



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**SCHOOL OF ARTS AND SOCIAL SCIENCE**

**COURSE CODE: CSS134:**

**COURSE TITLE: GEOGRAPHY OF NIGERIA**

## **CSS134: GEOGRAPHY OF NIGERIA**

### **Course Guide**

<b>Programme:</b>	B.Sc Criminology and Security Studies
<b>Course:</b>	Geography of Nigeria
<b>Duration:</b>	First Semester
<b>Course Developer:</b>	Professor K.O. Ologe

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## **1.0 Introduction**

CSS 108 Geography of Nigeria is a first semester, 100-level, three-credit course. It is a required course for students doing the B.Sc and the Diploma in Criminology and Security Studies. It may also be taken by anyone who does not intend to do these programmes but is interested in learning the geography of Nigeria for purposes of self-improvement.

This course will give you an introduction to the nature of the physical environment of Nigeria and the resources which nature has endowed her with. It will also introduce you to the characteristics of Nigeria's population and settlements. Finally, it will introduce you to the economic activities or the ways in which people make a living. The course will relate all these various aspects of the geography of the country to the occurrence, causes, prevention and control of crime and threats to security.

Do not worry if you have never studied geography before. You will discover that because much of the subject matter falls within our everyday experiences or are often in the news, it is very interesting.

The course will consist of 9 units. These will cover: Nigeria's location, neighbours and boundaries; its physical environment; human population; characteristics; settlement patterns and its main economic activities.

This Course Guide tells you briefly what the course is all about, the course materials you will be using and how to work your way through the materials. It suggests some general guidelines on the length of time you are likely to spend on each of the units in order to complete it successfully. It also guides you on your Tutor-Marked Assignments it tells you about the Tutorial Classes which are linked to the course.

## **2.0 What you will learn in this course**

In this course you will learn how the geography of a place is important to an understanding of crime and security threats in that place. You will see how the physical environment, population and economic activities of Nigeria present conditions and opportunities for crime and threats to security.

## **3.0 Course Aim**

The aim of this course is to enable you to acquire knowledge of the geography of Nigeria, which can help you understand the occurrence, causes, prevention and control of crime and threats to security in the country.

This will be achieved by:

- Introducing you to the relationship between Criminology, Security Studies and Geography;
- Describing Nigeria's location in relation to the sea and its neighbours;
- Describing Nigeria's physical environment and resources;
- Identifying, describing and explaining the main characteristics of Nigeria's human population and settlement;
- Relating crime and security threats in Nigeria to its location, relations with its neighbours, its physical environment and natural resources, its population and settlement patterns and its economic activities.

#### **4.0 Course Objectives**

In order to achieve the aims set out above, the course has specific objectives. If you can meet these objectives, then you have successfully completed the course. The objectives of the course are its learning outcomes. They are the things you should be able to do by the time you complete the course.

By the time you complete this course, you should be able to:

- Explain the relationship between Criminology, Security Studies and Geography;
- Describe the location of Nigeria and state its size;
- List Nigeria's neighbours and discuss its relationship with them;
- Describe Nigeria's boundaries and discuss their implications for crime and security;
- Describe Nigeria's relief drainage, climate and vegetation and discuss their economic importance;
- Describe and explain the characteristics of Nigeria's human population and discuss their socio-economic implications;
- Describe and discuss the country's urban and rural settlement patterns;
- Discuss the importance of mining, animal husbandry, food crop agriculture, export crop agriculture, modern manufacturing, internal trade, transport and communications to the country's economy;
- Discuss the Main characteristics of these economic activities;
- Discuss the problems facing these economic activities: and
- Suggest possible ways of tackling these problems.

These are the specific objectives of this course.

In addition, each of the units making up the course has specific objectives by which you can measure your own progress. These are always set out at the beginning of the unit. You are expected to read them carefully before moving on to the rest of the unit. You are also expected to refer to them again after you have completed the unit. In this way you can be sure that you have done what is required of you by the unit.

## **5.0 Working through This Course**

In order to complete this course you are required to read all the study units as well as other materials, which may be recommended by the National Open University of Nigeria (NOUN). At the end of each unit, there is a list of further reading and other materials. While it is not absolutely necessary for you to read them in order to complete the course successfully, it will be to your advantage if you can. They are recommended for learners who wish to have a deeper understanding of the subject matter.

Each unit contains a self-assessment exercise by which you can assess your own progress. At various points in the course you are required to submit assignments for assessment purposes. These are called Tutor-Marked Assignments (TMAs). At the end of the course there will be a final examination.

You will be expected to spend between one week and three weeks on each of the units. However, you may find out that you have to spend more or less time on particular units because of their volume or level of difficulty or your own level of preparedness. So do not be discouraged if you have to spend more time on any particular unit.

## **6.0 Course Materials**

The major components of the course are:

1. The Course Guide.
2. The Study Units.
3. Further Reading and Other Materials.
4. Presentation Schedule.

## **7.0 Study Units**

The course is made up of 19 units as follows:

1. Unit 1: Criminology, Security Studies and Geography.
2. Unit 2: Location, Size, Neighbours and Boundaries of

- |     |          |   |
|-----|----------|---|
|     |          | Nigeria.  |
| 3.  | Unit 3:  | Relief and Drainage of Nigeria.                 |
| 4.  | Unit 4:  | Climate of Nigeria.                             |
| 5.  | Unit 5:  | Vegetation.                                     |
| 6.  | Unit 6:  | Population, Size, Growth and Distribution.      |
| 7.  | Unit 7:  | Age-Sex Characteristics and Ethnic Composition. |
| 8.  | Unit 8:  | Population Migration.                           |
| 9.  | Unit 9:  | Rural Settlements.                              |
| 10. | Unit 10: | Urban Settlements.                              |
| 11. | Unit 11: | Mining.   |
| 12. | Unit 12: | Fishing.  |
| 13. | Unit 13: | Animal Husbandry                                |
| 14. | Unit 14: | Food Crop Agriculture                           |
| 15. | Unit 15: | Export Crop Agriculture                         |
| 16. | Unit 16: | Irrigated Agriculture                           |
| 17. | Unit 17: | Modern Manufacturing                            |
| 18. | Unit 18: | Internal Trade                                  |
| 19. | Unit 19: | Rail and Road Transport                         |

Unit I sets the stage by explaining the relationship between Criminology, Security Studies and Geography. Unit 2 looks at Nigeria in relation to her neighbours. In Units 3, 4 and 5 we look at the physical environment and the natural resources of Nigeria. Units 6, 7 and 8 describe and discuss the characteristics of Nigeria's population. Units 9 and 10 look at settlement patterns while the rest of the course. Unit 11 to 19 focus on economic activities.

Each study unit normally consists of between one and three weeks' work and includes:

- Introduction
- Objectives
- Main text
- Conclusion
- Summary
- Self-assessment Exercise (SAE)
- Tutor-marked Assignment (TMA)
- Further Reading and Other Materials.

In general the exercises are based on the materials you have just covered. You may be required to apply the knowledge you have acquired as a way of helping you to assess your progress and reinforcing your understanding of the material. The Self-Assessment Exercises (SAE's) and the Self-Marked Assignments (SMAs) are very important because together, they will assist you to achieve the learning objectives of the individual units and of the course as a whole. Maps are very important in geography and you will be expected to use them in your

SAE's

## **8.0 Assignment File**

There are eight TMAs in this course. These TMA's will cover:

- Nigeria's neighbours;
- The climate of Nigeria;
- The population of Nigeria;
- Urban settlements in Nigeria;
- Irrigation agriculture and
- Internal trade.

## **9.0 Presentation Schedule**

The presentation schedule included in your course materials gives you the important dates for this year for the completion of Tutor-marked assignments and attending tutorials. Remember that you are required to submit all your assignments by the due date. You should guard against falling behind in your work.

## **10.0 Assessment**

There are three aspects to the assessment of this course:

- First, there are self-assessment exercises;
- Secondly, there are Tutor-marked Assignments (TMA's);
- Thirdly, there is a final, written examination.

You are expected to be sincere in attempting the exercises. In tackling the assignments, you are expected to apply information and knowledge gathered during the course. The assignments must be submitted to your tutor for formal assessment in accordance with the deadlines stated in the *Preservation Schedule* and the *Assignment File*. The work you submit to your tutor for assessment will count for 50% 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 count for the remaining 50% of your total course mark.

## **11.0 Tutor-marked Assignments (TMAs)**

There are eight tutor-marked assignments in this course. You only need



to submit seven of these eight assignments, in which case the highest five oldie eight marks will be used to assess you. Each assignment counts for 10% towards your total course mark. 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 study units. However, it is desirable in all degree level education to demonstrate that you have read and researched more widely than the required minimum. Using other references will give you a broader viewpoint and may provide a deeper understanding of the subject.

When you have completed each assignment, send it, together with a TMA (tutor-marked assignment) form to your tutor. Make sure that each assignment reaches your tutor on or before the deadline given in the *Presentation Schedule and Assignment 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.

## **12.0 Final Examination and Grading**

The final examination for ASS 108 will be of three hours duration and carry 50% of the total course grade. The examination will consist of questions which reflect the types of self-testing, practice exercises and tutor-marked assignments you have previously encountered. All areas of the course will be assessed.

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

## **13.0 Course Marking Scheme**

The following table lays out how the actual course marking is broken down.

*Table 1: Course Marking Scheme*

<b>Assessment</b>	<b>Marks</b>
Assignments 1 - 8	Eight assignments, best live marks of the eight count for 10% each = 50% of course marks.
Final	50% of overall course marks
Total	100% of course marks.

## 14.0 Course Overview

Table 2 brings together the units, the number of weeks you should take to complete them and the tutor-marked assignments that follow them.

*Table 2: Course Overview*

Unit	Title	Weeks of Study	Schedule TMA (end of respective unit)
1	Criminology, Security Studies and Geography	2	1
2	Location, Size, Neighbours and Boundaries of Nigeria	3	2
3	Relief and Drainage	2	
4	Climate	2	3
5	Vegetation	1	
6	Population Size, Growth and Distribution	1	
7	Age-Sex Characteristics and Ethnic Composition	2	4
8	Population Migration	1	
9	Rural Settlements	1	
10	Urban Settlements	1	
11	Mining	1	5
12	Fishing	1	
13	Animal Husbandry	2	
14	Food Crop Agriculture	2	6
15	Export Crop Agriculture	1	
16	Irrigated Agriculture	1	7
17	Modern Manufacturing	1	
18	Internal Trade	1	8
19	Rail and Road Transport	1	

## 15.0 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. It enables you to read and work through specially designed study materials at your own pace, and at a time and place that suits 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 other material. 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.

The 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.

Self-tests are interspersed throughout the units, and answers are given at the end of the units. Working through these tests will help you to achieve the objectives of the unit and prepare you for the tutor-marked assignments and the final examination. You should do each self-test as you come to it in the study unit.

The following is a practical strategy for working through the course. If you run into any trouble, contact your tutor by the fastest available means. Remember that your tutor's job is to help you. When you need help, don't hesitate to contact him.

1. Read this *Course Guide* thoroughly.
2. Organize 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 tutorial, and the date of the first day of the semester is available. 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 own dates for working on each unit.
3. Once you have created your own study schedule, do everything you can to stick to it. The major reasons why learners fail is that they get behind with their course work. If you get into difficulties with your schedule, please let your tutor know before it is too late for help.
4. When you want to study any of the units, assemble your study materials, namely, the study unit itself, a notebook, a pen, diagrams and a good dictionary.
5. Turn to the study unit and read its introduction and objectives.
6. Browse through the rest of the material by reading the sub-titles. This will give you a sense of direction.
7. Next, read through the unit fairly quickly and see how much of it you can take in. No are ready to study the material.
8. Read through the material again, but slowly this time. Underline

key words, phrases and sentences, which seem to be important. Find out the meaning of words that are new to you from our dictionary.

9. Now take each section of the text and study it. Jot down points in your notebook. Learn to sketch the maps and diagrams, which are always important as a way of presenting large amounts of information economically.
10. When you have come to the end, check what you have learnt against the objectives of the unit in order to ensure that you have achieved them.
12. Do the self-assessment exercise so that you can evaluate your own progress yourself.
12. When you have finished the study unit, close it and see how much of what you have learnt you can recapitulate.
13. Keep in mind that you will learn a lot by doing all your assignments carefully. They have been designed to help you meet the objectives of the course and will therefore help you to pass the examination. Submit all Tutor-Marked Assignments (TMA's) not later than the due date.
14. When you are confident that you have achieved the objectives of a unit, you can start on the next unit. Proceed unit by unit through the course and try to pace your study so that you can keep yourself on schedule.
15. When you have submitted an assignment to your tutor for marking, do not wait for it to be returned before starting on the next unit. Keep to your schedule. When the assignment is returned, pay close attention to the comments which your tutor has made, both on the tutor-marked assignment form and on the assignment itself. Consult your tutor as soon as possible if you have any questions or problems.
16. After completing the last unit, review the course and prepare yourself for the final examination.  
Check that you have achieved the objectives listed at the beginning of each unit as well as the course objectives listed in this Course Guide.

## **16.0 Tutors and Tutorials**

There are 20 hours of tutorials provided in support of this course. You will be notified of the dates, times and location of these tutorials, together with the name and phone number, if any, of your tutor, as soon as you are allocated a tutorial group.

Your tutor will mark and comment on your tutor-marked assignments, keep a close watch on your progress and on any difficulties you might encounter and provide assistance to you during the course. You must

mail your tutor-marked assignments to your tutor at least two working days before the due date. They will be marked by your tutor and returned to you as soon as possible thereafter.

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

- You do not understand any part of the study unit:
- You have difficulty with any self-assessment exercise
- You have a question or problem with an assignment or with our 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 you have to have thee-to-face contact with your tutor and to ask questions and seek clarification on any aspect of the course. In order to obtain maximum benefits from course tutorials, prepare a question list before attending them. You will learn a lot from participating in discussions actively.

## **17.0 Summary**

ASS 108 intends to introduce the geography of Nigeria to you. Upon completing this course you will be equipped with basic knowledge, which will enable you to answer such questions as:

- How does knowledge of the geography of an area help us to understand the occurrence of crime and security threats in that area?
- What are the implications of Nigeria's relationship with her neighbours for crime and security?
- What security problems do Nigeria's boundaries pose'?
- Of what economic significance are Nigeria's relief and drainage?
- Why is drought a major security threat in Nigeria?
- Of w hat economic importance is Nigeria's vegetation cover?
- Why is the size and rate of growth of Nigeria's population a threat to the country's security?
- Why is the age-sex characteristic of Nigeria's population a threat to the country's security?
- Why are people moving from parts of Nigeria to other parts and what are the security implications of these movements?
- Why are Nigerian towns growing so rapidly and what are the implications for crime and security?
- What are the security implications of Nigeria's over-dependence

- on petroleum exports?
- What role does fishing play in Nigeria's food security?
- What role does animal husbandry play in Nigeria's food security and what are the threats to this role?
- How best may the problems facing food crop agriculture be tackled?
- Why has export crop production declined in recent years and what can be done to revive it?
- What is the future of irrigated agriculture in Nigeria?
- Why are most of Nigeria's manufacturing industries located in urban centres?
- What is the pattern of inter-regional trade in foodstuff in Nigeria?
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## **Unit 1: Criminology, Security Studies and Geography**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 What is Criminology?
- 3.2 What do we mean by Security Studies?
- 3.3 What is Geography?
- 3.4 The Relationship between Criminology, Security Studies and Geography
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

In order to know why we are studying this course on the geography of Nigeria, it is necessary for us to know:

- What criminology is;
- What we mean by Security Studies
- What geography is; as well as
- The link between these three subject areas.

These are the things which we shall be examining in this unit.1 The objectives of the unit are stated below:

### **2.0 Objectives**

By the time you complete this unit, you should be able to:

- define what we mean by crime and criminology;
- give examples of the kinds of things which form the subject matter of criminology;
- define what we mean by security and security studies;
- give examples of the subject matter of securities studies;
- define geography;
- give examples of the subject matter of securities studies;
- explain the relationship between criminology, security studies and geography.

### **3.1 What is Criminology?**

Criminology may be defined as the study of crime, its causes, how it is explained in a scientific way and how people react to it. But what is crime? The Advanced Learner's Dictionary defines crime as "an offence for which one may be punished by law".

What are the different types of crimes? Why do people commit crimes? What kinds of people commit crimes? Why is crime more common in some places than others? What kinds of conditions encourage criminal activity? How do people react to crime? What measures should be put in place to reduce crime or prevent it? These are the kinds of questions that criminology asks and tries to answer.

Whenever a crime is committed, it is committed in a particular place on the earth's surface. This may be a village, a neighbourhood within a town, on a stretch of road or at an oil installation. Thus the question, which we asked earlier, 'why is crime more common in some places than in others?' is of particular interest. Please keep it in mind as you go through the rest of this unit and the course itself.

### **3.2 What do we mean by Security Studies?**

The Advanced Learner's Dictionary defines security as *freedom or protection from danger or worry*, thus, anything which threatens the peace, law and order of a country, is threatening its security. Anything that threatens the life or well-being of an individual is threatening his security. Under such threats, neither the country nor the individual can function normally.

Security studies are concerned with those conditions, people or events, which are a threat to the wellbeing of:

- a country;
- an area;
- people; or
- properties.

For example, pirates are people who attack and rob ships at sea and their activities are called piracy which is a crime. Such people operate in the coastal waters of Nigeria. They can and do attack ships bringing imports to Nigeria or taking exports out of Nigeria. They are therefore a threat to legitimate shipping and overseas trade. Since the Nigerian economy depends to a large extent on external trade, piracy is a threat to the economy of the country. It is therefore a matter of great concern to experts in security studies. That was why the Nigerian Institute of International Affairs published a special edition of its journal *Nigerian Forum* in March/April 1983 on Smuggling and Coastal Piracy in Nigeria.

Security studies are concerned with such questions as what constitutes a security threat? What are the factors which favour the emergence or development of security threats? Why are some places more prone to

security threats than others? What could be done to prevent security threats or control them?

The concept of security covers a very wide field. Thus we can talk of national security, food security, security of lives, security of properties, economic security, etc. Each of these different types of security is concerned with security in a particular area of the earth's surface. National Security is the security of a country which occupies an area of the earth's surface, food security is concerned with the adequacy of food supplies for a country, a state, a city, etc., each of which covers a particular part of the earth's surface, and so on. Again, the question, which we asked earlier, 'why are some places more prone to security threats than others?' is of particular interest. Please keep it in mind as you proceed from here.

### **3.3 What is Geography?**

Let us turn once again to the Advanced Learner's Dictionary for a definition of geography. It defines geography as "the scientific study of the earth's surface, physical features, divisions, climate, products, population, etc." This scientific study involves classifying these different aspects of the earth's surface, analysing them, describing them and explaining them all with a view to seeing how mankind can live a richer, better and safer life. Geography asks and tries to answer questions such as, in what ways does the surface of the earth differ from place to place? What objects of economic value occur naturally in different places? Why are there more people in some places than others? Why do people live in towns in some places and in villages in others? How do people earn their livelihood in different places? How does the environment pose a threat to human lives and property in different places? (Count the number of times the words "place" and "places" are used in these questions. You will soon see why this is important).

### **3.4 The Relationship between Criminology, Security Studies and Geography**

The introduction to this unit is rather long. It is long because we want you to understand how criminology, security studies and geography are related. In order to show how they are related, it was necessary to define them for you and show you the kinds of questions which they ask and try to answer. (Do you still remember those two questions which we asked you to keep at the back of your mind?) What we have been doing is like building a foundation. Now let us build on our foundation by explaining how these three subject areas relate to one another. Of course criminology and security studies are closely related because a security threat may be a crime or result in a crime, Thus being in possession of firearms without a licence is both a threat to security and a crime in Nigeria.

Let us now see how criminology and security studies are related to geography. Criminology and security studies may be carried out at various levels, e.g.

- At the local level, as in a village or town (such as Lagos) or a neighbourhood within a town (such as Mushin);
- At a regional level, as in one of the States of the Federation or in the oil-producing areas of the Niger Delta;
- At the national level in which case one is concerned with the whole of the territorial area of a country; and
- At the international level in which case one is concerned with trans-national crimes and security threats such as, smuggling, the influx of illegal immigrants, international terrorism and money laundering.

At each and every one of these levels the person studying crime and security will be concerned with people, conditions and events taking place in a particular place or in particular places on the earth's surface. (Do the words "place" and "places" remind you of the questions we asked you to keep in mind? If they do, you may clap for yourself! If they do not, then you may need to pay more attention).

Every place or area on the earth's surface has characteristics which distinguish it from every other place or area. For example, Ikoyi has characteristics which distinguish it from Mushin in Lagos; a village on the Port Harcourt - Aba expressway has characteristics which make it different from a village located ten kilometres away from that road. Kwara State is very different from Kano State. Nigeria differs in many ways from Uganda or Mexico. Many of these differences are important to criminology and security studies because they make particular places or areas more conducive to certain criminal activities and more subject to security threats and crime opportunity reduction strategies than others. Let us go back for a moment to the above examples. Armed robbery, burglary and theft are more common in Mushin than in Ikoyi. The village on the Port-Harcourt Expressway is more likely to be attacked by armed robbers than the one located in the bush. Kano State is more under threat from famine caused by drought than Kwara State. Nigeria suffers from the menace of pirates directly because it is a coastal state while Uganda suffers from it only indirectly because it is a landlocked state.

Every place on the earth's surface has characteristics which may or may not provide opportunities and favourable settings for criminal activities and security threats. Some of these characteristics are natural while others are man-made. Natural characteristics include relief, drainage and climate. The swampy nature of Nigeria's coastal belt with its navigable creeks and lagoons makes the area highly suitable for smuggling. The hilly nature of much of Nigeria-Cameroon boundary makes it difficult to

police effectively. The climate of the extreme northern state of Nigeria is characterised by periodic drought. Hence farmers in these states are periodically subject to famine caused by drought. The open nature of the landscape in these areas makes them unsuitable for daylight armed robbery operations.

Man-made characteristics of places on the earth's surface include National, State and Local Government boundaries, the distribution of human population, settlements, roads and railways and economic activities. Let us give a few examples of crimes and security threats caused or facilitated by this man-made characteristics of places.

Boundaries are very useful because they define what belongs to whom and are barriers put in place to keep out trespassers. However, they are notorious for causing disputes and conflicts even in places where people may have lived amicably as neighbours for a longtime. A very good example is the creation of States and Local Governments which have sparked off conflicts in different parts of Nigeria. Economic activities nearly always carry a risk factor, namely, the threat or the possibility of crime or of a breach of security. For example, the exploitation of crude oil in the Niger Delta has brought in its wake a restiveness and agitation especially amongst the youth who feel that the industry has destroyed their land without providing adequate compensation in terms of development. From time to time these agitations have degenerated into criminal acts such as pipeline vandalization and the kidnapping of expatriate oil workers.

