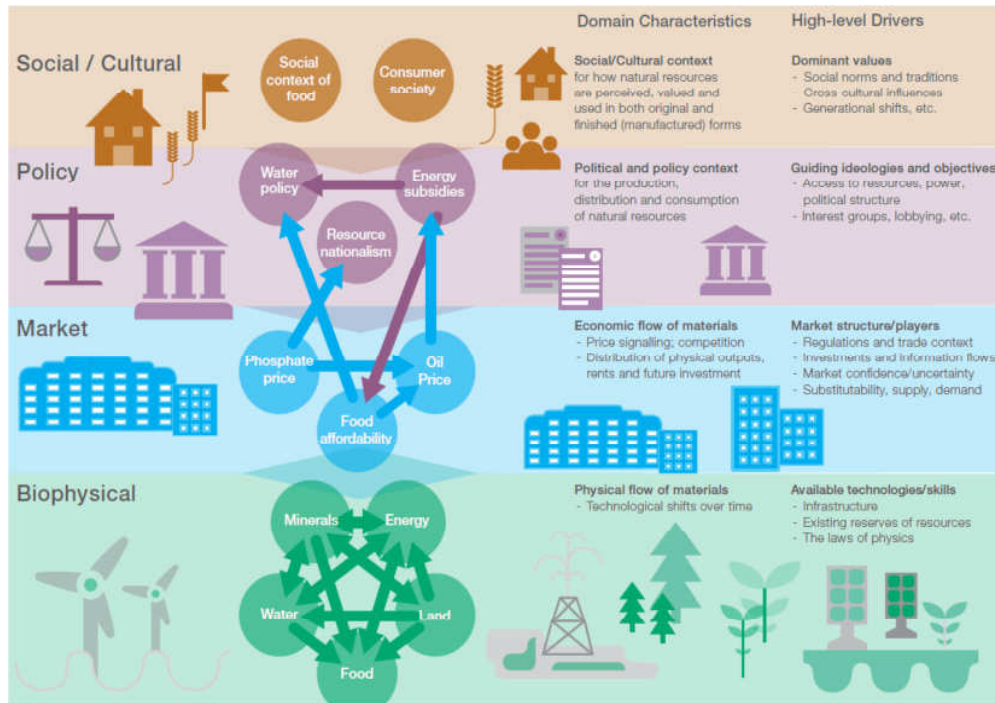
“Nature is the basis of our well-being and our prosperity – but we are using up way too much of the Earth’s finite resources. WWF’s Living Planet Report shows clearly that humanity’s demands exceed our planet’s capacity to sustain us – simply put, we are asking for more than we have available.” Jim Leape, Director-General, WWF International (2006-2014).

From the above quote, it is worth noting that the availability and utilisation of environmental resources of different types is an increasing discourse issue in various nations, and particularly by different government and non-governmental organisations. All individuals and nations require them to enhance the quality of life, specifically to improve the standards of living, as well as to facilitate economic prosperity of individuals and the country at large. Therefore, environmental resource utilisation is a political, economic, social and environmental issue that can impact all stakeholder groups, often with disproportionate and indirect consequences. This idea can be corroborated by the principles/views of economists that the resource reserves depend on the consumption rate and the technologies present. When technologies improve, the amount of resources that can be recovered increases, while as the consumption rate increases the amount of resources available decreases. Similarly, sporadic population increase has resultant effects on the socio-economic fabrics of the nation. Environmental resources availability is also a function of the supply and demand of resources that are discovered, developed, processed, distributed and consumed in intricate value chains, a significant portion of which are global (World Economic Forum, 2014). Globally, nations are experiencing unprecedented drawbacks on environmental resources.

This is due in part to decreasing supply of resources and exponentially rising demands driven by population and economic growth. This situation warrants carefulness in the utilisation of resources, particularly avoidance of future catastrophes as a result of resources extinction.