Since the scientific study of different aspects of the earth's surface is the subject matter of geography, the study of the natural and man-made characteristics of various parts of the earth's surface as they relate to crime and security falls within the field of geography. Thus one good way to start studying crime in and security threats of an area of the earth's surface is to study its geography.

This is the reason this course is the Criminology and Security Studies Programme of the National Open University. The course will provide a great deal of background information and idea which are necessary for you to have if you are to understand crime and security threats in Nigeria in particular and in other parts of the world in general.

#### **4.0 Conclusion**

We conclude this unit by saying that the geography of an area provides us with a great deal of useful background information for the scientific study of crime and security in that area.

## **5.0 Summary**

Criminology is the study of crime, its causes, how it is explained in a scientific way, how we can prevent or control it and how people react to it. Security studies means studies of conditions, people or events which are a threat to the well being of a country of an area or people or properties. Geography is the scientific study of the earth's surface, physical features, division, climate, products, population, etc. Criminology and Security Studies are concerned with various places on the surface of the earth and the characteristics of these places are very important. Therefore the geography of an area provides us with much valuable background information for the scientific study of crime and threats to security in that area.

## **6.0 Self Assessment Exercise**

In what ways may the knowledge of the geography of an area help us in understanding crime and security in that area?

## **7.0 Tutor-marked Assignment**

Discuss the relationship between criminology, security studies and geography.

## **8.0 Further Reading and Other Materials**

Nil

## **Unit 2:        Location, Size, Neighbours and Boundaries of Nigeria**

- 1.0    Introduction
- 2.0    Objectives
- 3.1    Location
- 3.2    Size
- 3.3    Neighbours and Land Boundaries
- 3.4    Coastal Boundaries and Territorial Waters
- 3.5    Internal Boundaries
- 4.0    Conclusion
- 5.0    Summary
- 6.0    Tutor-marked Assignment
- 7.0    Further Reading and Other Resources

### **1.0    Introduction**

You have just read through the Course Guide and from it you should have gained an understanding of what this unit is all about. You have also seen how it fits into the course; Geography of Nigeria.

The first time you meet a man with whom you are going to live or work for a period of time you would probably like to have some basic information about him including his name and where he comes from. (Of course, you would not need to ask him how tall he is or how fat he is!). In the same way, we are starting this course by giving you basic information about Nigeria — where it is to be found on the globe, how large it is in area, who its neighbours are and what its boundaries are like. All of these are vital information for any study of crime and security in the country. Thus

- The country's location determines its climate on which many economic activities depend;
- Its size tells us how large an area it has to police and defend;
- Her neighbours are very important because they may or may not be friendly; and
- Her boundaries are important because they need to have border posts and patrols for security reasons.

These are some of the reasons why you are starting the unit by looking at these basic information about the country. Let us now look at what you should learn in this unit, as listed in the unit objectives below:

### **2.0    Objectives**

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

- State the location of Nigeria;
- Give the area of the country;

- Explain the importance of her size;
- List her immediate and other West African neighbours;
- Show how these countries are important to an understanding of crime and security in Nigeria;
- Describe Nigeria's relationship with her immediate neighbours;
- Explain the implications of these relationships for crime and security;
- Discuss the importance of Nigeria's other West African countries to the crime and security situation in Nigeria;
- Describe Nigeria's external boundaries;
- Discuss the nature of these boundaries in relation to crime and security; and
- Discuss the effects of Nigeria's changing internal boundaries on security.

### **3.1 Location**

Nigeria is located in West Africa, roughly between Latitude 4°N and 14°N and Longitudes 4°E and 15°E. The country's most southerly point is near Brass in the Niger Delta, which is roughly north of the Equator. The country's northern boundary is approximately at 14°N. Her westerly boundary runs roughly along Longitudes 3°E. Her easterly boundary runs from a point to the south west of the estuary of the Cross River to northwards almost to Longitude 15°E, South of Lake Chad. Figure 2.1 shows the location of Nigeria. The country is located almost in the centre of the great curve made in the west by the continent of Africa. This means that it is roughly equidistant from the extreme corners of Africa. The flight time to any place in Africa is relatively short. It is only a few hours to Dakar, less than four hours to Tripoli or Algiers, about three hours to Cairo and to Addis Ababa.

### **3.2 Size**

Nigeria has a total land area of 923,768 square kilometres. This is four times the area of Ghana and about thirteen times the area of Sierra Leone. It is four times the area of the United Kingdom. Nigeria covers about one seventh of the productive area of West Africa.

The location and size of the country are very important for a number of reasons:

- Because of its location close to the equator and the Atlantic Ocean, Nigeria enjoys a hot tropical climate. Rainfall decreases from over 4000mm in the Niger Delta to less than 250mm in the extreme northeast. There is sufficient rainfall for some form of rain-fed agriculture in the country.
- Because of its location and large size, Nigeria has the greatest



diversity of climate, vegetation and soils as well as human population in West Africa. Thus, unlike some of its neighbours such as Niger Republic, Nigeria has a very wide range of national resources.

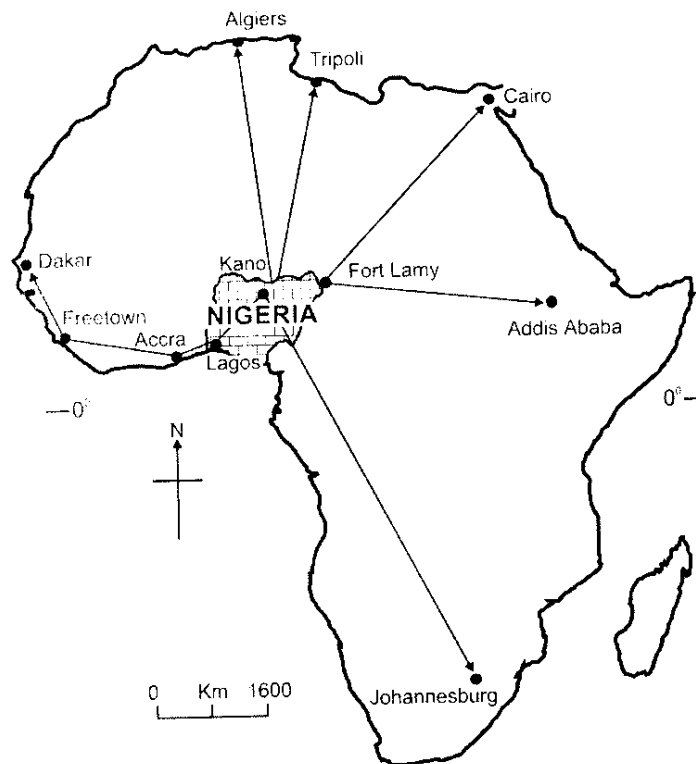
- The country's large size means that it must have a large police force to protect its entire territory from lawlessness.

### **3.3 Neighbours and Land Boundaries**

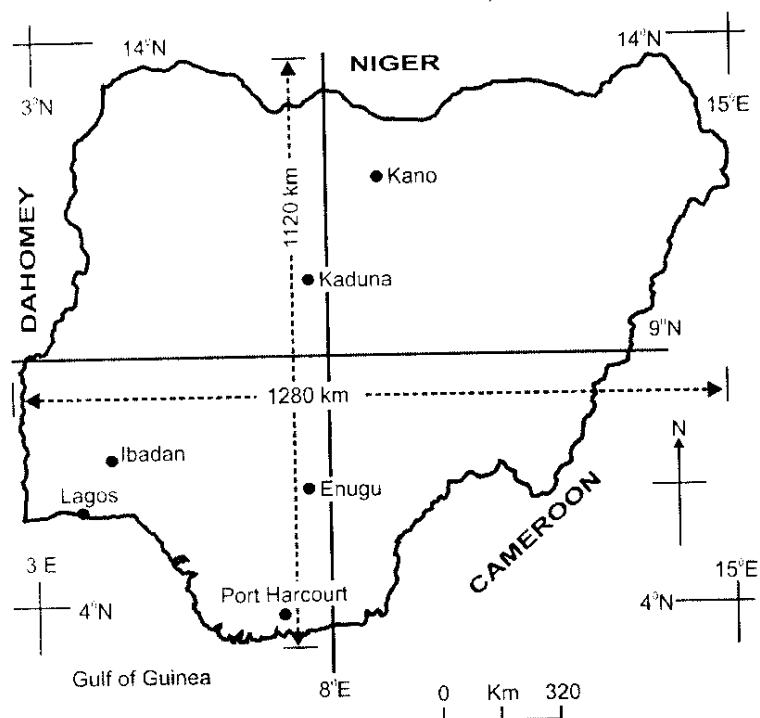
It is important to know Nigeria's neighbours for a number of reasons:

- The country's relationships with her neighbours have implications for its own security;
- Security threats in neighbouring countries affect Nigeria;
- There are many Nigerians living in these countries and the way they live and are treated have implications for security in Nigeria.
- There are many criminal cross-border activities taking place between Nigeria and her neighbours.
- All of Nigeria's neighbours are former French colonies and have an approach to public law and international transactions and relations which is different from that of Nigeria;
- From time to time there have been ugly border incidents between Nigeria and her neighbours.

For these reasons it is necessary for you to know whom Nigeria's neighbours are and what her boundaries with them are like. These are the peoples; Republic of Benin to the west, the Republic of Niger to the north, the Republic of Chad to the north east and the Republic of Cameroon to the east. Figure 2.2 shows Nigeria and its West African neighbours.



*Fig. 2.1 A: The Location of Nigeria on the African Continent*



*Fig. 2.1 B: Nigeria: North - South and East - West Dimensions*

**The Republic of Benin:** This is a small country which extends, as a narrow territory, all the way from the Atlantic in the south to the River Niger in the north. The boundary between Nigeria and this country has

split several ethnic groups including the Yoruba, the Baribo and the Hausa. This partition has always created social, economic, political and diplomatic problems for both countries. Thus:

- People on either side of the border continue to interact as if the border did not exist making life very difficult for law enforcement agencies such as the police to operate effectively.
- Because much of the Nigerian side of the border is out of the mainstream of the country's political, economic and social life, the people there avail themselves of services (e.g. health services), which are better on the Benin side. This has created security problems. For example, in a recent report in one of Nigeria's dailies, there was a story of Beninois gendarmes (i.e. policemen) invading a number of border villages in Sokoto State and wanting to enforce that country's tax laws there. (The argument of the gendarmes was likely to be, "If these people use our social services, they should pay our taxes." Can you fault this argument?).
- It is very easy for fugitive offenders (Nigerian and Beninois) to slip over the border and so escape from law enforcement agencies.
- There is a thriving smuggling business along the border in which second hand cars and clothes and other goods are brought into Nigeria.

The point must be made, however, that the Government of Nigeria has almost always enjoyed excellent relations with the Government of Benin.

***The Republic of Niger:*** Niger is a very large country (area: 1,267,000 square kilometres). It is mostly desert. The wettest areas are along the Nigerian border but even then severe periodic drought is a fact of life. Niger has a few minerals and also has livestock. But all the same, it is a very poor country.

The boundary between Nigeria and Niger splits the Hausa, the Fulani and other ethnic groups. The Governments of the two countries maintain excellent relations. But there are aspects of the geography of Niger and of the boundary between the two countries which are of security importance.

- The boundary is very long and the weather along it is nearly always hostile. It is therefore difficult to police effectively.
- The boundary area is mostly very open savannah where it is possible to stand and see the land for kilometres around. This means that, for a criminal on the run, there is literally nowhere to hide from law enforcement officers in pursuit of him.
- The most important aspect of the geography of Niger as far as crime and security in Nigeria are concerned, is the occurrence

from time to time of drought in the Sahel belt. Drought forces farmers and pastoralists from Niger to follow the footsteps of their Nigerian counterparts in this belt to move in large numbers into Nigerian towns. In these towns, they swell the ranks of the unemployed and constitute a serious security risk. Between 1980 and 1985, these ecological refugees participated in the serious Maitatsine urban revolts in Kano (1980), Maiduguri (1982), Kaduna (1982), Jimeta-Yola (1984) and Gombe (1985) in which thousands of people were killed. Table 2.1 shows the origins of Maitatsine Refugees who participated in these revolts. As you can see, a substantial number of them came from Niger Republic.

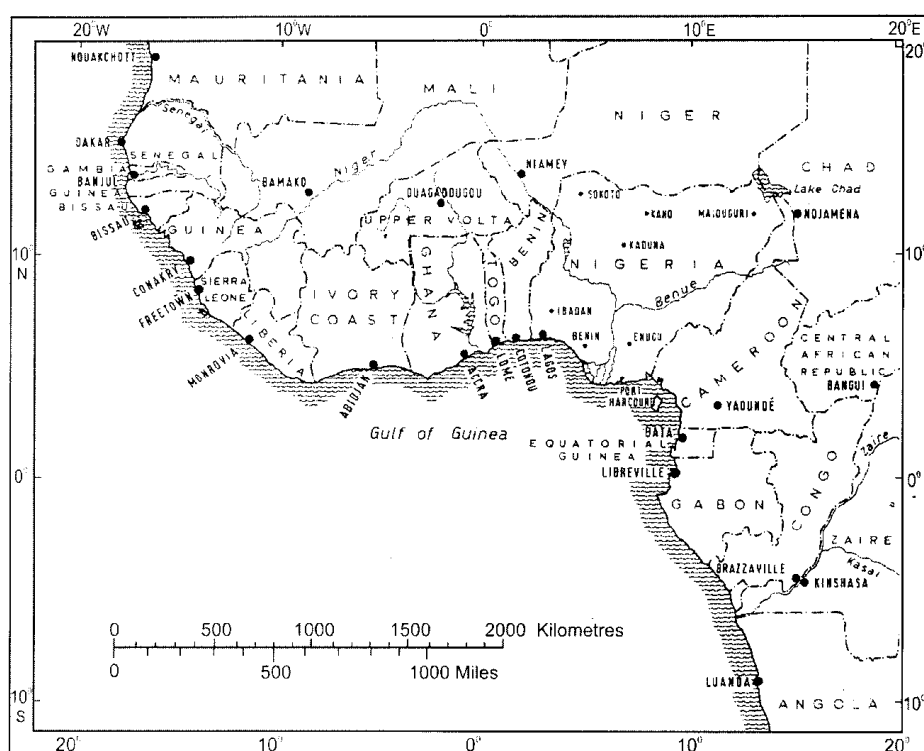


Fig. 22: Nigeria and Its Neighbours. (From Barbour, K. Michael et al. *opp.cit*)

**Table 2.1: Origins of the Maitatsine Refugees who participated in the Urban Revolts in Northern Nigeria Between 1980 and 1985.**

State/Country	Number
Borno/Yobe States	516
Kano/Jigawa States	324
Bauchi/Gombe States	280
Sokoto/Kebbi States	163
Niger	36
Plateau/Nasarawa States	6
Oyo/Osun States	1
Anambra/Enugu States	1
Niger Republic	281

Chad Republic	85
Cameroon	34
Mali	13
Upper Volta	8
Sudan	1
Total	1,749

Source: Sabo Bako (1990).

***The Republic of Chad:*** Like Niger, Chad is a very large country. It has an area, which is about one and one third that of Nigeria. Its boundary with Nigeria is only 98 km, long but it lies entirely on Lake Chad. Chad, which is a relatively poor country, has been politically unstable since 1975 creating great problems both diplomatically and economically. It is also subject to periodic drought. Nigeria's crime and security problems, which are associated with Chad, include the following:

- the civil war in Chad led to an influx of Chadian refugees into Nigeria which had to accommodate and feed them.
- there is conflict from time to time between Nigerian and Chadian fishermen over fishing rights on the Lake Chad and Chadian gendarmes are sometimes involved.
- it seems as if armed bandits cross over into Nigeria to take advantage of the better economic conditions and inadequate security protection in north east Nigeria. They raid villages and rob road travellers deep into the country..
- drought in Chad invariably cause an influx of Chadian refugees into Nigerian towns such as Maiduguri, Kano, Bauchi, Jos, Ilorin, Ibadan, Lagos, etc. Table 2.1 shows that many Chadian refugees took part in the Maitatsine urban revolts of 1980 to 1985.

***The Republic of Cameroon:*** Cameroon is Nigeria's eastern neighbour, It is a large country with diverse resources and peoples. It has a long boundary with Nigeria, which runs through hills and mountains from the shores of Lake Chad. It runs through the Mandara Mountains which reach 1525m above sea level. It crosses the Benue Valley and passes through Bamenda - Cameroon Highlands where the Shebshi Mountains exceed 1830m above sea level. It crosses the valley of the Cross River at Manife and crosses the Oban Hills before dropping to the sea south east of the Cross River estuary. Along the boundary, the vegetation changes from Sahel Savannah in the north through Montane Grasslands in the higher areas to Tropical Rain Forest, Fresh Water Swamps and finally Mangrove Swamps in the coastal area.

The boundary cuts across numerous ethnic groups.

The relationship between the Nigerian Government and the Government of Cameroon has not been very cordial especially since about 1975. Nigeria has a number of security problems which are associated with Cameroon:

- the boundary between the two countries runs through difficult terrain including mountains and thick vegetation. It is therefore difficult to patrol effectively.
- Cameroon gendarmes are in the habit of invading Nigerian territory in various places and subjecting innocent Nigerians to unlawful treatment.
- Cameroon has laid claim to parts of Nigerian territory. From time to time, Cameroonian security men have invaded these areas in an attempt to enforce their claim. Right now (March 2002), the International Court of Justice at the Hague is hearing a case in which Cameroon is claiming that the Bakasi Peninsula in Cross River State is part of its territory
- Cameroonian security men also attack Nigerians fishing in Nigeria's territorial waters.

***Border Posts and Patrols:*** A country establishes border posts at major points of entry and exit and organises patrols of its borders for various reasons, including:

- Monitoring and controlling movements of people into and out of the country;
- Combating smuggling and illegal trafficking in goods across the border: and
- Defending the country against external aggression.

In total, Nigeria has about 2,790 kilometres of land boundaries to monitor and defend. Not only is this long but the boundaries pass through difficult terrain in many places.

The Nigerian Customs Service has the responsibility of combating smuggling and illegal trafficking in goods across Nigeria's borders. It has been able to operate effectively only at the International Airports (notably Lagos, Kano and Abuja), the major sea ports (especially Lagos and Port Harcourt) and a number of border towns and villages (notably Idiroko and Semme) on the boundary with Benin Republic and Illela in Sokoto State. As of 1981, there were only 47 customs posts along Nigeria's borders and sea coast. This is hopelessly inadequate for the country's borders. No wonder smuggling, which is a threat to many of the country's manufacturing industries, is a major activity along the country's borders.

The responsibility of defending Nigeria's land borders is the responsibility of the Nigerian Army. Unfortunately, most of the army garrisons are located far away from the borders. It would therefore be true to say that Nigeria's land borders are undefended and are therefore open to entry by potential aggressors.

***Nigeria's other West and Central African Neighbours:*** You need to know Nigeria's other West and Central African neighbours. This is because although Nigeria does not share boundaries with them, it is generally known that their welfare is Nigeria's welfare and any major threats to their security is a threat to the security of Nigeria. These countries include, Equatorial Guinea and the Central African Republic in the east and Togo, Ghana, Upper Volta, Mali, Ivory Coast, Liberia, Sierra Leone, Guinea, the Gambia, Senegal and Mauritania in the west. They are important to the security of Nigeria for several reasons:

- Because Nigeria's economy is basically stronger than theirs, their citizens seek better pastures in Nigeria when there is a depression. Thus, many Ghanaians flocked to Nigeria in the 1970s when the Ghanaian economy was in bad shape. Although most of such economic refugees engage in legitimate economic activities, many of them engage in criminal activities of one type or another. In any case, they take up jobs which could have been done by Nigerians and so worsen the country's unemployment problem. They also put pressure on social services in Nigerian towns.
- Again, Nigeria is often the destination of refugees fleeing from these countries as a result of civil war, e.g. Chad in the 1970s and 80s. Liberia and Sierra Leone in the 1990s.
- Drought victims from some of these countries also take refuge in Nigerian towns.
- Finally, there is a substantial population of Nigerians in each of these countries. Therefore it is in Nigeria's interest that there is peace in them so that these people may not have numbers to swell the population of our towns.

### **3.4 Coastal Boundary and Territorial Waters**

Nigeria has a coastline of about 860 kilometres. This is quite a long boundary to protect and defend. Moreover, inter-connected lagoons and creeks makes the task of protecting and defending it all the more difficult. As a matter of fact, smuggling is rife, especially in the Niger Delta area and east of it. Smugglers are difficult to catch since there are so many alternative routes for their boats.

The area of the Atlantic Ocean over which Nigeria has jurisdiction, according to the United Nations Conference on the Law of the Sea, extends 320 kilometres out from the country's coastline. Within this area, Nigeria has sovereign rights over the mineral resources of the seabed as well as the fisheries. It also has the right to build artificial islands and structures and to control pollution.

Nigeria has the very heavy responsibility of protecting and defending this huge area of water against illegal intrusion of any sort. This responsibility has been assigned to the Nigerian Navy. But the navy is small and inadequately equipped. Therefore, it cannot be expected to discharge the responsibility effectively. As a result, piracy and illegal fishing by foreign ships occur, posing a threat to the country's economy.

### **3.5 Internal Boundaries**

Before May 1967 Nigeria consisted of four regions. In May 1967, the country was split into twelve States. In 1976 it was further broken down into nineteen States and a new Federal Capital Territory was carved out. Since then, more States have been added and today there are thirty-six plus the Federal Capital Territory (FCT). The Local Government Areas have similarly continued to be sub-divided so that today, there are seven hundred and seventy four. These State and Local Government creations have very serious security implications. Thus every time they were created, it meant that new artificial boundaries were drawn across areas that used to belong together in one entity. In many places when such a boundary is created on paper by the government:

- Problems arose regarding how to demarcate the boundary on the ground;
- People resent the fact that their village or area had been put on the "wrong" side of a boundary;
- People resent the fact that the new boundary has apparently cut off land, which had been traditionally theirs.

Many of the civil disturbances which have occurred in rural areas in different parts of Nigeria in recent times are due, at least in part, to the rapidly increasing number and length of our internal boundaries.

### **4.0 Conclusion**

From what we have learnt in this unit we can conclude that it is necessary for us to know the location and size of Nigeria as well as its neighbours and the nature of its external and internal boundaries in order to understand the problems of crime and security in Nigeria and how these problems may be tackled.

### **5.0 Summary**

Because of its location and size, Nigeria is well endowed by nature and is very diverse in character. Nigeria's official relationships with Benin and Niger have been cordial. But her relationships with Chad and Cameroon have not. These poor relationships, the nature of Nigeria's land borders and the fact that these borders are poorly policed have



created a favourable environment for cross-border criminal activities and threats to Nigeria's security. The relatively poor economies of Benin and Niger and of Nigeria's other West and Central African neighbours are also of concern for security reasons. Nigeria has a long coastal boundary and a large expanse of territorial waters. Yet its navy is small and inadequately equipped. Therefore Nigeria is open to criminal activities and threats to its security in these areas. The creation of States and Local Government Areas has multiplied the number and length of Nigeria's internal boundaries. This has led to boundary disputes and civil disturbances in various places and at various times.

## **6.0 Self-assessment Exercise**

Discuss the various ways in which Nigeria's shared boundary with the Republic of Chad poses crime and security problems for the country.

## **7.0 Tutor-marked Assignment**

How does Nigeria's relationship with her neighbours affect crime and security in the country?

## **8.0 Further Reading and other Materials**

1. Barbour, K. Michael, Julius S. Oguntinyinbo, J.O.C. Onyemelukwe and James C. Nwafor *Nigeria in Maps*. Hodder and Stoughton, 1982.

### **Unit 3: Relief Drainage**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Relief
  - Height above sea level
  - Relief Regions
- 3.2 Drainage
  - Lake Chad
  - The River Systems
  - Uses of Nigeria's Rivers
  - Problems of Nigeria's Rivers
  - The Coastal Creeks and Lagoons in the Niger Delta
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

#### **1.0 Introduction**

When we talk about the relief of an area we are talking about two things. First, we are talking about how high the area is above sea level. For example, the Niger Delta is only slightly above sea level. It is so low that at high tide, extensive areas are flooded by sea water. By contrast, Jos is located at a height of about 1300 metres above sea level. It is in an upland area.

The second thing we are talking about when we talk about the relief of an area is how uneven or rough the land is in that area. For example, Maiduguri is located on land which is very flat. So we say that Maiduguri is located on a flat plain. By contrast, Okene in Kogi State is located in an area where the land rises to a considerable height and falls again to a great depth over short distances. Therefore many of the houses are situated on steep slopes. We say that Okene is located in a hilly area.

The drainage of an area consists of the water bodies as well as the flow of water in that area. Drainage refers to water bodies such as lakes and rivers. It is concerned with the number, volume and flow characteristics of these water bodies.

In this unit we shall be looking at the relief and drainage of Nigeria. These are important features of the country's geography for a number of reasons, including the following:

- Relief *and* drainage affect economic activities, especially agriculture;
- Relief and drainage affect ease of concealment on the one hand and of movement on the other. They may therefore facilitate or deter criminal activities on the one hand and render security patrols easy or difficult on the other;
- It is relief and drainage which determine the potentials for the development of hydroelectric power on which much of the country's electric power supply depends.

These are some of the reasons why we are studying the country's relief and drainage. The specific learning outcomes of this unit are set out below:

## 2.0 Objectives

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

- Describe in a general way how high different parts of the country are above sea level;
- List the main relief regions of the country;
- Draw a sketch map showing Lake Chad and the country's main rivers;
- Describe, with the aid of this sketch map, the drainage pattern of the country;
- Discuss the economic importance of the country's drainage;
- Show the relationship between smuggling activities and drainage along the coast; and
- Discuss the effect of relief on security patrols along the country's land boundaries.

## 3.1 Relief

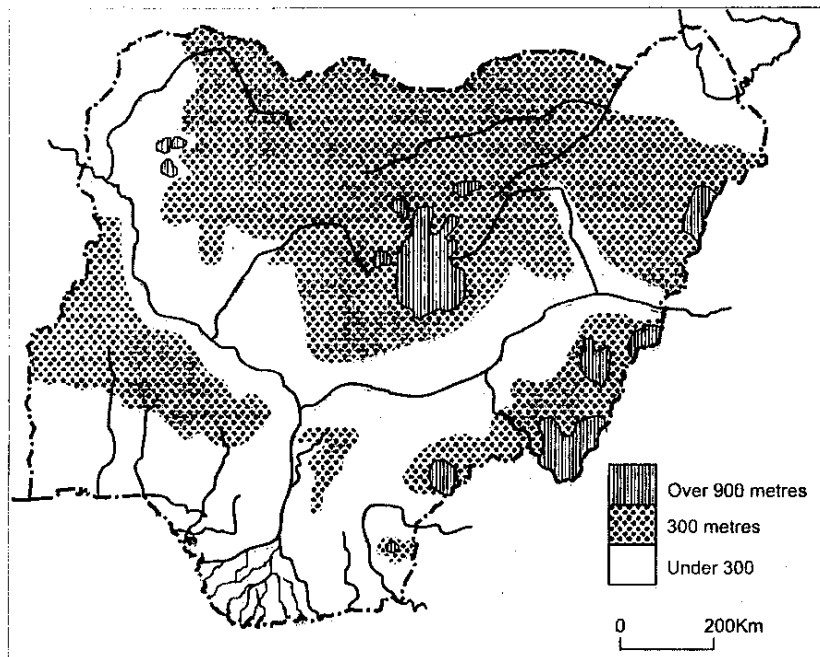
### Height above Sea Level

Figure 3.1 is a map of Nigeria showing height above sea level. The Rivers Niger and Benue divide the country into three large blocks. One block lies between the Middle Niger, the Lower Niger and Atlantic Ocean. Let us call this the Western Relief Block. The second block lies between the Benue, the Lower Niger and the Atlantic Ocean. We shall call this the Eastern Relief Block. The third block may be called the Northern Relief Block.

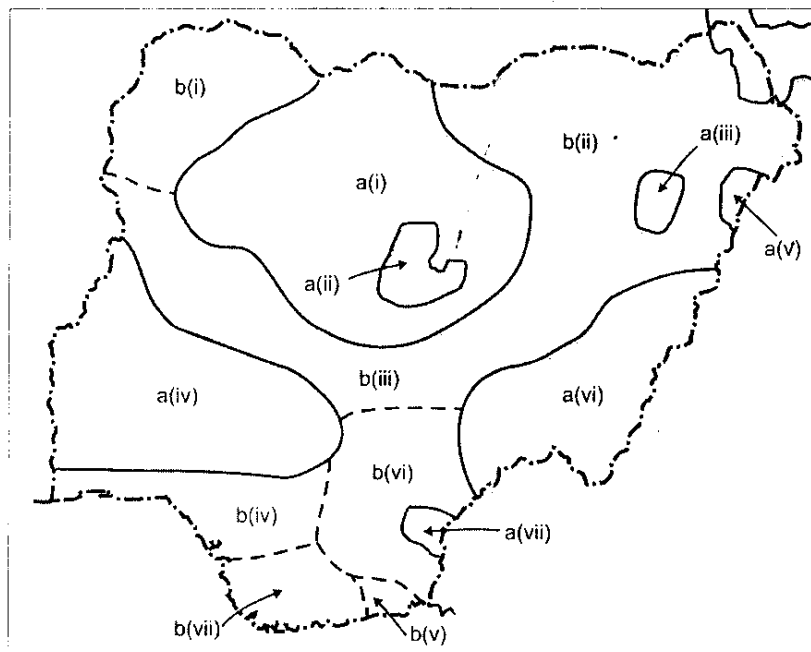
***The Northern Relief Block:*** This is the largest of the three relief blocks. From the River Niger and Benue where the elevation is less than 150m Above Sea Level (ASL), the land rises gently at first and then by a series of steps up to the High Plains of Hausaland on which Kaduna, Kano,

Gusau, Katsina, Dutse and Bauchi are located. Apart from the Jos Plateau, the High Plains of Hausaland range in elevation from about 300m to over 600m ASL rising to about 1200m at the foot of the Jos Plateau. The Jos Plateau rises abruptly above these plains and has a general elevation of over 1200m Above Sea Level.

From the Zaria area and the Jos Plateau the land falls away to the Sokoto valley in the north west and Lake Chad in the north east, both at a general elevation of less than 300m ASL.



*Fig. 3.1: Nigeria: Height Above Sea Level*



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>a) Upland Areas</li> <li>    i) High Plains of Hausaland</li> <li>    ii) Jos Plateau</li> <li>    iii) Biu Plateau</li> <li>    iv) Western Uplands</li> <li>    v) Mandara Mountains</li> <li>    vi) Eastern Highlands</li> <li>    vii) Oban Hills</li> </ul> | <ul style="list-style-type: none"> <li>b) Lowlands</li> <li>    i) Sokoto Plains</li> <li>    ii) Chad Plains</li> <li>    iii) Niger-Benue Trough</li> <li>    iv) Coastal Plains of South-Western Nigeria</li> <li>    v) Coastal Plains of South-Eastern Nigeria</li> <li>    vi) Lowlands and Scarpland of South-Eastern Nigeria</li> <li>    vii) Niger Delta</li> </ul> |
|--|---|

**Fig. 3.2: Relief Regions of Nigeria**

**The Western Relief Block:** This rises gradually from the Atlantic Ocean to form a belt of high plains and hills which are generally over 300m ASL reaching as high as over 1000m in the Idanre Hills. This belt of plains and hills is often called the Western Uplands. From the highest part of these uplands, the land falls down to the Middle Niger valley which is less than 150m ASL,

**The Eastern Relief Block:** This is made up of three upland areas separated by extensive, low-lying plains. The first of the upland area is the Udi Plateau. This is a relatively low plateau which extends from Igala country in Kogi State through Anambra, Enugu, Imo and Abia States. From this plateau which has a general elevation of over 300m ASL, this slopes down to the Lower Benue in the north (elevation less than 150m ASL). Finally, the land slopes down to the Cross River Valley in the east (elevation less than 150m ASL).

The second and smaller of the three upland areas making up the Eastern Relief Block is the Oban Hills. Located north of Calabar, this upland area rises to over 300m A SL. It is separated from the third and largest of the three upland areas by the Cross River Valley.

The third upland area rises from the Benue Valley to form a belt of high plateau and hills. The highest point in Nigeria is to be found in this area and in the Shebshi Mountains. This relief block rises to a general elevation of over 600m ASL with large areas rising to over 1000m. The famous Mambilla Plateau and the Alantika Mountains are to be found in this area.

### **Relief Regions**

A relief region is an area which can be distinguished from the areas around it by its height above sea level and how uneven the land surface is. For example, the Niger Delta is a relief region because:

- i) it is low-lying, standing only a few metres above sea level;
- ii) it is flat;
- iii) it is crossed by a complex network of creeks all of which are distributaries of the Niger River. Similarly, the Jos Plateau is a

relief region because:

- i) it is an upland at over 1000m ASL;
- ii) it is separated from the areas around it by very steep slopes called escarpments;
- iii) it has a general land surface which is either undulating, rolling or flat and may therefore be called a plain.

Having defined, with examples, what a relief region is, let us now divide Nigeria into relief regions. Let us start by dividing the country into two types of relief region based on height above sea level. These are:

- a) the upland areas and
- b) the lowlands.

The upland areas may be subdivided into seven relief regions, namely:

- i) the High Plains of Hausaland;
- ii) the Jos Plateau;
- iii) the Biu Plateau;
- iv) the Western Uplands;
- v) the Mandara Mountains;
- vi) the Eastern Highlands; and
- vii) the Oban Hills.

The lowlands may also be subdivided into seven relief regions, namely:

- i) the Sokoto Plains;
- ii) the Chad Plains;
- iii) the Niger-Benue Trough;
- iv) the Coastal plains of South-Western Nigeria;
- v) the Coastal Plains of South-Eastern Nigeria;
- vi) the Lowlands and Scarplands of South-Eastern Nigeria; and
- vii) the Niger Delta.

We shall now look at these relief regions which are shown on Figure 3.2, paying particular attention to their economic importance.

**a(i) The High Plains of Hausaland**

These are generally favourable for the production of a wide range of food crops as well as some export crops, notably, groundnuts and cotton. There are many places where the rivers draining these plains provide excellent sites for the construction of hydroelectric power dams. Some of these have been studied but only the site at Shiroro on the River Kaduna has been developed.

**a(ii) The Jos Plateau**

Because of the height above sea level, this upland plain is famous for its cool weather. The plateau is suitable for arable agriculture. There are many potential dam sites around its edges. Only the ones at Kwol and Kurro Falls have been developed.

**a(iii) The Bin Plateau**

This relief region is an upland plain with rich soils which are good for arable agriculture.

**a(iv) The Western Uplands**

The weather areas of the Western Uplands are famous for export crop production, notably cocoa. The drier areas concentrate on food crops such as yams.

**a(v) The Mandara Mountains**

**a(vi) The Eastern Highlands**

**a(vii) The Oban Hills**

These three relief regions are often taken together and called the Eastern Highlands. They are crossed by the boundary between Nigeria and Cameroon which is the most varied of the land boundaries of the country. The boundary is therefore poorly patrolled.

It is to be noted that the more hilly parts of Nigeria's upland areas served in the past as refuge sites for human settlement. People settled in these areas to escape from slave raiding on the surrounding plains. During the colonial period more peaceful conditions were established and roads and railway lines were built. The result was widespread abandonment of hill top settlements and relocation on the plains around. Unfortunately, the people also abandoned their system of arable agriculture which involved elaborate terracing and the use of animal manure in favour of shifting cultivation and bush fallowing. Later in this course, we shall see some of the problems confronting shifting cultivation and bush fallowing today.

**b(i) The Sokoto Plains**

These flat plains are famous for food crop production, notably millet, guinea corn and rice.

**b(ii) The Chad Plains**

These are similar to the Sokoto Plains.

**b(iii) The Niger-Benue Trough**

these flat to undulating plains are the country's bread basket. They are famous for the production of both grain and root crops, the huge potentials on the Niger have only been partially developed (at Kainji and Jebba).

**b(iv) The Coastal Plains of South-Western Nigeria**

**b(v) The Coastal Plains of South-Eastern Nigeria**

**b(vi) The Lowlands and Scraplands of South-Eastern Nigeria**

This is a region of plains and Hills. The hills form distinctive belts which are steep on one side (called scarps) and are gently sloping on the other. The hills are subject to gully erosion. As a matter of fact this region is the relief region worst hit by gully erosion in the country.

**b(vii) The Niger Delta**

The relief of the Niger Delta has been described earlier. The only thing we need to add to that description is that it is subject to extensive flooding and is therefore swampy.

The Niger Delta is particularly important to the economy of Nigeria because most of the country's crude oil exports come from there and from the adjacent shallow water area of the Atlantic Ocean.

### **3.2 Drainage**

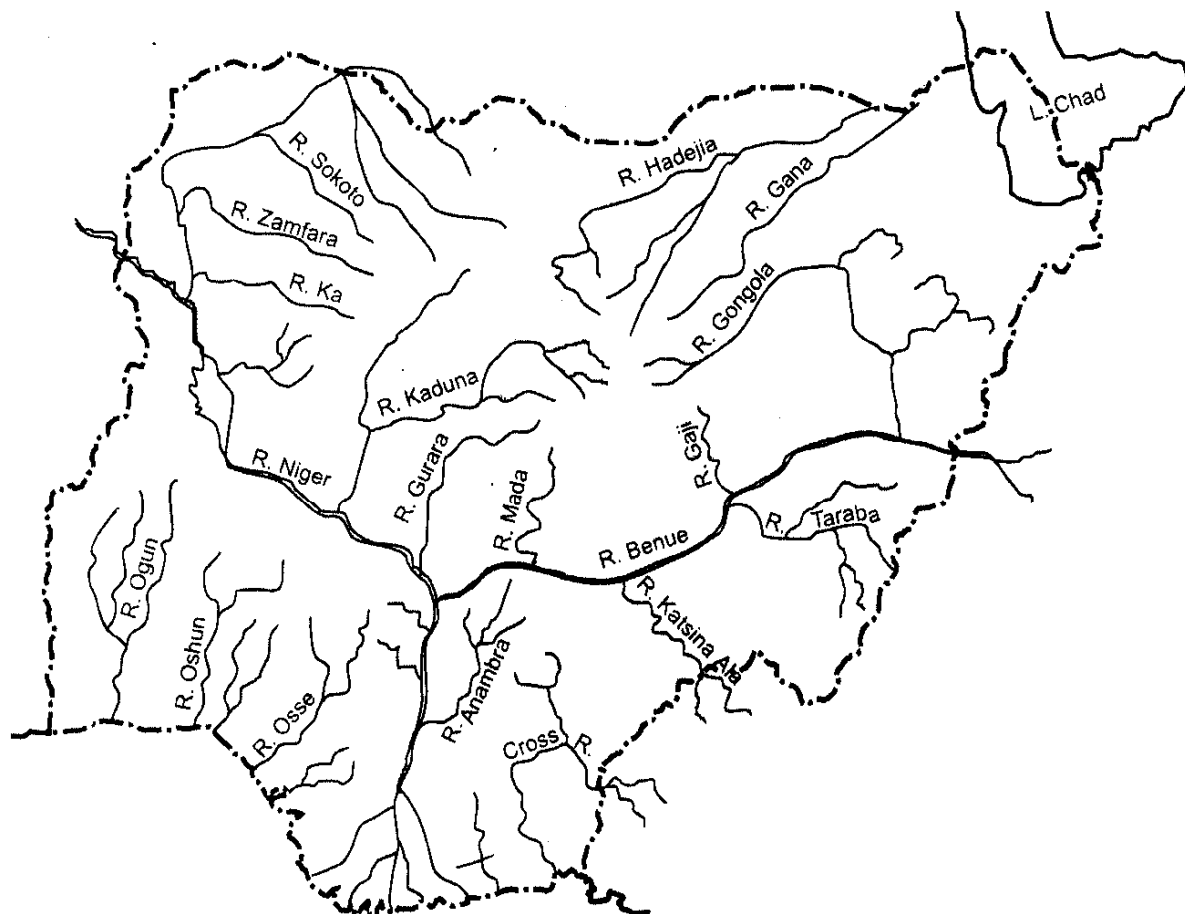
Figure 3.3 shows the drainage pattern of Nigeria. It shows Lake Chad which Nigeria shares with Niger, Chad and Cameroon. It also shows the main river systems as well as some of the coastal creeks and lagoons.

#### **Lake Chad**

This is a peculiar body of water. Although it is an inland lake with no outlet, it is a freshwater lake. It receives water mainly from Central Africa (the River Chari) and secondarily from Nigeria (Rivers Komadugu-Yobe, Ngadda and Yadseram). Because the lake is in a shallow basin, its area varies considerably depending on variation of rainfall in the areas supplying water to it.

Lake Chad is very important to the Nigeria economy because it supports a large fishing population and supplies the country with a large proportion of its animal protein. The Lake is therefore critical to Nigeria's food security. Unfortunately, conflicts often arise between Nigerian, Chadian and Cameroonian fishermen over fishing rights. This is so especially as the boundaries the four countries share are poorly demarcated and the Nigerian side is poorly patrolled and defended.





*Fig. 3.3 Nigeria: Drainage Pattern*

### **The River Systems**

Nigeria is well drained with a dense network of rivers. In order to describe it, let us look at the three relief blocks described above.

The Northern Relief Block is drained largely by rivers taking their sources from two centres:

- i) The first centre is located around Zaria in Kaduna State. From there, rivers drain north-westwards to join the Sokoto river which eventually flows into the Niger River, which also flows southwards to the River Kaduna which is also a tributary of the Niger. Finally, some rivers flow north-eastwards towards Lake Chad.
- ii) The second centre is the Jos Plateau from which rivers flow north-eastwards towards Lake Chad and into the Gongola river which is a tributary of the Benue; rivers flow north-westwards to join River Kaduna; they also flow south-wards to join the Benue.

You should also note that some rivers flow from the Mandara Mountains northwards to Lake Chad. The Western Relief Block is

drained by rivers which flow in three main directions:

- i) northwards to join the Middle Niger;
- ii) southwards to empty into the Atlantic Ocean;
- iii) eastwards to join the Lower Niger.

The Eastern Relief Block is drained mainly by four sets of rivers:

- i) Those which flow from the Eastern Highlands to join the Benue;
- ii) Those which flow into the Cross River which empties into the Atlantic.
- iii) Those which flow into the Lower Niger; and
- iv) Those which flow directly southwards into the Atlantic.

### **Uses of Nigeria's Rivers**

The rivers of Nigeria have many uses, including:

- domestic water supply;
- hydro-electric power generation;
- irrigation;
- fishing; and
- transportation

### **Problems of Nigeria's Rivers**

Nigeria's rivers and their use have some problems which pose threats to national security, food security or the security of lives and properties. These include the following:

- The country's two largest rivers are international rivers. This means that the uses to which the countries lying upstream of Nigeria put these rivers, affect the amount of water available for Nigeria to use. Thus, because more dams are being built in the countries through which the River Niger passes before entering Nigeria, the amount of water available for the Kainji and the Jebba hydroelectric dam reservoirs has been decreasing. This is a threat to Nigeria's electricity supply.
- It is also to be noted that Cameroon has built a dam (the Lagdo Dam) on the Upper Benue. From time to time, large volumes of water are released from this dam and these cause extensive flooding in the Benue Valley within Nigeria. Such flooding causes loss of lives, crops and other properties;
- Many of Nigeria's rivers are subject to annual flooding, e.g. the Cross River;
- The rivers of Nigeria are characterised by seasonal flow. This puts a limit on water transportation.

## **The Coastal Creeks and Lagoons in the Niger Delta**

The rivers of the Niger Delta and the creeks and lagoons to the west and east of it form an intricate network and are an important aspect of the country's drainage. They form a network of waterways, which present peculiar problems for crime prevention and security. The waterways are difficult to patrol effectively. Therefore, smuggling is rampant, a major threat to Nigeria's manufacturing industries.

### **4.0 Conclusion**

The relief and drainage of Nigeria present several economic advantages, such as:

- Land suitable for agriculture;
- Hydro-electric power dam sites;
- Fisheries; and
- Waterways.

The relief and drainage of the country also present a number of problems, such as:

- gully erosion;
- the international nature of the Niger and the Benue;
- annual flooding over large areas and
- seasonal flow of rivers.

### **5.0 Summary**

Nigeria may be divided into three large relief blocks. Each block is made up partly of lowlands and partly of uplands. We have divided the lowlands into seven relief regions and the uplands also into seven relief regions. Most of the lowlands are plains. Most of the uplands are also plains but they are to be found at a higher elevation than the lowlands. Most of the country's relief is not a limiting factor for agriculture. Thus, both food and export crops can be grown over large areas.

The drainage of the country is made up of Lake Chad, and international water bodies, a dense network of rivers and the lagoons and creeks of the coastal belt. These water bodies are used for a variety of purposes. They are also characterised by several problems, which are a threat to national security, food security or the security of lives and properties.

### **6.0 Self-assessment Exercise**

Discuss the economic importance of Nigeria's drainage pattern.