The World Economic Forum of 2014 that composed of different participants gave insight into resources availability and existing interconnections/links (See Fig. below). It shows that different stakeholders, and biophysical bear the risks involved in resource utilisation and management. It was noted that “interconnections can transmit risks across resources and stakeholders, turning local resource challenges into global risks; and, while increasing attention is paid to physical resource interconnections”. Based on the above illustration, it should be noted that for more than four decades, environmental conflict as a result of the devastation of the biodiversity or ecological regime and neglects of development needs of the sensitive ecosystem area, have left the bulk of the Niger Delta area is desolate, uninhabitable and poor. In recent years, there have been significant increases in the attention paid to environmental conflict, due in part to increasing awareness of the implications of environmental conflict on the developmental process and also because of political and economic transformation which the country is undergoing. It should be noted that there is a strong tie or relationship between environmental conflicts and sustainable development and, Nigeria as a notable oil-producing country cannot bear or stand the costs of environmental conflicts that impede development and also minimises or limit the possibility or ability of governments to reduce poverty and sustain infrastructural development in the society (Akpofure, et al; 2000). There is therefore the need to view the reduction of environmental conflict as an over-arching goal of development in Nigeria.

Four Domains of Resource Interconnections: Characteristics and Drivers



Source: World Economic Forum, 2014

World Economic Forum (2014). *The Future Availability of Natural Resources: A New Paradigm for Global Resource Availability World Scenario Series*. November 2014

As mentioned above, Nigeria with over 140 million people divided into nearly 3000 ethnic groups, inevitably faces major environmental conflict as a result of resources utilisation and management. This situation grossly impacts on regional and economic development of the country. For instance, the allocation and distribution of Nigeria’s massive income from oil have unfriendly effects on the developmental processes of some areas. Apart from the economic stagnation experienced for almost two decades in Nigeria, the underdevelopment and poverty particularly in the Niger Delta region of the country can be traced to the issue of “who gets what, what goes where, and when and how what goes where. In other words, environmental conflict in the oil-producing areas (Abia, Akwa – Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers) have become a terrain for contesting not just political space and access to resources, but one for resisting authoritarian forms of rule and accumulation (Obi, 1997). Many legal instruments (Section 15 of Decree 51 of 1969, Land-use Decree of 1978, Section 40 (3) of the 1979 constitution, as well as the 1999 constitution gave the Nigerian government the power to control the oil wealth in the Niger Delta area. However, a myriad of factors that include the neglect by government and oil companies, unemployment, military rule and a badly structured

Nigerian federalism or form of governance are often adduced for the protracted conflict in the Niger Delta area (Ibeanu, 2000). Conflict in the Niger Delta arose in the early 1990s due to tensions between the foreign oil corporations and a number of the Niger Delta's minority ethnic groups who felt they were being exploited, particularly the Ogoni as well as the Ijaws. This menace was pronounced in the 1990s till the 20th century.

Above all, availability and utilisation of resources have diverse impact/importance, these include among others:

- ✓ Facilitate employment opportunities
- ✓ Enhances development
- ✓ Promote trading activities (national and international trade-attracting favourable foreign investments)
- ✓ Fosters co-existence of areas
- ✓ Facilitate socio-cultural integration
- ✓ Promote technology transfers

Factors Resources utilisation

Concerning the importance of environmental resources, one of the key indicators of responsive government is her ability to efficiently maximise the values of available resources.

- ✓ Technology
- ✓ Preferences of stakeholders
- ✓ Government Policies (political and social interconnections)
- ✓ Prices/cost- Economic/market issues (supply and demand for natural resources).
- ✓ Population growth
- ✓ Economic growth and development
- ✓ Physical attributes
- ✓ Corruption
- ✓ Environmental attributes (Physical features, etc)
- ✓ Cultural characteristics of the area.

On the importance of environmental resources, one of the key indicators of responsive government is her ability to efficiently maximise the values of available resources. The following are factors affecting utilisation of resources; technology; preferences of stakeholders; government policies (political and social interconnections); prices/cost-economic/market issues (supply and demand for natural resources); population growth; economic growth and development; physical attributes; corruption; environmental attributes (Physical features, etc) and cultural characteristics of the area.