## **7.0 Tutor-marked Assignment**

Nil

## **8.0 Further Reading and Other Materials**

Nil

## **Unit 4: Climate**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Temperature
- 3.2 Pressure and Winds
- 3.3 Mean Annual Rainfall
- 3.4 Seasonal Distribution of Rainfall
- 3.5 Destructive Thunderstorms
- 3.6 Climate and Flood Disasters
- 3.7 The Rainy Season and Food Supply
- 3.8 The Dry Season
- 3.9 Rainfall and Agricultural Zones
- 3.10 Rainfall Variation and Drought
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

The climate of an area is the average weather conditions in that area. Weather conditions are the conditions of the atmosphere at a particular point in time. These conditions include sunshine, temperature, humidity, air masses, atmospheric pressure, winds and rainfall. When we talk of the weather at Abuja at 8.00a.m on 1<sup>st</sup> April 2002, we are talking of these conditions as observed or measured at Abuja at that time on that day. When these conditions have been observed or measured at 8.00a.m on the 1<sup>st</sup> April of every year for many years, we can build up an average picture of what to expect at 8.00a.m on the 1<sup>st</sup> of April in any one year.

Such an average picture can be built up for all hours of the day and for all days of the year for Abuja or any other place. Such an exercise will enable us to talk about what we expect conditions of the atmosphere to be in these places at any time of the year. In other words, we can talk of the climate of these various places. This is how scientists have been able to build up a picture of the climate in Nigeria.

In this unit, we shall not be concerned with all aspects of the climate of Nigeria. Rather, we shall concentrate on those aspects of climate which are of direct importance to security studies. These include winds and rainfall. Winds and rainfall are important to the study of security in Nigeria because:

- they affect civil aviation;
- rainfall affects vegetation;
- rainfall affects agriculture and food security;
- rainfall causes flood disasters;
- thunderstorms are often destructive; and
- ocean surges associated with winds cause catastrophic erosion.

Below are the learning outcomes of the unit.

## **2.0 Objectives**

By the time you have completed this unit you should be able to:

- describe the winds which prevail over Nigeria;
- show how the dust-laden North East Trade Winds cause a reduction in visibility which has a negative effect on civil aviation;
- describe the mean annual rainfall across Nigeria;
- describe the seasonal distribution of rainfall across Nigeria
- discuss the variability of rainfall and the occurrence of drought in Nigeria;
- relate these characteristics to the pattern of agriculture and food security;
- explain the connection between drought and rural-urban migration;
- discuss the relationship between rainfall and the occurrence of flood disasters in the country;
- discuss the occurrence and economic impact of destructive thunderstorms; and
- discuss the effects of storm waves on coastal erosion in general and the erosion of Bar Beach in particular.

## **3.1 Temperature**

Because Nigeria is located close to the Equator, the sun is high in the sky at mid-day throughout the year. Moreover the annual average number of hours of sunshine is high everywhere when compared with countries in Europe, for example, the annual average number of hours of sunshine increases from less than 1500 along the coast to over 3000 along the northern border. For these reasons, temperatures are high throughout the year. In the upland areas, mean annual temperatures vary from 21<sup>0</sup>C to 27<sup>0</sup>C. On the lowlands, means annual temperatures are higher than 27<sup>0</sup>C. The hottest months are March, April, October and November. The coolest months are July and August because heavy clouds tend to keep out the sun. In the north, December and January are also cool months partly because cool harmattan winds from the Sahara

Desert blow across the area.

### 3.2 Pressure and Winds

Atmospheric pressure is the weight of the air above the ground at a certain place. If the pressure at a particular place is high, the weight of air will tend to squeeze out the air at ground level, causing it to move away from that place as wind, if, on the other hand, the pressure is low, the air will tend to rise up. As it does so, air will flow in as wind from any area of high pressure around. Thus, it is the differences in air pressure which cause winds on the earth's surface and it is these winds which produce weather and climate in the areas across which they blow.

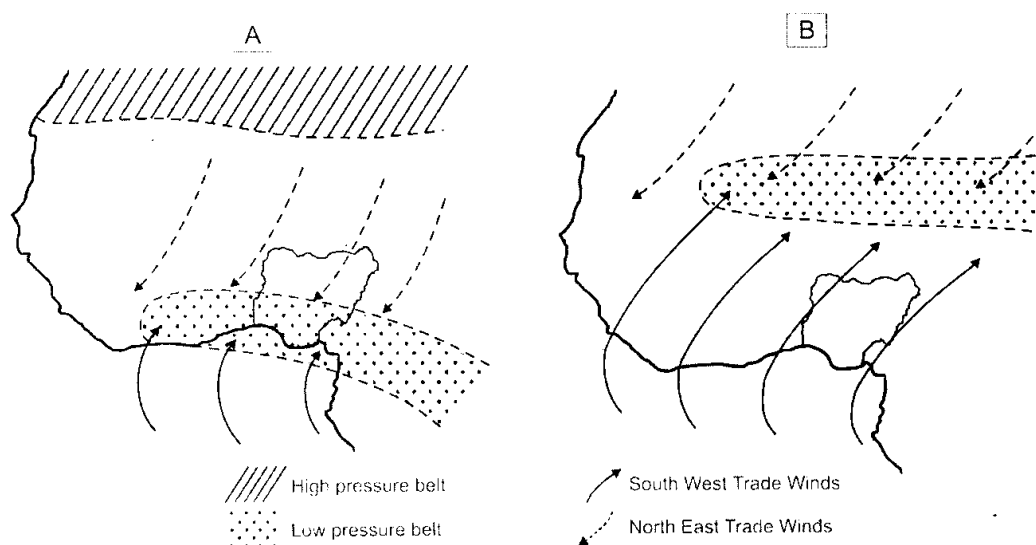


Fig. 4.1 West Africa Showing Pressure and Winds in January (A) and July (B)

The climate of Nigeria is due to the effects of two belts of high pressure and one belt of low pressure.

These high and low pressure belts are:

- the belt of high pressure which stretches east-west across the Sahara Desert:
- the belt of high pressure which stretches east-west across the South Atlantic Ocean: and
- the belt of low pressure which stretches east-west across West Africa.

It is important to note that these pressure belts are not static, i.e. they do not remain in the same place throughout the Year. Rather, they move north and south with the overhead sun. These movements of the pressure belts affect the winds which they produce which in turn affects climate over Nigeria.

The two high-pressure belts produce two wind systems which blow in opposite directions:

- i) the high pressure belt over the Sahara produce what are called the North East Trade Winds. These winds blow from northeast to southwest. They are cool, dry winds and they bring with them a great quantity of dust called the harmattan dust. They always produce dry weather.
- ii) the high pressure belt over the South Pacific produce winds which at first blow from south east to north west. But when these winds cross the Equator, the rotation of the earth from west to east causes them to be diverted to form the South West Trade Winds. These blow across West Africa from South West to Northeast. They pick up moisture as they blow over the ocean. Thus they reach West Africa as warm, moist winds, which produce cloudy skies with the possibility of rain.

These two wind systems meet in the belt of low pressure referred to above. As this belt of low pressure moves north and south so the areas affected by each of the two-wind systems increase or decrease, producing the weather and climate which we experience in Nigeria.

Figure 4.1 A shows that in January the low pressure belt is along the coast. Most of Nigeria is under the influence of the North East Trade Winds. It is the height of the dry season. There is no rainfall over most of Nigeria. In fact there are virtually no clouds over most of the country and the harmattan dust brought from the Sahara Desert may make visibility so low as to make civil aviation hazardous. Under these conditions, airlines often cancel their flights. Those that do not do so know that they are taking a risk. Air crashes have occurred several times as a result of this atmospheric hazard. As a matter of fact, *one* of Nigeria's worst air disasters occurred at Aminu Kano International Airport in the morning of 22nd January 1973 when harmattan haze reduced visibility to only 300 metres. A Jordanian airline crashed, killing 176 people.

At this time of the year (i.e. in January), only the southern part of the country is covered by the South West Trade Winds. Cloud formation and rainfall occur only in the coastal belt.

In July (Figure 4.1B), the low-pressure belt is located well north of Nigeria. The whole country is under the influence of the South West Trade Winds cloud formation and rainfall may be expected all over Nigeria. This is the height of the rainy season.

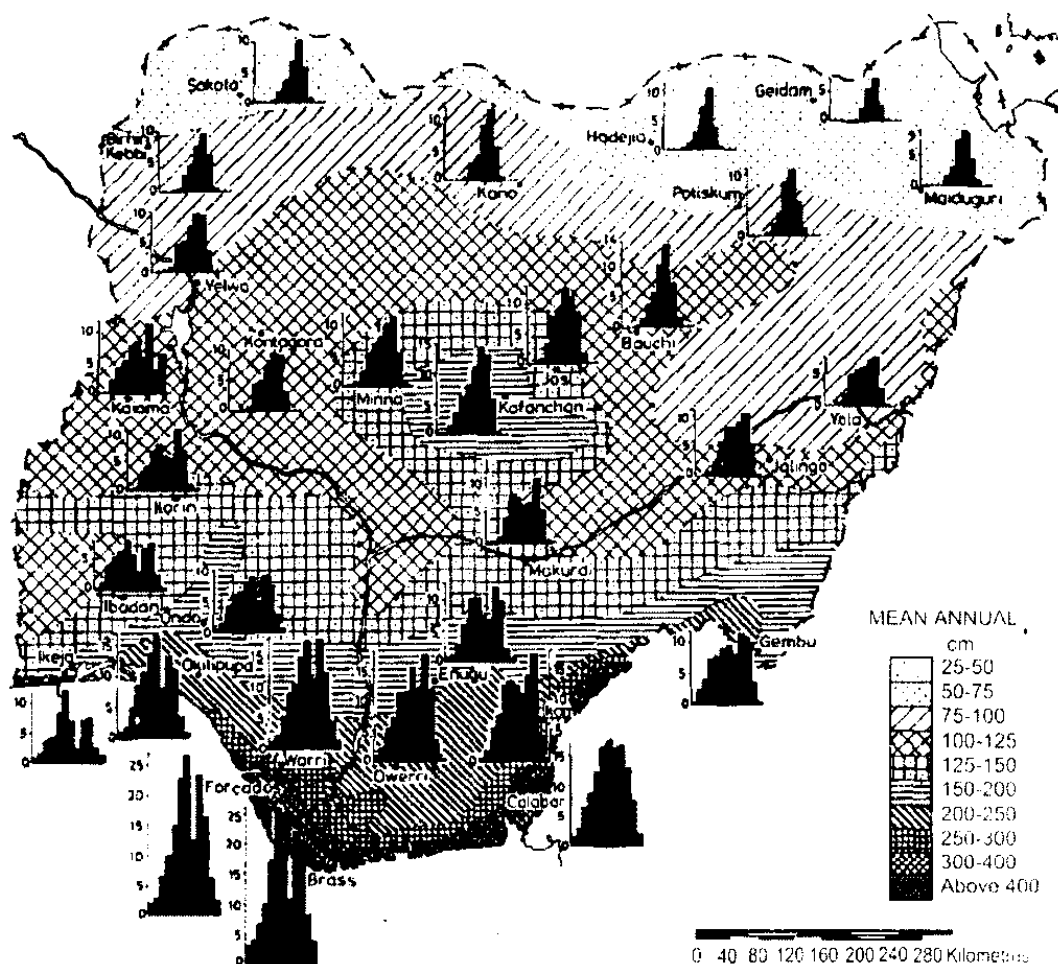
You should also take note of the fact that it is during the period between June and October that the South West Winds produce destructive waves which cause catastrophic erosion all along the Nigerian coastline. Driven by the South West Trade Winds, these waves erode the land at a



rapid rate. At Badagry Beach, west of Lagos, wave erosion is eating Lip the land at between 2 and 6 metres per year. The rates at other sections of the coastline are 25 to 30m on Bar Beach on Victoria Island, Lagos: 18 to 24m at Ogborodo/Moluwe in Ondo State: 20 to 22m at Forcados in the Niger Delta: 16 to 19m at Brass in the Niger Delta and 10 to 19m at Ibeno Eket in Akwa Ibom State. Such rates of coastal erosion pose a serious disaster threat wherever there are settlements or infrastructures located near the coast. The best example is Victoria Island where enormous amounts of investment are being threatened by the erosion of Bar Beach.

### 3.3 Mean Annual Rainfall

Figure 4.2 shows the distribution of rainfall in Nigeria. It shows that mean annual rainfall decreases from over 3000mm along the coast to less than 500mm in the Lake Chad area.



*Fig. 4.2: Mean Annual Rainfall in Nigeria*

### **3.4 Seasonal Distribution of Rainfall**

The seasonal distribution of rainfall is of much greater importance to agriculture than the mean annual rainfall. One of the most salient features of the climate of Nigeria is that the year is divided into two main seasons on the basis of rainfall. These are:

- i) the rainy season which in general lasts from April to October; and
- ii) the dry season which in general lasts from November to March.

The rainy season starts earlier and ends later in the south than in the north. The result is that the rainy season is more than nine months long in the extreme south, decreasing to less than three months on the shores of Lake Chad.

Figure 4.3 shows rainfall in Nigeria between May and October. It shows that rainfall decreases from over 250mm in the Niger Delta area to less than 1000mm in the north. This is the season when rain-fed agriculture, that is, agriculture relying solely on rainfall, is possible.

### **3.5 Destructive Thunderstorms**

One other important aspect of the climate of Nigeria is the occurrence of destructive thunderstorms characterised by heavy torrential rainfall and strong winds. They are normally of short duration but may last for several hours. These thunderstorms cause:

- poor visibility, which may lead to aviation disasters, as at Enugu in 1983;
- urban flooding, as in Lagos, Sokoto and Maiduguri;
- dam collapse, e.g. Bagauda Dam which burst in 1988 sweeping away villages and farmlands and killing many people and livestock;
- damage to power lines, telecommunication masts, public and private buildings;
- river flooding;
- the destruction of crops by hail and gusty winds.

Destructive thunderstorms occur throughout Nigeria, especially at the beginning and towards the end of the rainy season. In March 2002, the Federal Capital Territory (FCT) witnessed a particularly destructive storm which broke clown high-tension power lines, creating an electricity blackout that lasted several days.

### **3.6 Climate and Flood Disasters**

There are several causes of flood disasters in Nigeria but the underlying cause is heavy rainfall. Thus, flooding occurs extensively in the Coastal

Plains of South West Nigeria, the Coastal Plains of South East Nigeria and the Niger Delta. Flooding is most common in these areas in the months of July, August and September when rainfall is heaviest. But some places may stay under water for up to five months in the year. In the Niger Delta, flooding affects some 24,000 sq. km. either seasonally or permanently and this is because the area is flat and rainfall is very heavy.

River flooding occurs during the rainy season in the flood plains of the larger rivers of Nigeria. These include the Niger, Benue, Gongola, Sokoto, Hadejia, Yedseram, Katsina Ala, Dong, Taraba. Cross River, Imo, Anambra, Ogun, Kampe, Kaduna, Gurara, Mada and Shemanker.

Urban flooding occurs in many Nigerian towns as a result of heavy rainfall during the rainy season. These include Lagos, Ibadan, Maiduguri, Aba. In 1980, the Ogunpa, a river in Ibadan, rose and covered about 6 sq. km. as a result of a heavy downpour. Some 200 people were drowned and 30,000 rendered homeless.

Flooding is a threat to human lives and all physical infrastructure such as residential accommodation, commercial and industrial properties, roads, rail lines, bridges and so on. It destroys farmlands, including the crops growing on them.

### **3.7 The Rainy Season and Food Supply**

As soon as the rains start, farmers prepare the land for planting. As soon as the soil is wet enough, he plants his seeds. This is a very critical time for the farmer. He has to work very hard to clear and plant as much land as possible in order to obtain a harvest that will keep him and his family going for the next year. As a result of the hard work, farmers lose weight at this time. This is because all this hard work has to be done five months or more after the previous harvest by which time food is in short supply. In many, if not most rural areas this time is called the hunger season when the food intake falls down to only 70% or even 60% of food needs.

In many parts of the country, early maize ripens by June or July, a very welcome addition to the diet of rural people. The rains also bring a greater variety of vegetables. Thus, between June or July and November or December, food supply is relatively good both in quantity and quality. Unfortunately, because of the need for cash, many farmers tend to sell more of their harvest than is good for their food security. This is partly why food stocks run too low during the planting season.

### 3.8 The Dry Season

The dry season starts later and ends earlier in the north than in the south. Therefore the dry season is less than three months long in the extreme south but more than nine months long in the extreme north. As shown on Figure 4.4. only along the coast and in the extreme southeast is there more than 500mm rainfall between November and April. Over most of the dry season, crops cannot be grown without irrigation. Therefore, farmers are forced:

- to remain idle; or
  - to find alternative employment; or
  - practice irrigation.
- During the dry season, farmers migrate temporarily:
- from rural to urban areas to seek employment, returning home when the rainy season starts;
  - from the Sokoto area into the cocoa belt to work on cocoa farms until the rainy season starts when they return home.

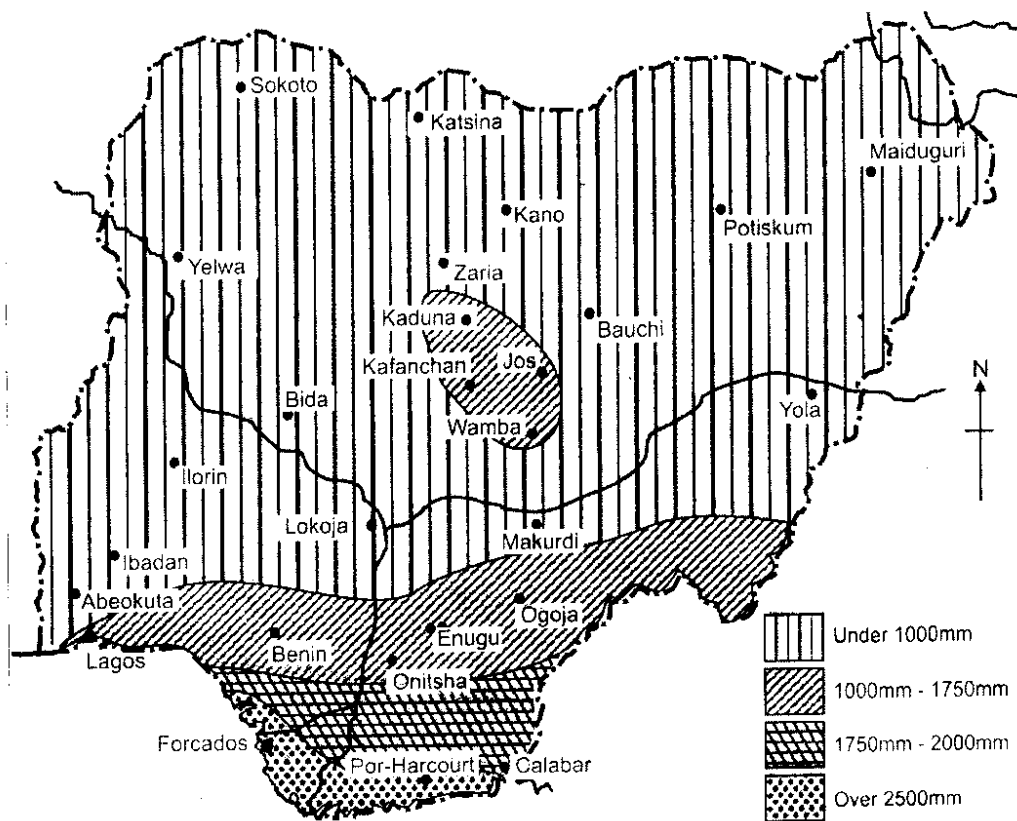


Fig. 4.3: Nigeria: Wet Season (May - October) Rainfall

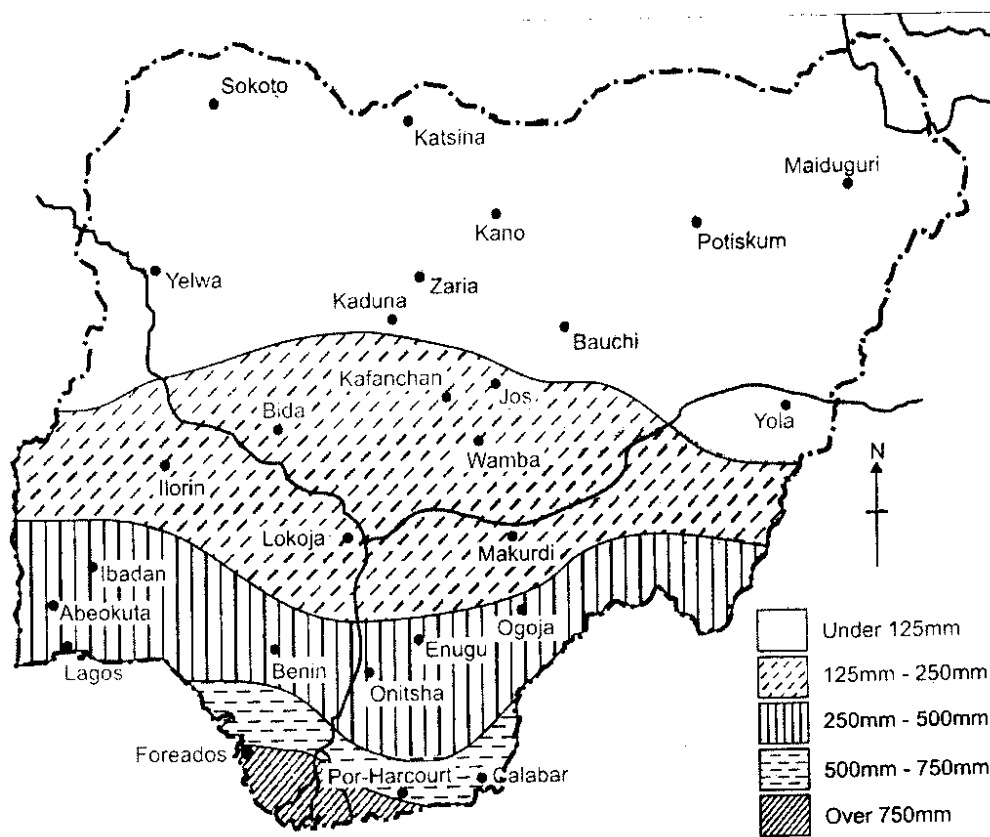


Fig. 4.4: Nigeria: Dry Season (November - April) Rainfall

### **3.9 Rainfall and Agricultural Zones**

Because of the annual and the seasonal distribution of rainfall, crops which need a lot of water and a long rainy season are best grown in the south. Crops which do not need much water and can tolerate a short rainy season can be grown in the far north. Between these two extremes, we have crops that can thrive in areas where rainfall conditions are not as good as in the south or as relatively poor as in the far north. Thus, Nigeria may be divided into three agricultural zones, namely:

- i) the southern tree and root crop zone;
- ii) the mixed root and grain crop zone; and
- iii) the northern grain crop zone. These agricultural zones and the main crops grown in these zones are shown in Figure 4.5.

### **3.10 Rainfall Variation and Drought**

There are two other aspects of the climate of Nigeria which are important for national security:

- i) the fact that rainfall varies from year to year: and
- ii) the occurrence of drought from time to time.