SELF-ASSESSMENT EXERCISE

List and discuss with examples factors affecting resource utilisation.

4.0 CONCLUSION

Environmental resources of various types (renewable and non-renewable) require appropriate/adequate utilisation and management strategies to ensure sustainability. Environmental resources, especially non-renewable resources are important components of human existence because they support and guarantee the functionality of man. For many reasons/purposes, resources are inevitable in our societies. They invariably improve the quality of life of people. For instance, mineral/oil resources have become a significant component and life-wire of the Nigerian economy. Indeed, utilisation of resources by man requires transformation or manipulation for them to be termed resources. In other words, the everyday hustling of man for survival and development often creates an avenue to explore available resources.

5.0 SUMMARY

A resource is not a substance or a thing, but the term resource relates to “A function which a thing or substance may perform”. In this unit, you must have understood the fact that availability and utilisation of resources have diverse impacts/importance, these include among others: facilitating employment opportunities; enhancing development; promoting trading activities (national and international trade- attracting favourable foreign investments); fostering co-existence of areas; facilitate socio-cultural integration and promote technology transfers. Concerning the importance of environmental resources, one of the key indicators of responsive government is her ability to efficiently maximise the values of available resources. The following are factors affecting utilisation of resources; technology; preferences of stakeholders; government policies (political and social interconnections); prices/cost-economic/market issues (supply and demand for natural resources); population growth; economic growth and development; physical attributes; corruption; environmental attributes (Physical features, etc) and cultural characteristics of the area.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss your understanding of resources utilisation.
2. Discuss the importance of environmental resources.

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UNIT 4 ENERGY PRODUCTION, CONSUMPTION AND DEVELOPMENT

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Energy Production, Consumption and Development
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References /Further Reading

1.0 INTRODUCTION

Historically, headlong urbanisation coupled with the higher economic recession has being attested to directly impact sustainable energy in Nigeria. This situation is drastically transforming the developing world, especially Nigeria; thus hindering the development of cities that are full of new opportunities for economic and social advance. It is instructive to note that, increasing population of Nigerian cities is grossly leading to higher demand for energy. Meanwhile, sustainable energy has been recognised as a facilitator of satisfactory socio-economic activities in Nigeria; yet, the power supply in most Nigerian residential buildings are grossly erratic and low-capacity oriented.

The increasing energy consumption and use of alternative sources of energy are becoming a highly debated issue in different countries of the World. This partly stems from the importance of energy, the resultant effects of misuse of this resource, and the environmental consequences of increasing energy consumption. Interestingly, the fluctuating oil prices and high costs of renewable energy sources, specifically in developing countries, implies that the relationship between energy consumption, energy prices and opportunities for economic growth is inevitable. Energy is one important factor that propels economic growth and development. This is based on its ability to be used for production or manufacturing activities. Indeed, the roles of energy consumption for socio-economic growth and development, and vice versa cannot be ignored in policy discourse. Carfora, (2019) affirmed that a positive relationship between energy consumption and prices and growth suggests that energy efficiency policy may have detrimental effects on economic growth. Scholars affirmed that energy is utilisation is inevitable for the smooth running of economic and social activities in

every society. In other words, energy is a key in the economic and social development of countries. It is the resource that invariably enhances the quality of life of not only people but the nation as a whole. It should be mentioned that much of the world's energy, however, is currently produced and consumed in ways that could not be sustained if technology were to remain constant and if overall quantities were to increase substantially (Bilen et al., 2008). Sequel to this assertion, it could be echoed that energy production, consumption and atmospheric emissions are interrelated. Meanwhile, the persistent population increase invariably influences the demand/use of energy. Thus, it is pertinent for different countries to control or manage the ways available energy is being used. Particularly, how the use of energy will not affect the general environment. The need to control atmospheric emissions of greenhouse and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption in the country. The greenhouse gas (GHG) emissions that cause climate change are emitted mainly from burning fossil fuels such as coal, oil and natural gas. Because the heavy industry is a leading source of GHG emissions, most of the business-focused programs responding to the problem emphasise participation by "emitters," manufacturers and utilities.