#### **Rainfall Variation**

In Nigeria, it is more common for rainfall at any particular place for any particular year to be either more than or less than the average. For example, the mean annual rainfall at Sokoto is 710mm. But in 1984 it received only 467mm of rain. At Katsina the mean annual rainfall is 714mm. But in 1980 the town received 773mm of rain.

Rainfall variation is very important when the difference between actual rainfall in any year is much more or much less than the average:

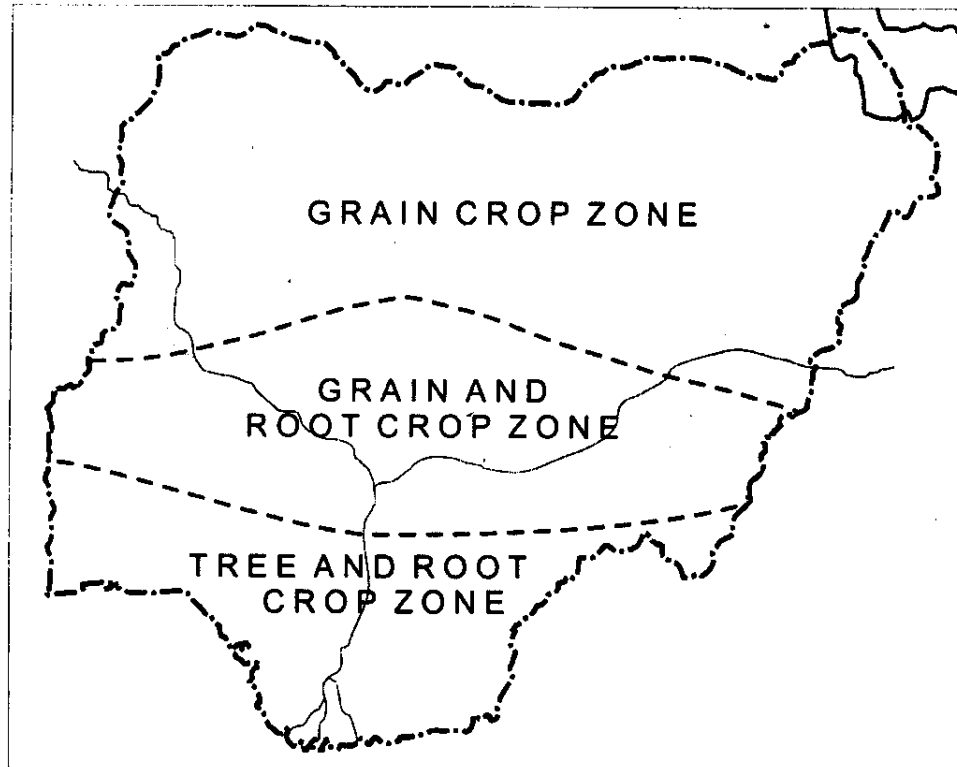
- when actual rainfall is much more than the average in an area, extensive flooding is likely to occur resulting in much destruction of livelihoods and infrastructures. Too much rain may also result in poor harvests for some crops such as maize, guinea corn and early yams;
- when actual rainfall is much less than the average, we say that there is drought, widespread crop failure and water shortage, as shown below.

Both excessive rainfall and drought occur throughout Nigeria and have adverse effects on security.

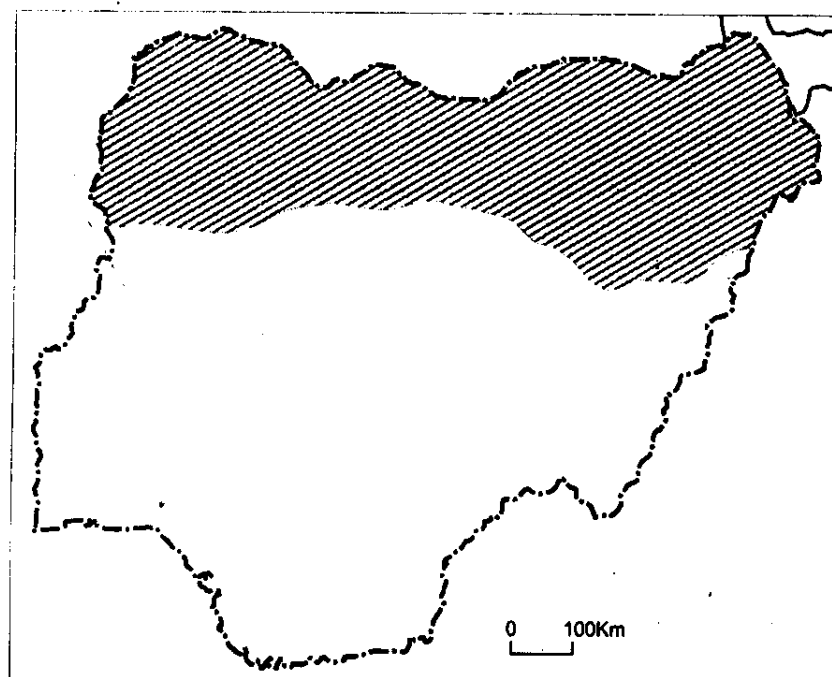
#### **Drought**

Drought occurs throughout Nigeria but it is more frequent and more severe as we move northwards from the coast. The States that are most

affected are Kebbi, Sokoto, Zamfara, Katsina, Kano, Jigawa, Bauchi, Yobe and Borno. (Figure 4.6). In these areas, severe droughts occurred in 1913 - 1914 and 1969 - 1973 and less severe ones in the 1940s and early 1980s. There have also been many local occurrences of drought in these and other parts of the country.



*Fig. 4.5 The Three Agricultural Zones of Nigeria*



*Fig. 4.6: Nigeria: Areas Most Affected by Periodic Drought*

Severe drought affects people, the economy and the environment of affected areas in several ways:

- it results in widespread crop failure. In 1972- 1973, for example, crop yields in the areas most affected by drought dropped by between 60% and 78%;
- it results in the death of livestock. For example in 1972- 1973, about 300,000 animals perished; it causes severe shortages of water;
- it causes famine which may in turn cause the death of people, especially the elderly and children. The effects of drought are not limited to the areas actually affected but may be felt in areas far away.

Thus:

- drought forces people to migrate either temporarily or permanently from rural areas into towns. For example, about 55% of the people who were detained as a result of the 1985 Maitatsine urban revolt said that they were victims of drought. Victims of the droughts of the early 1970s and early 1980s are to be found in most of Nigeria's larger towns;
- the drought of the early 1970s forced the nomadic Fulani to move with their animals further south than they used to do and to stay for much longer. As a matter of fact, farmers living as far south as Kogi, Benue and Anambra have to coexist with relatively large population of nomadic and semi-nomadic Fulani. Farmers in these areas now see the Fulani as a serious threat to their livelihoods. Conflicts between the two groups of people in which dangerous weapons have been used are a frequent occurrence.

#### **4.0 Conclusion**

We conclude this unit by saying that the characteristics of the climate of Nigeria which are most important for security studies are the seasonal distribution of rainfall, rainfall variation from year to year and the occurrence of drought from time to time.

#### **5.0 Summary**

Climate is important to security studies in Nigeria because it affects civil aviation, agriculture and food security and causes flood disasters, destruction by thunderstorms and catastrophic coastal erosion.

Temperature is relatively high throughout the year in Nigeria. The country's climate is controlled by two wind systems: the South West Trade Winds and the North East Trade Winds. Mean annual rainfall decreases from the coast inland. Much more important to agriculture are the following:



- rainfall is seasonal, with the wet season decreasing in length from the coast inland and a dry season increases from the coast inland;
- rainfall varies from year to year; and
- drought occurs from time to time.

These facts affect the types of crops that can be grown in different parts of the country. They affect employment in rural areas. They also affect food supply.

Other aspects of climate which are important include:

- the occurrence of harmattan haze which is hazardous to civil aviation;
- the occurrence of destructive thunderstorms; and
- the occurrence of ocean surges and storm waves which cause catastrophic coastal erosion.

## **6.0 Self-assessment Exercise**

Why is the seasonal distribution of rainfall of great importance to agriculture in Nigeria?

## **7.0 Tutor-marked Assignment**

How is knowledge of the climate of Nigeria relevant to the study of crime and security in the country?

## **8.0 Further Reading and Other Materials**

1. Barbour, K. Michael *et al.* *Nigeria in Maps* (1982).
2. Iloeje, N.P. *A New Geography of Nigeria*. Lagos: Longman Nigeria Limited, 1973
3. Oguntoyinbo, J.S., O.O. Arcola and M. Filani (1978). *A Geography of Nigerian Development*. Ibadan; Heinemann Educational Books (Nig) Ltd., 1978

## **Unit 5:       Vegetation**

- 1.0   Introduction
- 2.0   Objectives
- 3.1   Vegetation Cover
  - Mangrove Forest
  - Fresh-water Swamp Forest
  - Tropical Rain Forest
  - Guinea Savannah
  - Sudan Savannah
  - Sahel Savannah
  - Montana Vegetation
- 3.2   Vegetal Resources
- 3.3   Deforestation
- 3.4   Forest Conservation
- 4.0   Conclusion
- 5.0   Summary
- 6.0   Self-assessment Exercise
- 7.0   Tutor-marked Assignment
- 8.0   Further Reading and Other Materials

### **1.0   Introduction**

Vegetation means the plants which cover an area. Thus, when we talk of the vegetation of Nigeria, we are talking about the type of plants covering the country. These plants are made up principally of trees and grasses of various shapes and sizes.

There are several reasons why you need to know something about vegetation:

- Vegetation is what protects the land against harsh weather and against erosion of the soil;
- Vegetation supplies us with a wide range of products, including timber, firewood and fruits of various kinds;
- Vegetation provides habitats for wild animals.  
Wildlife, which is another name for wild animals such as elephants, deer and antelopes, is important for several reasons:
- Wildlife supplies about 13% of the animal protein consumed in the country;
- Hunting of wildlife is an important occupation in some rural areas;
- Wildlife has recreational value. For example, many people visit our Game Reserves and National Parks to derive pleasure from viewing wild animals in their natural habitat;
- Tourism based on wildlife could provide employment for rural people and bring foreign exchange to the country.

The objectives of this unit are stated below:

## 2.0 Objectives

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

- Draw a map of Nigeria showing the main vegetation belts;
- Describe the main characteristics of these vegetation belts;
- Discuss the importance of vegetation to the country's economy;
- Explain the main causes of deforestation in the country's economy;
- Discuss the main consequences of deforestation.

## 3.1 Vegetation Cover

There are two main types of vegetation in Nigeria: forest and savannah. Forest is a type of vegetation which is dominated by woody plants called trees. These trees grow so close together that their crowns touch one another completely covering the ground. Because this cover prevents most if not all the rays of the sun from reaching the ground, grasses are either absent or few.

Savannah is a type of vegetation in which the ground is covered by grasses among which there may be some trees. Such trees may grow close together, forming a woodland or they may be far apart, forming a parkland.

In Nigeria, these two types of vegetation occur as east-west belts. The forest belt, covering about 20% of the country is to be found in the wetter south, extending inland from the coast. The mean annual rainfall is over 1300mm and the rainy season is at least eight months long. The Savannah belt covers the rest of the country where the mean annual rainfall is less than 1300mm and the rainy season is less than eight months long.

Each of these two vegetation belts is divisible into three vegetation zones as shown on Figure 5.1. Let us now look at the main characteristics of these vegetation zones.

**Mangrove Forest** - This type of vegetation covers a zone which is about thirty to fifty kilometres wide along the coast.

Because:

- The land is flat;
- Mean annual rainfall is very high;
- There are many lagoons and creeks which often overflow their banks;
- Sea water rushes onto the land during high tide;

- The area is waterlogged and the swamp waters are salty. Only plants which stand these conditions can grow in this area.

The vegetation is dominated by the mangrove trees of which there are several species. Reaching heights of only 2.5 metres on land which is relatively dry, mangrove trees usually attain heights of ten to fifteen metres. They grow close together, forming a tangled mass with many roots which sack out of the swampy soil. Coconut palms grow profusely along the coastal beaches.

One of the species of mangrove, the red mangrove, yields wood which is used for pit props. Other species are used for boat and canoe building.

The mangrove swamp forest had not, until recently, been greatly modified by man for several reasons:

- there are relatively few people living in the zone and so deforestation has been limited;
- access is difficult because there are few roads, the land is swampy and the vegetation is virtually impenetrable;
- the high temperature and the abundant supply of water ensure that plants grow quickly again when they are cut down.

However, since the 1960s petroleum exploration and exploitation have led to clearing of the vegetation in many areas to make way for access roads, pipelines, oil installations and housing development.

**Fresh Water Swamp Forest** - The environment is very similar to that of the Mangrove Swamp Forest except that the tide does not reach the zone. Therefore the swamp is fresh water swamp and fresh water plants are to be found. The most common of these plants is the raffia palm, much valued for the wine that is tapped from it and also for its leaves which are used in craft industries.

**Tropical Rain Forest** - Except in the area of the Niger valley where it is narrow, this vegetation zone extends across the country from the Benin border to the Oban Hills. High temperatures, high rainfall and a long rainy season, combine to favour plant growth throughout the year. In its natural form, the vegetation is dominated by a great variety of tree species with the crowns that are arranged in three distinct layers or storeys:

- ***The ground storey:*** As the name implies, this is found at the ground level and consists of shrubs, herbs and some grasses. These form a dense tangle wherever they have access to sunlight, as along roads, rivers and man-made clearings.
- ***The middle storey:*** This is made up of trees which grow to heights of eighteen to twenty-four metres. Their branches often intertwine and their crown forms a continuous mass or canopy

which shuts out the sun from the ground storey. There are many hundreds of species of these trees and at any one time some are shedding their leaves, others are flowering and yet others are bringing forth new leaves. Over all, the forest appears evergreen.

- ***The lop stony:*** The top storey is made up of large trees, thirty to sixty metres tall, shooting above the middle storey. Their crowns form a discontinuous canopy over the forest. They include trees of great value for their timber, such as iroko, mahogany, afar and sapele.

In addition to the plants which form the three storeys, there are many other plants in the tropical forest which depend on other plants for their food or for support or for both. They include:

- Parasitic plants which attach themselves to other plants and derive their food from them;
- Saprophytes which attach themselves to dead plants and get their food from them;
- Climbers which grow from the ground and climb their way up the trunks and branches of other plants; and
- Epiphytes which also climb up other plants but have roots that dangle in the air.

Because of human activities tropical rain forest such as has been described above is now to be found mainly in a few remote areas. It occurs as a narrow broken belt just to the south of Ondo and the Idanre Hills, stretching from the Osun Valley to the Benin River in Edo State. It also occurs between the Cross River and the Nigeria-Cameroon border as well as in the foothills of the Obudu Plateau. The human activities which have contributed to the disappearance of Tropical Rain Forest from most of the areas it used to cover include:

- Food crop cultivation;
- Establishment of export crop plantations (cocoa, oil palm and rubber);
- Lumbering;
- Establishment of exotic tree plantations (such as teak and gruelina);
- Road construction; and
- Urbanization.

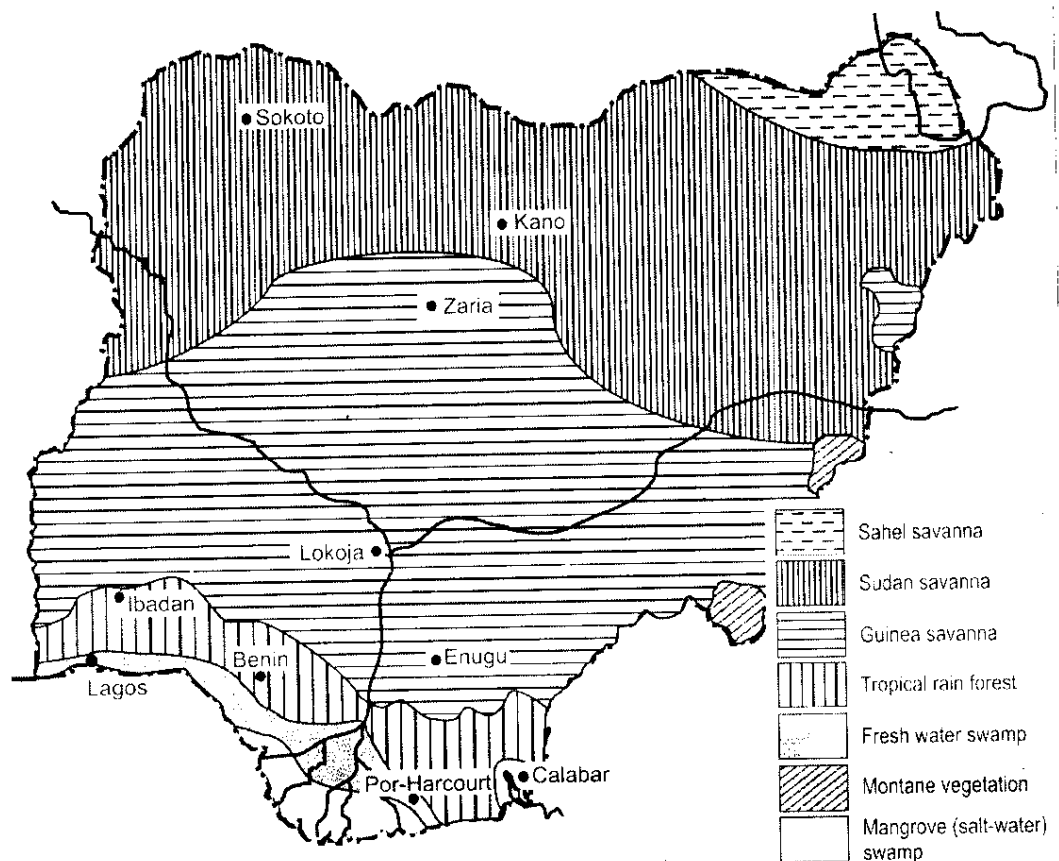


Fig. 5.1: Vegetation Belts of Nigeria

**Guinea Savannah** - This is the widest of the vegetation zones of Nigeria, covering almost half its area. It is found in areas with a mean annual rainfall of between 1000 and 1500mm and a rainy season of six to eight months. The vegetation is made up of tall grasses and trees which vary in density from place to place. The most of which have umbrella-shaped canopies become smaller as we move northwards. They shed their leaves during the dry season.

The Guinea Savannah is extensively burnt during the dry season.

In the wetter parts of this vegetation zone, forest vegetation occurs along river valleys where soil moisture conditions are better than on the uplands around. These forests are called gallery forests.

**Sudan Savannah** - Sudan Savannah covers areas where the mean annual rainfall ranges from 650 to 1000mm and the dry season is six to eight months long. The vegetation consists of short grasses, 1.5 to 2 metres high and scattered trees which are much smaller than those found further south. Trees include the acacia, the baobab and the dum palm.

The Savannah belt is heavily populated and covers large areas, the natural vegetation has been replaced farmland and fallow land.

***Sahel Savannah*** - This is found in the extreme northeastern corner of the country where mean annual rainfall is less than 650mm and the season is longer than eight months.

The vegetation cover is mainly grass, which is short and tussocky. The most important tree is the acacia. Tall trees are to be found on the seasonally flooded areas around Lake Chad.

The area supports a large population of cattle, sheep and goats.

***Montana Vegetation*** - This is a special type of vegetation found on the Jos Plateau and on the eastern Highlands. It consists of short grasses with very few trees.

### **3.2 Vegetal Resources**

A country's resources are those things, natural as well as man-made, which the country has and can use to increase its wealth. Therefore, the vegetal resources of a country are those things which the vegetation cover of the country supplies which can be used to increase its wealth. The vegetation cover of Nigeria supplies it with a great variety of useful products. These include:

- Firewood. This is easily the most important source of energy in the rural areas of Nigeria as well as among poor urban residents. There is a booming trade in firewood in Nigerian towns such as Kano, Maiduguri, Sokoto, Jos, etc. Sometimes the firewood is first converted into charcoal which is easier to transport.
- Wood for furniture, building, tool handles, packing cases, sculpture, etc. For a longtime, Nigeria was a major exporter of tropical timber. But depletion of the rain forest and a rapid increase in the rate of domestic use of timber has forced the government to ban timber exports.
- Transmission poles for electricity and telephone lines.
- Oil and fat extracts from plants such as the oil palm and the shea butter trees.
- Beverages and stimulants such as palm wine.
- Tannin and deges for the textile and leather industries.
- Fruits, leaves, roots, flowers and nuts, which are eaten as food. There are over 170 woody plants of nutritional importance in the forest zone alone. These plants are major and cheap sources of vitamins, minerals, carbohydrates and fats.
- Fodder for domesticated animals. Much of Nigeria's livestock industry depends entirely or almost entirely on natural grass and tree leaves.
- Medications. Herbalists or traditional healers depend to a large extent on plant resources for the drugs they use.

- Honey. Much of the honey consumed in the country is collected from the wild.
- Meat from the wildlife.

The list of useful products derivable from our vegetation cover has by no means been exhausted. We may summarize by simply saying that Nigeria's natural vegetation provides us with:

- Very many useful products;
- Employment for many people who gather these products;
- Income for people who sell these products and for government which gets tax on trees felled for timber.

All of these benefits of our natural vegetation are unfortunately being lost at an increasing rate as a result of deforestation.

### **3.3 Deforestation**

Deforestation is the removal of forest and other natural vegetation from an area without replacing it. It is on the increase in Nigeria as a result of population growth and the increased tempo of economic activities such as:

- Timber exploitation
- Fanning
- Urbanisation
- Bush burning
- Firewood collection
- Grazing
- Construction of roads, dams and other infrastructure
- Oil exploration and exploitation

### **3.4 Forest Conservation**

By the late 1800s and early 1900s, British officials were already concerned about the rate of deforestation and the possibility of Nigeria's natural vegetation being unable to supply the benefits described above. The colonial administration decided on a policy of creating forest reserves. These are areas which are set aside and in which certain activities such as farming and timber exploitation are not allowed. In some, called game reserves and National Parks, hunting is not allowed.

The colonial administration planned to reserve 25% of Nigeria's land area. In the end, only about 10% of the country was set aside as reserves and these are scattered all over the country. This percentage is small compared with the percentage of the land reserved in countries such as France (25%), U.S.A. (33%) and Japan (67%).



Unfortunately, even the small area of Nigeria which has been reserved, is under tremendous pressure from the human activities listed above and some forest reserves or parts of them are being exploited.

#### **4.0 Conclusion**

In conclusion, we can say that the vegetation cover of Nigeria is of great importance to the physical environment of Nigeria as well as to the economy, especially in rural areas where it supplies employment, income and many useful products. Therefore the threat posed to the vegetation by human activities is a threat to the economies of our rural areas.

About 20% of Nigeria is covered by forest of which there are three types: Mangrove Swamp Forest, Freshwater Swamp Forest and Tropical Rain Forest. About 80% of the country is covered by Savannah which may be sub-divided into Guinea, Sudan and Sahel Savannah and Montana Vegetation.

The vegetation of Nigeria is important because it provides people with:

- Very many useful products;
- Employment in rural areas; and
- Income.

The natural vegetation of Nigeria is being removed at an alarming rate as a result of human activities. The colonial administration set aside about 10% of the country as forest reserves but these forest reserves are under increasing pressure from these same human activities.

#### **6.0 Self-assessment Exercise**

In what ways does vegetation contribute to the economy of Nigeria's economy and what are the threats to this contribution?

#### **7.0 Tutor-marked Assignment**

None

#### **8.0 Further Reading and Other Materials**

1. Barbour, K. Michael et al. *Nigeria in Maps*, 1982.
2. Illoeje, N.P. *A New Geography of Nigeria*. Lagos: Longman Nigeria Limited, 1973.
3. Oguntoyinbo, J.S., O.O. Areola and M. Filani. *A Geography of Nigerian Development*. Ibadan: Heinemann Educational Books (Nig) Ltd., 1978.

## **Unit 6:        Population: Size, Growth and Distribution**

- 1.0    Introduction
- 2.0    Objectives
- 3.1    Population Size
- 3.2    Population Growth
- 3.3    The National Population Policy
- 3.4    How the Population is Distributed
- 3.5    Areas of Overpopulation
- 3.6    Areas of Underpopulation
- 3.7    Population Redistribution
- 4.0    Conclusion
- 5.0    Summary
- 6.0    Self-assessment Exercise
- 7.0    Tutor-marked Assignment
- 8.0    Further Reading and Other Materials

### **1.0    Introduction**

This unit as well as units 7 and 8, are concerned with the population of Nigeria, in them you will learn several things about the people of Nigeria that will enable you to answer such questions as:

- How many people are there in Nigeria?
- How fast is the country's population growing?
- How are the people distributed across the country's land area?
- What is the age-sex composition of the population?
- How many ethnic groups are there in the country?
- From where and to where are people moving in the country and why are they moving?

You will discover that the answers to these questions are very important to criminology and security studies.

We shall start our study of the population of Nigeria by looking at its size, the rate at which it is growing and how it is distributed.

### **2.0    Objectives**

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

- State the size of the population of Nigeria as well as the rate at which it is growing;
- Explain the implications of the size and rate of growth of the population for national security;
- Describe the distribution of the population;
- Relate the distribution of the population to the natural resources available to support it.

### **3.1 Population Size**

The 1991 national population census gave the population of Nigeria as 88,992,220. This makes Nigeria the most populous country in Africa. As a matter of fact, about 20% of the world's black population are Nigerians.

Nigeria's population is greater than that of all the other countries of West Africa put together. It is nine times the population of Ghana, about three times that of the Republic of South Africa. Population-wise, Nigeria is the largest country in the Commonwealth, after India and Pakistan.

Nigeria's population is both an asset and a liability. It is an asset because:

- When Nigeria speaks, the rest of the world listens. Nigeria is looked up to for leadership by the black people of the world. Part of the reasons for this is the country's large population. But there are other factors such as its abundant natural resources and its large crude-oil-based national income.
- Nigeria's large population is a large potential market for manufacturing industries. But for this potential to be translated into reality, the purchasing power of the people must be substantially increased.
- Nigeria's large population could provide it with a large labour force for economic development. But before this can happen, the people need to be educated and provided with job skills.
- In the unlikely event of a conventional war, Nigeria would be in a position to raise a very large army because of her large population.

Nigeria's large population is a liability because it means:

- So many people to be fed;
- So many people to be provided with shelter;
- So many people to educate;
- So many people to be provided with other social services such as water and health;
- So many people to provide with security; and
- So many people to provide with employment.

### **3.2 Population Growth**

The population of Nigeria was estimated at 17 million in 1921 and 21 million in 1931. The first complete census in 1953 gave the population as 31 million. The 1963 census gave it as 55.67 million. The 1991 census put the population at 88,992,220.

From the above figures, it is clear that Nigeria's population has been growing very rapidly over the last eighty years. The National Population Commission has estimated that the population of Nigeria is now growing at about 2.8% per annum. Compared with the developed countries of the world, this rate of growth is very high.

The National Population Commission has estimated the population of the country in 2002 at 122,443,748. At the present rate of growth, the population figure of 1991 may be expected to double by or before the year 2015. This means a doubling of the population in about 25 years.

In order to know the implications of this high rate of growth of Nigeria's population for economic development and the standard of living of the people, it is necessary to compare it with the rate at which the economy is growing. This means comparing the rate of population growth to the rate at which the Gross Domestic Product (GDP) is growing.

It has been estimated that Nigeria's Gross Domestic Product is growing at only 3.4% per annum. This is only a little higher than the rate at which the population is growing. The result is that after the country has met its people's basic needs such as food, shelter and clothing, there is little left over for investment in development. Thus, there is a big gap between the peoples' needs for education, water, health facilities and employment and the ability of the country to provide these things. Above all, there is a big gap between the country's needs for security personnel and her ability to meet these needs. Thus, the country's Police Force is only about 120,000 strong, making the country under-policed, a situation that favours criminal activity.

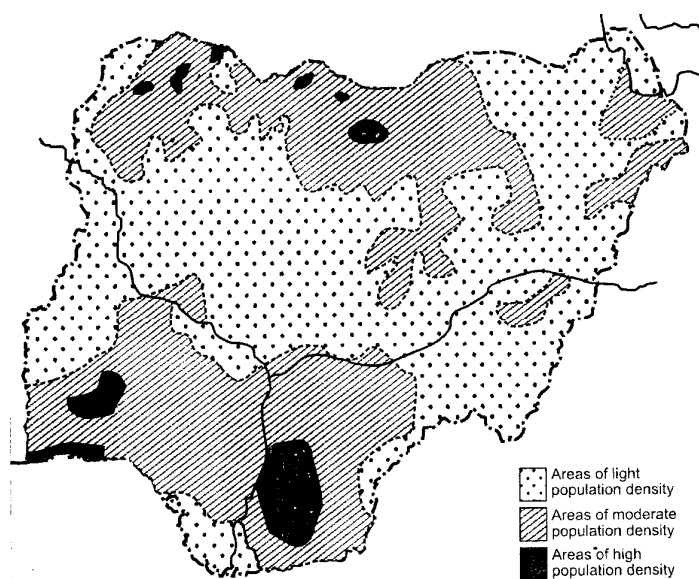


Fig. 6.1: Population Distribution in Nigeria

### **3.3 The National Population Policy and Population Growth**

The Federal Government of Nigeria is very conscious of the effects which the country's rapid population growth is having on:

Investment in the production of goods and services as against consumption;

- Fuel wood supply;
- Availability of land for agriculture;
- Social services such as health, housing and education;
- Employment;
- Living standards; and
- The environment

Therefore, in 1988 the government approved a National Policy on Population for Development, Unity, Progress and Self-Reliance. One of the goals of the Policy is "to achieve lower population growth rates".

It set a population growth rate target of 2.0<sup>11</sup>/0 per annum for the year 2000. Unfortunately, we do not know what the actual growth rate was in that year.

### **3.4 How the Population is Distributed**

One of the most striking features of the population of Nigeria is that it is very unevenly distributed. While some areas are very densely populated, others are only lightly populated or virtually uninhabited. Figure 6.1 shows the general distribution of population in Nigeria which may be described as follows:

- Areas of high population density which include the Igbo-Ibibio heartland of Anambra, Imo, Abia and Akwa Ibom States; parts of Lagos State and Oyo State as well as parts of Kano, Katsina and Sokoto;
- Areas of moderate population density, which include Ogun State, Ondo, Edo, Osun, Ekiti, most of Kogi, parts of Rivers, Cross River, Ebonyi and Benue States; most of Sokoto, parts of Zamfara, Katsina, Jigawa, Plateau and parts of Bauchi, Gombe, Borno and Adamawa States; and
- Areas of light population density, which include parts of Oyo, Kwara, most of Niger, most of Kebbi, most of Zamfara, most of Kaduna, Nasarawa, Taraba, parts of Bauchi and Gombe, and most of Borno and Adamawa.

This uneven distribution of population is very significant when it is related to the distribution of national resources as we shall see below.

### **3.5 Areas of Overpopulation**

Overpopulation is a term used to describe a situation in which there are too many people to live comfortably on the present system of land use. There is abundant evidence to show that there are large and small pockets of overpopulation in Nigeria. According to NEST (1991), this evidence includes:

- Increasing malnutrition and famine;
- Farmland fragmentation;
- Shortage of wood for fuel;
- Widespread unemployment and underemployment;
- Declining agricultural yields;
- Shifts to alternative and less demanding crops (e.g. from yams to cassava);
- Partial or total abandonment of agriculture in favour of alternative employment such as petty trading; and
- Migration into towns or other rural areas.

Areas of the country which may be said to be overpopulated include:

- Parts of Awka, Onitsha, Udi, Okigwe, Orlu and Owerri areas of Anambra, Enugu and Imo States;
- Abak, Ikot Ekpene, Uyo and Eastern Ibibio, Ikom in Akwa Ibom and Cross River States;
- The Kano-Katsina region;
- The Jos Plateau;
- Ebiraland in Kogi State; and
- Southern Tivland in Benue State. Each of these areas is characterised by several, if not all, of the above evidences of overpopulation.

Furthermore, the environment in these areas has been or is being degraded. Thus soil erosion is a common problem in those parts of Anambra, Enugu, Imo, Akwa Ibom and Cross River States that are listed above as well as on the Jos Plateau.

### **3.6 Areas of Underpopulation**

Underpopulation is a term used to describe a situation in which an area has the resources to support many more people than it actually does. Vast areas of Nigeria may currently be said to be underpopulated. They include:

- Southern Borno State;
- Parts of Taraba State;
- Large parts of Niger State;
- Large parts of Nasarawa State;
- Parts of Zamfara State;

- Southern Kaduna State;
- Parts of Oyo, Ogun and Ondo States;
- Parts of Lagos State (e.g. Epe Division);
- The Nike Plains near Enugu;
- The Cross River Basin; and
- The flood plains of Nigeria's major rivers.

### **3.7 Population Redistribution**

The fact that some areas of the country are overpopulated while some others are underpopulated would seem to call for population redistribution from the former to the latter. In this way, the pressure of population in the former will be made lighter so that the people remaining behind can live more comfortably. At the same time, the areas of underpopulation will have many more people to top their natural resources and make a better life for themselves than where they came from. Quite clearly, such a redistribution of population would be in the overall interest of national security.

As a matter of fact, people have been moving from areas of overpopulation to areas of underpopulation since colonial times. Thus, people have been moving:

From Kano and Katsina into Bauchi State;  
 From Katsina and Sokoto into Niger and Kaduna States;  
 From Jos Plateau into Nasarawa State;  
 From Ebiraland into Undo and Edo States;  
 From Tivland into Nasarawa and Taraba States.

Unfortunately, some of these population movements which have gone on peacefully for a long period of time have created social disharmonies and social conflicts in various parts of the country in recent years.

Examples include:

- Conflicts between the Tiv and their host communities in Taraba and Nasarawa States;
- Conflicts between the Hausa-Fulani and their host communities in Southern Kaduna State.

Since population redistribution is in the national interest, the governments and people of Nigeria need to find ways by which host communities will accommodate immigrants so that the resources of the country can be developed and used by all Nigerians.

### **4.0 Conclusion**

Nigeria has a large population which is growing rapidly and which is unevenly distributed. All of these characteristics of the population are important for national security.

## **5.0 Summary**

Nigeria's population was 88,992,220 in 1991. This large population is both an asset and a liability. Furthermore, the country's population is growing at an estimated 2.8%. Its 1991 population figure is likely to double by or before 2015.

Nigeria's GDP is growing at only 3.4%. This means that after the basic needs of the population have been met, there is relatively little resources left for economic development. It is partly for this reason that the Federal Government developed a National Population Policy which set a target growth rate of 2.0% per annum for the year 2000.

The population of the country is unevenly distributed. There are:

- Areas of high population density
- Areas of moderate population density and
- Areas of low population density.

Furthermore, there are pockets of overpopulation in various parts of the country as well as areas of underpopulation. In order to make better use of the country's resources, it is necessary to redistribute some of the population from the former to the latter. Some redistribution of population has actually been taking place since the colonial period. There has been social conflicts in some areas in recent years between settlers and their host communities.

Since population redistribution is desirable in the national interest, the governments and people of Nigeria must find ways of ensuring that host communities accommodate settlers.

## **6.0 Self-assessment Exercise**

In what ways may Nigeria's large population be said to be both an asset and a liability?

## **7.0 Tutor-marked Assignment**

None

## **8.0 Further Reading and Other Materials**



1. Barbour, K. Michael et al. *Nigeria in Maps*. 1982.
2. Iloeje, N.P. *A New Geography of Nigeria*. Lagos: Longman Nigeria Limited, 1973.
3. Oguntoyinbo, J.S., O.O. Areola and M. Filani. *A Geography of Nigerian Development*. Ibadan: Heinemann Educational Books (Nig) Ltd., 1978.

## **Unit 7: Population: Age-Sex Distribution and Ethnic Composition**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Age-Sex Distribution
  - The Youthful Population
  - The Reproductive Age Bracket
  - The Criminally-Active Age Bracket
  - The Labour Force
  - The Elderly
- 3.2 Ethnic Composition
  - Ethnic Diversity of the Middle Belt
  - Ethnic Migrations
  - Ethnic Diversity of Urban Areas
  - Ethnic Diversity of Border Areas
  - The Problem of Ethnic Minorities
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

The age distribution of a country's population is the proportion of the population lying within the age brackets 0 - 4 years, 5 - 9 years, 10 - 14 years, 15 - 19 years... 80 - 84 years and 85 years and over. Of course, the sex distribution means the proportion of the population which is male and the proportion which is female. When you combine the age distribution and the sex distribution, we get the age-sex distribution.

There are at least four reasons why we need to know the age-sex distribution of Nigeria's population:

- It tells us the size of the dependent population. The dependent population is made up of people who depend on the rest of the population for their needs. There are two groups of people in this category: people in the 0 - 14 years age bracket and the elderly, aged 65 and above. Normally, the former are too young to enter the labour market while the latter are too old to work.
- The age-sex distribution tells us the size of the labour force. The labour force is made up of people aged 15 - 64 years. These are the people who produce almost all the goods and services which society uses;
- The age-sex distribution tells us the proportion of the population that is aged 15 to 29 years. In many countries such as the U.S.A. and the Republic of South Africa, it has been found that people in

this group account for a disproportionately high percentage of the crimes committed in society;

- The age-sex distribution tells us the proportion of the population which is aged 15 to 44 years. This is the reproductive age and its size is an indication of how rapidly the population is likely to grow in future.

Each of these four things which the age-sex distribution of a population reveals, is important to the study of crime and security as we shall see shortly.

An ethnic group is a group of people with a common identity in terms of history, language, cultural traditions, outlook and sentiments. The ethnic composition of the population is important for several reasons:

- The three largest ethnic groups in the country have tended to dominate national politics and control national resources;
- The elite in Nigerian society have a tendency to exploit ethnic differences in their struggle for state resources and this has promoted inter-ethnic conflicts;
- Ethnic minorities resent the dominance of the larger ethnic groups as well as the tendency of the elite to set ethnic groups against one another. These ethnic minorities have become increasingly restive.
- Inter-ethnic conflicts have been on the increase in recent years and this is a threat to the country's nascent democracy.

For these reasons, we need to know the ethnic composition of Nigeria's population.

In this unit we shall be studying the age-sex characteristics and the ethnic composition of the population of Nigeria. The objectives of the unit are stated below:-

## **2.0 Objectives**

By the time you complete this unit you should be able to:

- Describe what the age-sex distribution of a population is;
- Describe the shape of the age-sex pyramid of Nigeria and compare it with the age-sex pyramids of developed and developing countries;
- State the size of the country's labour force;
- Explain the economic implications of the country's labour force;
- State the proportion of the population which is aged 15 to 39 years;
- Explain the implications for criminal activities of the proportion

- of the population which is aged 15 to 39 years;
- State the proportion of the population which is aged 15 to 44 years;
- Explain how the size of the country's population aged 15 to 44 years will affect population growth;
- Define what an ethnic group is;
- Relate the ethnic composition of Nigeria's population to:
  - Civil unrest in rural areas;
  - Civil unrest in urban centres;
- Show how the problem of ethnic dominance is a threat to State and national security.

### **3.1 Age-Sex Distribution**

Figure 7.1 shows the population pyramid of Nigeria in 1991. The vertical axis shows successive age groups 0 - 4 years; 5 - 9 years; 10 - 14 years and so on. The horizontal axis shows percentage of the population. The left hand side of the pyramid itself shows the male population. The individual bars show the proportion of the population which was male aged 0 - 4 years; 5 - 9 years; 10 - 14 years and so on in 1991. The right hand side of the pyramid shows the female population. The individual bars show the proportion of the population which was female aged 0 - 4 years; 5 - 9 years; 10 - 14 years and so on in 1991.

The population pyramid of Nigeria has a broad base and tapers as we move to the older age brackets. Such a population pyramid is typical of developing countries such as Mexico (Figure 7.2). Such a population pyramid shows a population which is increasing rapidly. It is very different from that of a developed country which has a narrow base, a bulging middle and a tapering top. The population pyramid of Sweden is a good example (Figure 7.3).

Let us now look at the economic and social implications of the age-sex distribution. In order to do this, we shall divide the population into five groups, three of which overlap:

- i) The youthful population;
- ii) The population within the reproductive age bracket;
- iii) The criminally active age bracket;
- iv) The labour force; and
- v) The elderly.

#### **The Youthful Population**

This is that part of the population that is 14 years old or younger. In Nigeria, about 45.3% of the population falls into this category. This makes the population of the country a predominantly youthful one. This

has several economic and social implications:

- Normally, these young people should not be put to work. Rather, they are to be educated and provided for in various other ways, (food, shelter, clothing, medical, etc.) by the working population. It means that the country has a large dependent population. This is a serious handicap for capital formulation and economic development because a great deal of the country's resources has to be spent on taking care of these people.
- The large proportion of children is an indication that the labour force will grow rapidly in the years ahead. Since the economy as a whole is growing only slowly, the rate at which employment is being generated is slow. This means that the labour market will be oversupplied. Unemployment rates will be high. This will lead to social problems including crime.
- Because of economic pressure, parents often put their children to work. Such children are not receiving education nor are they being armed with the kind of skills they will need in order to be able to make useful contribution to the economy later in life. (The United Nations Organisation is currently fighting against child labour and Nigeria has joined this fight).

### **The Reproductive Age Bracket**

The reproductive age bracket in a country is usually taken to the 15 to 44 years. Most of the children born are likely to be born to people within this age bracket. The proportion of the population which falls within the age bracket is important because it is an indication of how rapidly the population may be expected to grow.

In Nigeria, about 43.2% of the population falls within the reproductive age bracket. This is an indication that the rate of population growth is likely to remain high for some time to come. This means that:

- Nigeria will continue to have a youthful population for some time to come. The economic and social implications of a youthful population have been discussed above.
- Nigeria will continue to have a large proportion of its people in the 15 to 39 years age bracket for some time to come. This is the age bracket that has been found in several countries to be more involved in criminal behavior than those who are either younger or older (see below).

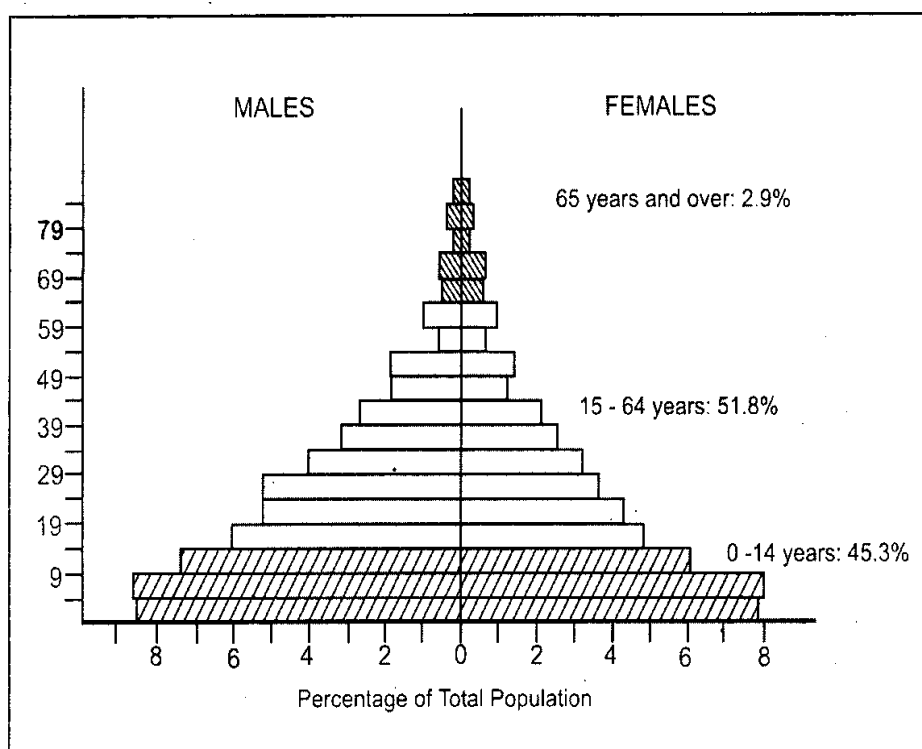


Fig. 7.1: Age-Sex Distribution of the Population of Nigeria (1991 Census. Redrawn from National Population Commission)

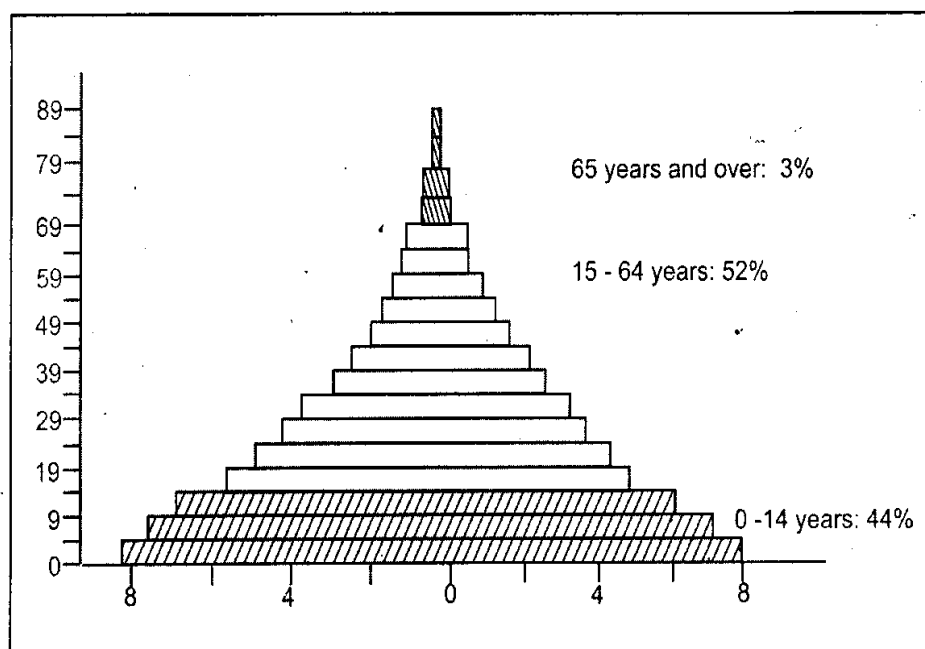


Fig. 7.2: Age-Sex Distribution of Mexico's Population (1960)

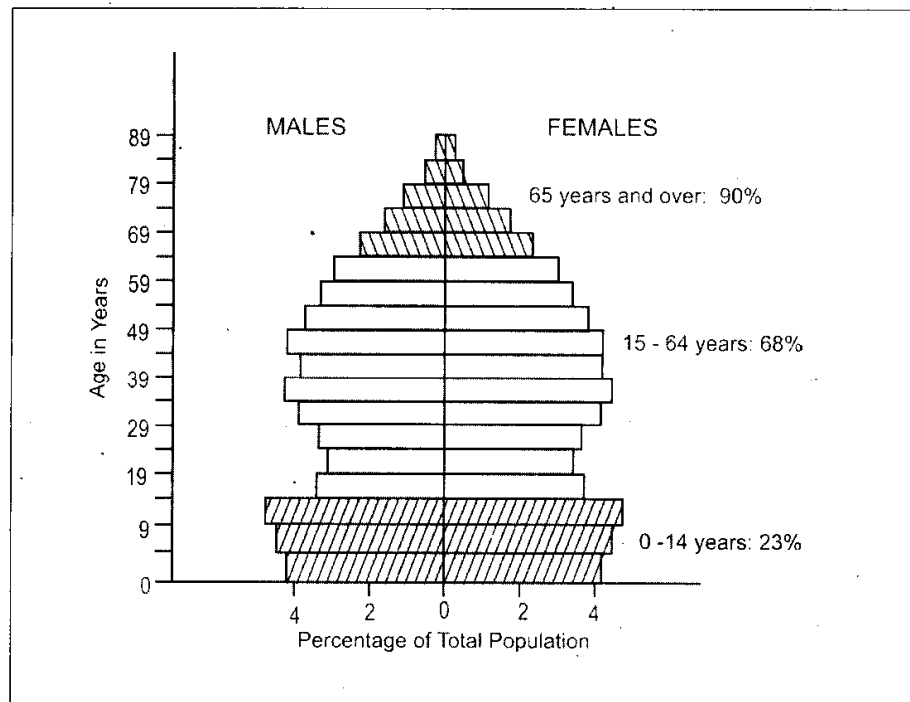


Fig. 7.3: Age-Sex Distribution of Sweden's Population in 1957

### The Criminally-Active Age Bracket

In several countries such as the Republic of South Africa and the U.S.A., criminologists have discovered that people in the age bracket 15 to 39 or 40 years are more prone to criminal behaviour than people who are either younger or older. In Nigeria, about 38.9% of the population falls in this category. This is probably why the crime rate in the country is high, especially as a high proportion of these people consists of unemployed youth in the urban areas where opportunities for crime are many.