From the foregoing, it could rightly be said that achieving reliable and access to a power supply (electricity) will enhance or assist in the transformation many developing countries. It is pertinent to note that energy/power supply has significant effects on a household's energy behaviour pattern. Invariably, the relationship between population and energy consumption have been established by different scholars. It is however displeasing that much of the world's population remains without reliable access or the benefits generated from energy. This unit will add to your knowledge of energy consumption and the consequences.

2.0 OBJECTIVES

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

- discuss energy consumption and population growth
- list consequences of inadequate energy supply
- discuss the relationship between energy and development.

3.0 MAIN CONTENT

3.1 Energy Production, Consumption and Development

Global Energy Consumption

Prior to 1700 A.D, solar energy is the major source of power that is usually trapped by green plants and made available to human society. The biological oxidation of the organic matter produced fuelled the muscle power, while combustion of organic matter provided energy for other purposes; such as lighting, cooking, heating etc. The formation of fossil fuels (coal, and natural gas) is also due to photosynthesis carried on by plants which occurred millions of years ago. These were not in general use before the beginning of the Industrial Revolution (Asthana, et al; 2003). In the early century, the energy requirements of man were modest and could be fulfilled by solar energy and fixed by green plants. This situation has now changed drastically. The minimum per capita energy requirement of man is about 2000 kcals which is the quantity required to keep him alive and obtainable from food intake. In a primitive society, apart from cooking, lighting, heating etc, there was little need for more energy. Globalization has, however, brought in an era of concentrated use of large amounts of energy. Per capita, energy consumption, which was a little more than 2000 kcals, has now shot up to about 1000 times in technologically advanced countries of the world and developing ones (Asthana, et al; 2003). There has been a rapid and steady rise in global energy consumption ever since fossil fuels came into widespread use. We have entered an age of rapid consumption of fossil fuels, which represents the photosynthesis of millions of years ago.

Per capita consumption of energy is not the same all over the world. It is highest in advanced Western countries. Only 20% of the world consumes about two-thirds of the total energy produced by a man while the result of the population has to live with only one-third of the energy supply. To millions of people living in developing countries of the world, electricity is still a dream, fossil fuels are difficult and costly to obtain and biomass constitutes the only source of energy.

Oil will remain the single largest fuel in the global primary energy mix, even though its share will fall marginally, from 36% in 2002 to 35% in 2030. Oil demand is projected to grow by 1.6% per year, from 77 mb/d in 2002 to 90 mb/d in 2010 and 121 mb/d in 2030. Oil use will become increasingly concentrated in the transport sector, which will account for two-thirds of the increase in total oil use. Transport will use 54% of the world's oil in 2030 compared to 47% now and 33% in 1971. It should however be noted that, as the level of motorization increases, most Nigerian cities do not have the resources to keep pace with the spiralling demand for urban transport. The consequences of this can be traced to different transport externalities in cities. As the volume of traffic increases, the amount of greenhouse gas (GHG) emissions increases. In

other words, transportation contributes significantly to climate change because the emission rate varies for different types of vehicle. It is imperative to note that, increasing population of cities leads to higher demand for mobility. One consequence of this is the high volume of traffic, increasing motorisation and overland transportation in general. Indeed, the transport sector is widely recognised as the major source of greenhouse gas (GHG) emissions. It contributes about one-fifth of global (GHG) causing climate change. Surveys in developing countries, like Brazil, China, India and Nigeria established that the alarming rate of motorisation is responsible for increasing GHG emissions. Transportation-related pollution levels are maintained at levels below those human beings can safely tolerate and the environment carrying capacity can allow.