### The Labour Force

A country's labour force consists of people aged between 15 and 64 years. These are the people who produce most of the goods and services consumed in the country. Obviously, the larger it is in relation to the dependent population, the better it is for the country, provided gainful employment can be found for it.

Nigeria's labour force in 1991 was made up of 51.8% of the country's population. This is low by comparison with Japan (64% in 1960) or Sweden (68% in 1957). Furthermore, Nigeria's labour force has several major handicaps:

- Low level of technology;

- Poor educational levels and skills;
- Poverty and low level of savings;
- The rate of job creation in the economy is low; therefore there is a high level of unemployment.

Under these conditions the labour force is unable at present to maintain the dependent population and still have substantial resources left over for economic development.

### **The Elderly**

The elderly are people who are at least 65 years old. They may be regarded as too old to work and are therefore dependent on the working population. They make up about 2.9% of the population of Nigeria. If we add this figure to the percentage of people who are 0- 14 years old, we get a total of 48.2%. This is the total percentage of the population of Nigeria which is dependent. This means that if all Nigerians of working age were actually working, each of them has to produce enough for himself or herself and for about one other person. However, we know that the rate of unemployment is high and that many working adults are actually underemployed (most farmers remain idle for several months during the dry season; many urban residents are living on petty trading, etc).

### **3.2 Ethnic Composition**

There is no general agreement as to the number of ethnic groups in Nigeria. The number is probably between 250 and 400. Each ethnic group has an identity — it looks at itself as having a common history, it has its own language and customs and has accepted one or more of the three main religions: Islam, Christianity and African traditional religion. Each occupies a definite territory although some, such as the Hausa/Fulani are widely dispersed.

According to the 1963 census, the three largest ethnic groups in Nigeria, listed in ascending order are the Igbo, Yoruba and Hausa; Together, they made up 57.8% of the country's population. About 27.9% of the population was accounted for by eleven other ethnic groups namely, Fulani, Kanuri, Ibibio, Tiv, Ijaw, Edo, Nupe, Uthobo, Igala and Idoma. The rest of the country's population is made up of well over 240 ethnic groups. They include the Ebira, Gwari, Ekoi, Mutnuye, Alago, Ogori, Isoko, Higii, Bura, Efik, Chamba, Jukun, Jarawa, Birom, Itsekiri, Kambari and Bassa Nge, to mention a few.

Figure 7.4 shows very roughly the territories of the 14 largest ethnic groups as listed above as well as those parts of the country with great



ethnic diversity. The following features of the ethnic composition of the country are noteworthy:

- The ethnic heterogeneity of the Middle Belt;
- Ethnic migrations;
- The ethnic diversity of urban areas;
- The ethnic diversity of some of the country's border areas;
- The problem of ethnic minorities.

### **Ethnic Diversity 'Of the Middle Belt**

The Middle Belt is home to most of the smaller ethnic groups of Nigeria. It is noteworthy that some of the inter-ethnic conflicts which have occurred in recent times, occurred in this area.

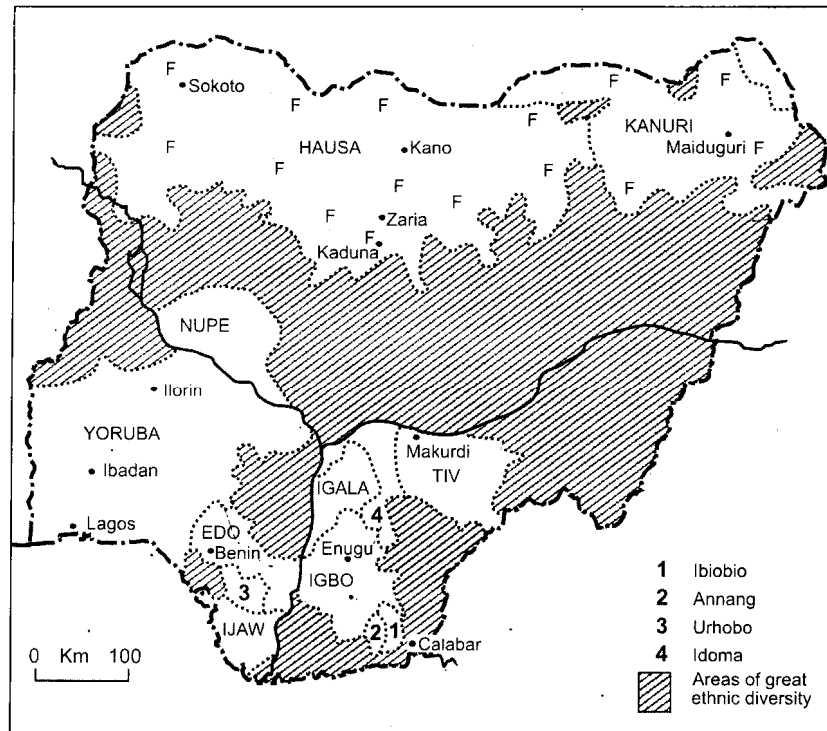
### **Ethnic Migrations**

In many parts of Nigeria: people of one ethnic group have migrated from their homeland into and settled in the homeland of other ethnic groups. Such movements have been prompted by the search for better economic opportunities.

Thus:

- The Tiv have moved in large numbers into Jukun territory in Taraba State and into Nasarawa State in search of farmland;
- Hausas and Fulanis have moved into Southern Kaduna State in search of farmland and to take advantage of commercial opportunities created by the construction of railway lines and roads;
- The Ebira have moved into Ondo and Edo States to grow food crops;
- The Ibo and the Urhobo have moved into Southern Ondo State to tap palm wine, extract palm oil and farm.
- People of many ethnic backgrounds moved to the Jos Plateau to work in the tin mines.

For the most part, these movements have been peaceful and migrants and their host population have lived together amicably. But in recent times, conflicts have broken out between migrants and their host communities.



*Fig. 7.4: Nigeria Showing Ethnicity*

Examples of such conflicts include:

- The ones involving the Tiv in Taraba and Nasarawa States;
- The one involving the Hausa and Fulani in Zangon Kataf in Southern Kaduna State.

### **Ethnic Diversity of Urban Areas**

Nigerian towns are ethnically diverse as a result of rural-urban migration. As a general rule, the larger the town, the greater the ethnic diversity. Again, for the most part, people of different ethnic backgrounds have lived at peace with one another in Nigerian towns. But in recent times, inter-ethnic violence has occurred in several Nigerian towns such as Lagos, Kaduna, Kano and Jos.

### **Ethnic Diversity of Border Areas**

All of Nigeria's eastern border area is ethnically highly diverse. The same is true of most of its western border area. Furthermore, these boundaries are artificial and cut across the homelands of the many ethnic groups. This makes the policing of these border areas difficult, facilitating cross-border criminal activity.

### **The Problem of Ethnic Minorities**

One of the main problems which threaten state security in Nigeria is the problem of ethnic minorities. The three largest ethnic groups have tended to dominate state power and control national resources. The

minorities resent this dominance and this resentment is a constant source of friction in the body polity. The creation of States is meant to be a solution to this problem. The idea is that State creation will give people a greater say in the way they are governed and the way national resources are shared out and used.

Unfortunately, the creation of States has not solved the problem of ethnic minorities. What has happened is that when a State is created in an area of ethnic diversity, one ethnic group emerges as the dominant ethnic group while others are minorities. For example:

- When Benue State was created, the Tiv emerged as the dominant ethnic group with the Idoma, the Iggede and others as minorities;
- When Kogi State was created, the Igala emerged as the dominant ethnic group with the Okun, Yoruba, the Ebira, the Bassa Nge, the Kakanda and others as minorities;
- When Borno State was created, the Kanuri emerged as the dominant group with the Shuwa Arab, Bura, Marghi and others as minorities.

In various States, the relationship between the dominant group and the minorities is that of an uneasy calm which can be very easily upset, resulting in violent conflict. Such violent conflict occurred in Kogi State in March 2002. The State Government had carried out a Local Government creation exercise which was perceived by the minorities as unduly favouring the Igalas. There was a build-up of tension until violence broke out mainly between the Ebira and the Igala in several pails of the State. The violent conflict claimed many lives.

Clearly, there is a need for the Federal and State Governments to address the problem of minorities in Nigeria in the interest of national security.

#### **4.0 Conclusion**

From the point of view of national security, the most important features of the age-sex distribution of Nigeria's population are the large percentage of people in the 0 - 14 years add the 15 -39 years age brackets. There is need to reduce these percentages through a long-term programme of reducing the rate at which the population of the country is growing as envisaged in the National Population Policy.

#### **5.0 Summary**

Like that of other developing Countries. Nigeria's population pyramid has a very broad base and tapers upwards. The population is characterized by:

- A large proportion of dependent youth and this:
  - i) adversely affects capital formation and economic development;
  - ii) means that the labour force will grow rapidly;
  - iii) explains why many young people who should be in school are put to work so that the family can make ends meet.
- A large proportion in the reproductive age bracket and this means that:
  - i) Nigeria's population will continue to grow rapidly; and
  - ii) Nigeria will continue to have a youthful population for some time to come.
- A large proportion in the criminally active age bracket and this is probably one major reason why the crime rate is high and rising;
- The labour force is large but is unable to cater for the dependent population and still have resources left over for development because:
  - i) Level of technology is low;
  - ii) Educational and skill levels are low;
  - iii) There is widespread poverty and level of savings is generally low;
  - iv) The rate of job creation is low.

Nigeria is made up of between 250 and 400 ethnic groups with the three largest accounting for 57.8% of its population. The Middle Belt is particularly diverse ethnically speaking. People have moved and are moving from their traditional homelands to the territories of other ethnic groups in search of better economic opportunities. They have also migrated into towns, making all the larger towns ethnically diverse. Although, by and large, migrants have lived at peace with their host communities, ethnic violence have erupted in several rural and urban areas in the recent past.

The ethnic diversity of large parts of Nigeria's border areas has encouraged cross-border criminal activities and hindered policing.

Nigeria's ethnic minorities resent the tendency for ethnic majorities to dominate State power and national resources. The creation of States has failed to solve this problem which the Federal and State Governments need to address in the interest of national security.

## **6.0 Self-assessment Exercise**

How is the problem of ethnic dominance a threat to State and national security in Nigeria?

## **7.0 Tutor-marked Assignment**

Of what importance to the study of security is the age-sex distribution of Nigeria's population?

## **8.0 Further Reading and Other Materials**

1. Barbour, K. Michael et al. *Nigeria in Maps*, 1982.
2. Iloeje, N.P. *A New Geography of Nigeria*. Lagos: Longman Nigeria Limited, 1973.
3. Oguntoyinbo, J.S., O.O. Areola and M. Filani. *A Geography of Nigerian Development*. Ibadan: Heinemann Educational Books (Nig) Ltd., 1978.

## **Unit 8: Population Migration**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Pre-Colonial Migration
- 3.2 Migration During the Colonial Period
- 3.3 Migration in the Post-Independence Period
  - Creation of States and Local Governments and Population Migration
  - Creation of the Federal Capital Territory and Population Migration
- 3.4 Impact of Migration
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

Population migration means the movement of people from one place to another, either permanently (in which case they settle down) or temporarily (in which case they return home after a period of stay). It has been a feature of the geography of Nigeria from time immemorial. It is important for several reasons:

- It is a means by which the pressure of population on the land in overpopulated areas is reduced;
- It is a means by which underpopulated areas can be settled and their natural resources exploited;
- It causes people of different ethnic backgrounds to live together and although the relationship between them may be peaceful, it can also be and has sometimes been marked by conflict;
- It is responsible for the rapid growth of Nigerian towns with serious implications for crime and security.

In this unit, we shall be studying population migration in Nigeria with the underlisted objectives in mind.

### **2.0 Objectives**

By the time you complete this unit, you should be able to:

- Discuss the role of migration in the peopling of Nigeria;
- Describe the pattern of pre-colonial migration in Nigeria;
- Describe the pattern of migration during the colonial period;
- Explain the pattern of migration during the colonial period;
- Describe the pattern of migration since independence;

- Explain the pattern of migration since independence;
- Discuss the impact of migration on the source regions and the destinations of the migrants.

### 3.1 Pre-Colonial Migrations

In ancient times, people often moved from the areas where they were living to settle in other areas. Such movements were prompted by one or more of the following:

- The search for richer hunting grounds;
- The search for better or more spacious agricultural land;
- The search for better fisheries;
- The search for a refuge from hostile armies;
- The pursuit of commercial activities;
- Exile for political or social reasons; and
- Forced movement as slaves.

That is why the folklore of most of Nigeria's ethnic groups include stories which trace their origins to the movement of their ancestors from a former home area either within Nigeria or from outside, to their present homeland. These ancient movements continue to be important because they were responsible for the location and area extent of the various ethnic groups of Nigeria.

Figure 8.1 is an attempt to show some of the known pre-colonial migrations. Some of the main ones include the movement of:

- Tuareg and Fulani from the Southern Sahara into the extreme northern part of Nigeria;
- Fulani from the Rita Djallon Highlands of Guinea to the Sokoto area and from there fanning out to the Kano area, the Ilorin area, the Suleja area, the Bauchi and Yola areas and across into Cameroon;
- The Kanuri from South east of Lake Chad to Kano and Gombe areas;
- Tiv people north-eastwards, north-westwards and northwards;
- The Yoruba from west of the Kainji Dam area southwards into the forest belt;
- The Igbo southwards towards the coast and westwards across the Niger; and
- The Benin south-eastwards into the Niger Delta area.

These and many other ethnic migrations resulted in people of various ethnic groups settling in the traditional territories of other ethnic groups. In many instances, the host ethnic groups absorbed the migrants. In others, it was the migrants that absorbed their hosts. In yet others, the migrants have maintained their identities till today.

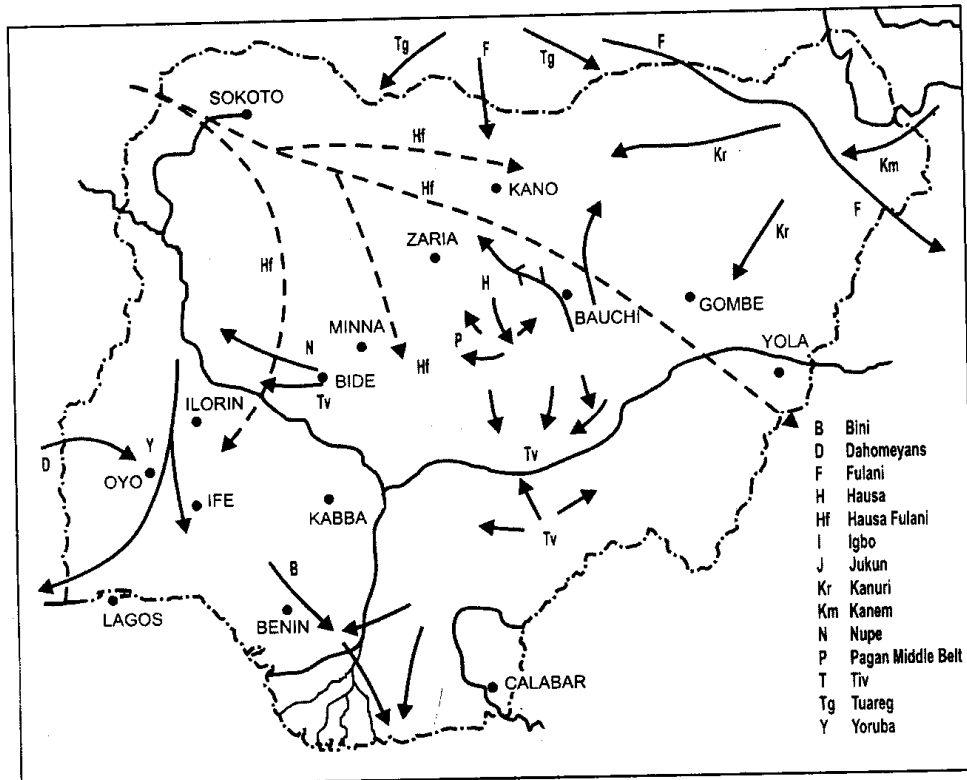


Fig. 8.1: Pre-colonial Migration in Nigeria. (After Barbour, K. Michael et al.)

### 3.2 Migrations During the Colonial Period

During the colonial period internal migration increased considerably in response to an economy that was becoming more diverse and larger, offering a wider and wider range of opportunities in both the formal and informal sectors. The following factors in particular encouraged and made it easier for people to move:

- Tin mining on the Jos Plateau with its large demand for labour;
- The promotion of export crop production by the colonial administration creating larger demands for labour than the local population could supply.
- The development of railways and roads which themselves attracted settlement of people and made it easier for people to move;
- The development of administrative centres with social services such as electricity, pipe-borne water and medical facilities, which were powerful pull factors for the rural population. The towns also provided large and increasing opportunities for commerce which attracted many people.

The main source regions for migration during the colonial period, that is the areas from which people moved in large numbers, include:

- The Sokoto region from which people moved during the dry season to the cocoa belt, returning home at the beginning of the



- rainy season; and also to the Jos Plateau tin mining areas;
- The Katsina area from which people moved to present day Niger State and also to the Jos Plateau;
- Southern Borno to the groundnut belt of Kano and to the Jos Plateau;
- The Igbo heartland into the rubber belt of Edo and Delta States; into the cocoa belt and the Lagos area; into the Nike Plains near Enugu;
- The Middle Cross River valley into surrounding areas;
- The homeland of the Ebira into the cocoa belt.

Thus the main areas, which served as receiving areas were:

- The cocoa and kolanut growing areas of Oyo, Ogun and Undo States;
- The rubber and timber producing areas of Edo, Delta, Ondo, Ogun and Oyo States;
- The oil palm belt of Ondo, Ogun, Edo, Delta, Imo, Abia and Cross River States;
- The groundnut and cotton growing areas of Kano, Jigawa, Katsina, Sokoto and Zamfara States;
- The tin mining areas of Jos Plateau.

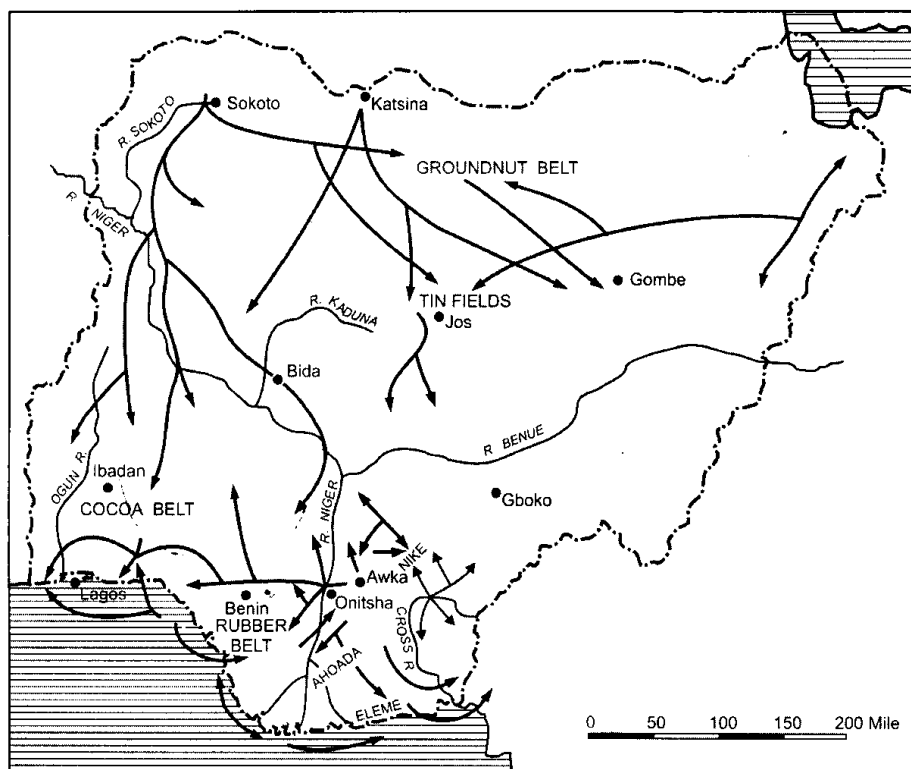


Fig. 8.2: Pattern of Rural - rural Migration in Nigeria During the Colonial Period.