Energy Consumption and the Environment

It was reported that access to reliable energy is a critical determinant of growth. Greater access to reliable energy transforms lives and economies in an almost uncountable number of ways including income generation; greater economic specialisation; and more enjoyable leisure; substitution of labour with capital that increases productivity; creation of small businesses and enterprises; facilitating the reallocation of household time (especially by women) from energy provision to improved education; protection from extreme temperatures; access to greater market size due to lower transportation and communication costs; and potential health improvements due to reduced indoor smoke, cleaner water, and improved refrigeration (Lipscomb, Mobarak, and Barham, 2013; Dinkleman, 2011; Toman and Jemelkova, 2003; Barreca et al. 2012; Jensen, 2007; Suri et al., 2012).

However, rapid population increase and development in many developing countries have led to an exponential rate of consumption of energy. An unfortunate side effect of this situation is increased pollution; and declines in environmental quality. A point of note is the high rate of motorisation that resultantly leads to the emission of carbon monoxides into the environment. This situation and a host of others has profound implications for the sustainability of future growth and development of most developing countries in particular. Similarly, the productivity effect of unreliable energy sources are the use of smaller personal or private backup generators (Greenstone, 2014).

A World Bank report of 2002 emphasised the use of diesel generators by farmers for their pump sets. It is worthy to mention that, all dimensions of energy consumption have a resultant effect on the natural environment and basically through various human developmental activities. For instance, fuel-burning or consumption impacts the

environment as well as sustainable development in a variety of ways and through the multitude of channels. It is interesting to note that in most developing countries, many people rely on the electricity grid, but unfortunately, the quality of service remains inadequate, and not accessible to some people. This situation impacts negatively on the socio-economic wellbeing of the country. Interesting, it has been reported that there is increasing consensus that significant reductions in greenhouse gas (GHG) emissions are necessary to limit the magnitude and extent of climate change. Fortunately, studies confirmed that renewable energy systems already reduce GHG emissions from the energy sector. Indeed, renewable energy will play a major role in the global energy supply. Climate change is a notable factor in the economic, social, cultural and general activities of human being in the twenty-first century (Bakker, Zuidgeest, Coninck and Huizenga, 2014). It is an issue that shapes and re-shapes various activities of man. Min, Zhang, Zwiers, and Hegerl, (2011); Pall et al., (2011) reported that the activities of man are partly responsible for different climatic changes observed in recent time.

In recent times, energy inadequacies have compelled most people to access or secure alternative sources of energy. This trend of energy-saving technologies, not only lowers the costs of generation (Greenstone, 2014) but also enhances the quality of the environment and people livelihoods.

SELF-ASSESSMENT EXERCISE

Discuss the relationship between energy and development.

4.0 CONCLUSION

Scholars affirmed that energy utilisation is inevitable for the smooth running of economic and social activities in every society. In other words, energy is a key in the economic and social development of countries. It is the resource that invariably enhances the quality of life of not only people but the nation as a whole. It should be mentioned that much of the world's energy, however, is currently produced and consumed in ways that could not be sustained if technology were to remain constant and if overall quantities were to increase substantially (Bilen et al., 2008). Sequel to this assertion, it could be echoed that energy production, consumption and atmospheric emissions are interrelated. Meanwhile, the persistent population increase invariably influences the demand/use of energy. Thus, it is pertinent for different countries to control or manage the ways available energy is being used. Particularly, how the use of energy will not affect the general

environment. The need to control atmospheric emissions of greenhouse and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption in the country. The greenhouse gas (GHG) emissions that cause climate change are emitted mainly from burning fossil fuels such as coal, oil and natural gas. Because the heavy industry is a leading source of GHG emissions, most of the business-focused programs responding to the problem emphasize participation by “emitters,” manufacturers and utilities.

5.0 SUMMARY

Energy is generally known to be an inevitable resource(s) for facilitating and sustaining the development of most countries. It is widely noted to be a propelling force behind any economic development of nations. This unit made you understand that energy resources will enhance economic growth and development. It also revealed that energy will help people to be more productive in their different activities. Sustainable energy is germane for the socio-economic development of any country. More importantly, energy production and consumption are increasingly emphasized as an important factor in achieving sustainable development goals.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss energy consumption and population growth.
2. List consequences of inadequate energy supply.

7.0 REFERENCES/FURTHER READING

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