Figure 8.2 shows the main source and destination regions of population migration during the colonial period.

The post-independence period has witnessed a relative decline in cocoa, palm produce, rubber, groundnut, cotton and timber production and a virtual end to tin mining. In the cocoa, rubber, timber and palm oil producing areas of the South West, many of the Igbo, Ebira and Urhobo migrants settled down as long-term labourers or as share croppers. An increasing number of them became independent food crop producers, leasing land from the local owners.

In the groundnut and cotton growing areas, many former migrant labourers have also settled down as food crop producers. On the Jos Plateau, former tin miners either:

- Became farmers on land leased from the host communities; or
- Settled in the towns (such as Jos, Bukuru and Barkin Ladi) as traders, artisans and service providers; or
- Moved to other parts of the country (such as Nasarawa, Oyo and Osun States) to engage in illegal mining of tantalite and gold.

### **3.3 Migration in the Post-Independence Period**

The most important factors responsible for migration since 1960 are:

- i) the creation of States and Local Governments and the development of social infrastructures in their headquarters; and
- ii) the establishment of the Federal Capital Territory.

#### **Creation of States and Local Governments and Population Migration**

In 1966, Nigeria was made up of four regions: Northern, Eastern, Western and Mid-Western. In 1967 the country was divided into twelve States. In 1976, the country was further divided into nineteen States and a Federal Capital Territory. Further sub-divisions have taken place since then while new Local Governments were created again and again. Today, Nigeria is divided into:

- 36 States:
- a Federal Capital Territory: and
- 774 Local Government Areas. The indications are that many more Local Governments will be created. One important result of State and Local Government creation has been the emergence of their capitals as new economic growth poles with a concentration of:

- administrative functions which means some job creation;
- infrastructural development in the form of roads, electricity, telecommunications, water supply, educational institutions, etc. Again this means job creation.
- government investment in State-owned manufacturing industries.

The result is that there has been an unprecedented rate of movement of people from rural areas into these favoured towns to seek employment in government and in government-owned industries and to take advantage of the opportunities for informal sector activities of commerce, cottage industries and the provision of services. Lagos and all the State capitals have grown phenomenally in recent years as a result.

### **Creation of the Federal Capital Territory and Population Migration**

Creation of the Federal Capital Territory and Population Migration must be singled out as a special case of recent population concentration. The decision of the Federal Government to create a new, centrally-located Federal Capital Territory has led to the development of Abuja, a new town and of several satellite towns such as Nyanya-Karu, Gwagwalada, Kuje, Bwari and Kubwa. All of these towns are growing very rapidly, largely as a result of migration from rural areas and other urban centres.

### **3.4 Impact of Migration**

Population migration in Nigeria has left its impact in both the source regions and the destinations of the migrants. In the source regions, migration has led to:

- Population imbalance. Migration is selective in that it is people in the age bracket 15 to 40 years that tend to move. This leaves behind people who are below 15 years and above 40 years:
- Labour shortage because of the migration of people of working age:
- Decline in agricultural production:
- Food shortage, making it necessary to "import" food from other rural areas or even from the towns! Importation of food is made possible by remittance sent home by relatives resident in towns.

In the receiving areas or destinations, migration has led to:

- Increased tempo of economic activities: food crop production if the destinations are rural areas, and commercial activities and manufacturing if they are towns;
- Population imbalance in which young and middle-aged males predominate;
- Massive unemployment in urban areas. This is because there are far fewer jobs available in these areas than the number of people looking for employment;

- Increased pressure of population on social services such as electricity, water and transportation;
- Increased disillusionment among the people especially school leavers;
- Increasing tendency for people to commit crimes partly out of necessity, partly because the opportunities are there, partly out of frustration and partly because people have left behind the social norms and sanctions by which traditional society keeps crime in check.

#### **4.0 Conclusion**

The most important aspect of migration in Nigeria today is the migration of people from rural areas into towns. This has left its impact in the rural areas as well as the towns.

#### **5.0 Summary**

The folklore of most of Nigeria's ethnic groups suggest that these groups moved to their present territories from some other place for a variety of reasons. During the colonial period, the movement of population was encouraged and facilitated by:

- Tin mining on the Jos Plateau;
- Export crop agriculture;
- The development of railways;
- The development of administrative centres.

In the post-independence population, migration has been encouraged principally by:

- The creation of States and Local Governments; and
- The establishment of the Federal Capital Territory.

The most important type of migration during this period has been rural - urban migration. This has left its impact in both the rural areas and the towns.

#### **6.0 Self-assessment Exercise**

Why are Nigerian towns growing so rapidly and what are the security implications of this growth?

Tutor-marked Assignment

None.

## **Unit 9: Rural Settlements**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Types of Rural Settlements in Nigeria
  - Nucleated Settlements
  - Nucleated Settlements with Isolated Compounds
  - "Satellite" Farm Villages and Hamlets
  - Dispersed Settlements
  - Hamlets and Fishing Camps
- 3.2 Economic Characteristics of Rural Settlement
- 3.3 Social Infrastructure in Rural Areas
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **10 Introduction**

People live in farmsteads, hamlets, villages, towns and cities. These various places where people live are called settlements. A farmstead is usually made up of a farmhouse and the buildings near it such as barns and chicken houses. Such a housing unit is usually the abode of a man, his wife or wives and his children. A hamlet is made up of a few housing units located in one place. It contains two or more farmers and their households.

A village consists of a larger number of housing units which may be arranged in a variety of ways in one place. They may be dispersed, in which case a housing unit is separated from its neighbours by large, open spaces, bush or farmland. They may be nucleated in which case the housing units are clustered together. They may be linear as when they are strung along a road or river. A village may have a population ranging from a few hundred to a few thousand.

Farmsteads, hamlets and villages are called rural settlements. People who live in them are usually engaged in agriculture or fishing and the making of craft goods.

A town is a very large collection of housing units with a population of many thousands. A city is a large town. Towns and cities are called urban settlements. In many countries, agriculture is not an important occupation of town or city-dwellers. Rather, these people are engaged in manufacturing industry, commercial activities, the provision of various services and administration. In Nigeria, a large proportion of the

population of many towns (such as Kano, Ibadan and Ogbomosho) are farmers, although many people engage in commerce and the provision of services.

These various types of settlement have different characteristics, afford different opportunities for people and present different problems, particularly those which relate to crime and security. That is why *we* shall be studying rural settlements in this unit and urban settlements in Unit 10.

## **2.0 Objectives**

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

- Define what a rural settlement is;
- Describe the functions of rural settlements;
- State the proportion of the population of Nigeria who live in rural areas;
- Describe the main types of rural settlements in Nigeria and where they are found;
- Describe the main economic characteristics of rural settlements in Nigeria;
- Relate types of rural settlements to economic activities in Nigeria;
- Describe the nature of social infrastructure in the rural areas of Nigeria.

### **3.1 Types of Rural Settlements in Nigeria**

There are five main types of rural settlements in Nigeria:

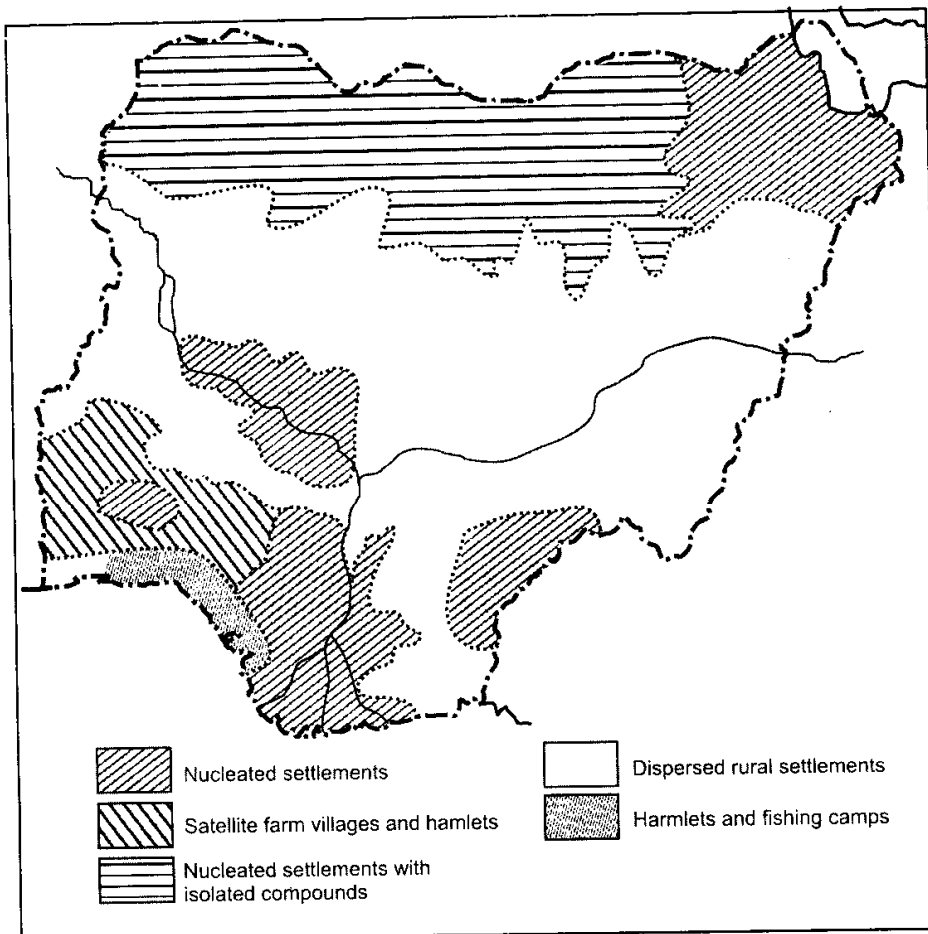
- i) Nucleated settlements;
- ii) Nucleated settlements with isolated compounds;
- iii) "Satellite" farm villages and hamlets; -
- iv) Dispersed settlements; and
- v) Hamlets and Fishing camps.

Figure 9.1 shows the areas where these various types of rural settlements are found.

#### **Nucleated Settlements**

A nucleated settlement is one in which there is a large concentration of buildings in one place. In the olden days such a settlement often had a defensive wall around it in many parts of Nigeria. In the more hilly parts of the country, such as around the Jos Plateau, nucleated villages were located on hill tops, again for defensive reasons. The cessation of inter-ethnic wars and of slave raiding has rendered such defensive measures unnecessary. This has led to the dispersal of walled villages in many

areas such as Hausaland to the abandonment of hill top village sites in favour of dispersed settlements on nearby plains as in many parts of the Middle Belt.



*Fig. 9.1: Types of Rural Settlements in Nigeria*

Nevertheless, we still find a nucleated pattern of settlement:

- Around Ogoja in Cross River State;
- Around Eruwa in Oyo State;
- In an irregular belt stretching from Bayelsa and Rivers States through Delta into Imo and Edo States;
- In Nupeland; and
- In Kanuriland areas to the south-west of it.

The main occupation of the people who live in these nucleated settlements is crop farming, with trading, the collection of forest products and traditional industries and craft making as secondary activities. One of the problems which nucleated villages face in various parts of the country is that farmers are not located on their farms. As a matter of fact, these farms, which may be in scattered locations, are often located several kilometers from the village.

To facilitate trading, villages have markets which hold every so many days, depending on the size of the village and of the area it serves.

### **Nucleated Settlement with Isolated Compounds**

In this settlement pattern we have old nucleated villages scattered about dispersed compounds. The dispersed compounds consist of a number of huts or dwelling units and granaries all enclosed within a fence with an entrance. This is the pattern of rural settlement in Hausaland.

In the olden days, the nucleated villages were usually walled for security reasons. But with population growth and the establishment of law and order, many people have moved out and settled in isolated compounds (called *ungwa* in Hausa) and hamlets (called *kauye*). These isolated compounds and hamlets are surrounded by the residents' farmlands. In matters of administration, they report to the Village Head who resides in the other village. Several village heads report to a District Head who lives in what is usually the largest village in an area. District Heads report to the Emir, a powerful traditional ruler, resident in a town. This was the system that the British met and preserved for their own use in their Indirect Rule system of administration, including security.

The primary and secondary occupations in the areas with this type of rural settlement are also crop farming, trading, the collection of forest products and traditional industries and crafts. To facilitate trading, there are periodic rural markets located in the villages.

### **"Satellite" Farm Villages and Hamlets**

"Satellite" Farm Villages are hamlets settlements in the highly urbanised area of Yorubaland. This is where the cocoa belt is to be found. Because of the high level of urbanisation, farmlands and especially farmlands for cocoa is available only at considerable distances from the towns where most farmers have their permanent homes. In order to reduce the time spent in and the cost of moving between town and farm, farmers have established villages and hamlets on or near the farms. Most of the time while working on their farms, they live in these villages and hamlets. They visit the town where they have their permanent houses from time to time but invariably during national or local festivals. They spend more time on their farms when farm prices are high.

### **Dispersed Settlements**

This pattern of rural settlement consists of farmsteads and hamlets located on farmlands. It is the dominant pattern of rural settlement in South-east Nigeria (Cross River, Abia, Ebonyi, Enugu and parts of



Anambra gates) and the vast Middle Belt (Niger, much of Kogi, Nasarawa, Benue, Taraba, Adamawa and Plateau).

In Igboland the rural landscape is dominated by isolated compounds and hamlets. Each compound is made up of a group of small, closely-spaced buildings. Compounds may be grouped to form a hamlet. Such hamlets tend to be located along roads which radiate from a central place in which there is a church, a market place, a post office, a health centre. In that part of the country, such a grouping of hamlets around a central place is inhabited by a clan and is called a village. Its population may range from 1000 to 5000.

In the Middle Belt, nucleated rural settlements were common in the past, villages being surrounded by walls and or located on hill tops. But during the colonial period, settlement was no longer influenced by security considerations. The result is that villages broke up to form hamlets and farmsteads surrounded by bush and farmlands. This process has taken place in Idomaland, Tivland, Gwariland, Kambariland and Baribaland, as well as in the Jos Plateau area.

### **Hamlets and Fishing Camps**

These are the dominant types of rural settlements in the coastal strip of Lagos, Ogun, Ondo and Delta States. The main occupation is sea-fishing along the coast itself and inland fishing in the creeks and lagoons.

Sea-fishing is the occupation of the Ijo, Ewe (from Ghana) and Kita ethnic groups who settle in small hamlets and fishing camps on the coastal sands. The Ijo, Ilaje and Ijebu engage in inland fishing, settling in hamlets along the lagoons and creeks. The Igbo and the Urhobo engage in cassava growing and the collection of oil palm fruits. They tend to settle in small temporary farm camps, each having between two and fifteen or twenty people.

### **Economic Characteristics of Rural Settlement in Nigeria**

The main economic characteristics of rural settlements in Nigeria are as follows:

- The main occupation is either agriculture or fishing;
- Secondary occupations include agricultural crop processing, trading, the collection of forest products and the making of various craft products.
- Periodic markets are a very important aspect of the economic life.

### 3.2 Social Infrastructure in Rural Areas

In Nigeria, the provision of social infrastructure is heavily in favour of urban areas. By infrastructure we mean the basic structures and facilities necessary for a country or area to function effectively, e.g. buildings, transport, water and electricity. Inadequate provision of these facilities is one major reason why living in rural areas is harsh and unattractive. There are three of them that are particularly important:

- **Roads.** Inadequate provision of roads means that many farmers cannot dispose of their surplus production
- **Potable water.** Lack of potable water in many rural areas makes water-borne diseases such as guinea an prevalent; and
- **Electricity.** Although the situation is improving because of rural electrification projects, lack of electricity makes rural industrialisation impossible and renders life in rural areas dull.

### 4.0 Conclusion

In order to make life more tolerable for rural dwellers in Nigeria, it may be necessary to reorganize rural settlements in many areas so that it would be possible to provide them with social infrastructures such as roads, potable water and electricity relatively cheaply.

### 5.0 Summary

Between 70% and 80% of the population of Nigeria live in rural areas. There are five main types of settlements in these rural areas:

- Nucleated settlements;
- Nucleated settlements with isolated compounds;
- “Satellite” farm villages and hamlets;
- Dispersed settlements; and
- Hamlets and fishing camps.

These rural settlement types are to be found in different parts of the country. The occupations of the people who live in the rural settlement are:

- Agricultural or fishing as main occupations; and
- Agricultural crop processing, trading, the collection and processing of forest products as secondary occupations.

Periodic markets are an important aspect of the economic and social life of rural settlements.

### 6.0 Self-assessment Exercise

With specific examples, describe the five main types of rural settlement in Nigeria.

## **7.0 Tutor-marked**

None

## **8.0 Further Reading and Other Materials**

1. Barbour, K. Michael et al. *Nigeria in Maps*, 1982.
2. Oguntinyinbo. J.S., O.O. Areola and M. Filani. *A Geography of Nigerian Development*. Ibadan: Heinemann Educational Books (Nig) Ltd. 1978.

## **Unit 10: Urban Settlements**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Pre-Colonial Urbanisation in Nigeria
  - Pre-Colonial Urban Development in Hausaland
  - Pre-Colonial Urban Development in Yorubaland
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### **1.0 Introduction**

If you refer back to the introduction to unit 9, you will discover that we defined a town as "a very large collection of housing units with a population of many thousands and a city as "a large town". We also said that "Towns and cities are called urban settlements". This unit is concerned with urban settlements in Nigeria. The process by which a village grows into a town which grows bigger and bigger is called urbanisation. Urban settlement and urbanisation are important because:

- Between 20% and 30% of the population of the country lives in urban settlements including cities such as Lagos, Ibadan and Kano, and towns such as Bida, Yola, Calabar and Owerri;
- Urban centres are centres of political and administrative activities and these determine, to a large extent, what happens in rural areas;
- Government investment in general is heavily in favour of urban areas;
- Towns and cities attract migrants in large numbers from rural areas of the country;
- The rapid rate at which cities and towns are growing has created

various problems – physical, economic, political and social. These are reasons why we need to study the urban settlements of Nigeria. The objectives of this unit are stated below:

## **2.0 Objectives**

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

- Describe the history of urbanisation in Nigeria;
- Describe the pattern of urbanisation in the country;
- Distinguish between:
  - i) traditional towns
  - ii) modern towns
  - iii) traditional/modern towns in Nigeria
- Discuss the economic, political and social characteristics of Nigerian towns;
- Discuss the causes of rapid urbanisation since 1967.
  - Discuss the problems caused by rapid urbanization; and
  - Suggest how these problems may be tackled.

## **3.1 Pre-Colonial Urbanisation in Nigeria**

Nigeria had had a long history of urban settlement before the coming of the British although very many new towns were established during the colonial period and the rate of urbanisation has increased tremendously since independence. BY the middle of the 19th Century there were two major areas of urban settlements in Nigeria and two minor ones. These four areas of pre-colonial urban development are:

- Hausaland;
- Yorubaland;
- The area covered by the Kanem Borno Empire and
- The city-states of south-eastern Nigeria.

### **Pre-Colonial Urban Development in Hausaland**

Towns developed in Hausaland between the 9th and 17th Centuries as part of the great Sudanese Empires of Ghana, Mali and Songhai. These empires established a system of cities for commerce and administration that included Kano, Katsina and Zaria. They served as focal points for the great transaharan trade routes.

When the last of these empires collapsed, the seven Hausa States of Kano, Zazzau (Zaria), Gobir, Katsina, Rano, Biram and Daura developed in Hausaland, extending their influence southwards into the States of Zamfara, Yauri, Nupe, Gwari and Korofa. From 1804, the Islamic Scholar, Uthman Dan Fodio, led a Jihad or Holy War that resulted in the take-over of the rulership of the Hausa States by Fulani

Emirs. New towns such as Sokoto, Wandu, Gombe, Katagum and Warno were established for purposes of trading and administration.

The ancient and the new towns performed three main functions:

- They served as the administrative headquarters of large provinces into which the Fulani Empire was organised;
- They served as trading posts both for the emirates and for the long-distance trade across the Sahara;
- They served as the religious capitals of the emirates where Islamic scholars taught the Koran and Islamic culture.

Several of the towns grew into quite large sizes. Richard Lander estimated the population of Sokoto in 1825 - 1827 to be 120,000. According to study reports, the population of Kano between 1851 and 1855 was 30,000. Also the population of Zaria between 1982 and 1827 was reported to be between 40,000 and 50,000.

The Hausa States maintained strong trading links through such trade centres as Sokoto, Katsina, Kano and Kukawa. They also had strong trading links to the forest belt of Nigeria through Zaria, Vaud, Rabbah and Wamba.

### **Pre-Colonial Urban Development in Yorubaland**

The Yoruba people were believed to have migrated in waves from the north east into south western Nigeria between the 7th and the 10th Centuries A.D. The earliest of these movements led to the founding of Ile-Ife by Oduduwa, making that town the cradle of the Yoruba. From there, Oduduwa's children moved out to establish their own cities and kingdoms. They are believed to have founded Ketu, Sabe and Popo Kingdoms in the west, Owu Kingdom in the South and the Kingdoms of Ila and Oyo in the north. The capitals of these kingdoms served as administrative centres as well as centres of trade and craft production.

The present day system of cities in Yorubaland dates back to the 18th and early 19th Centuries as a result of the Yoruba wars. Towns were often established as a result of the depopulation of the villages as a result of war, forcing the remnant population to come together in one place.

The populations of some of these towns were quite substantial. According to the estimates of various European travellers, six Yoruba towns — Ibadan, Ilorin, Iwo, Abeokuta, Oshogbo and Ede - had a population of over 40,000 in the 1890s.

## **Pre-Colonial Urban Development Elsewhere in Nigeria**

Urban development of a lesser magnitude than in Hausaland and Yorubaland took place in pre-colonial times in the north east and in the south east. In the north east, the Kanem-Borno Empire which is mostly outside Nigerian territory today, led to the development of two important towns within Nigerian territory namely, Maidugur-Yerwa and Potiskum.

In south-eastern and southern Nigeria, a number of powerful coastal city states grew up to take advantage of the Transatlantic Slave Trade and in later years, trade in palm produce. They include Calabar, Bonny, Brass and Opobo.

### **3.2 Urban Development During the Colonial Period**

During the colonial period, urban development was boosted by two main factors:

- The development of a modern transport network, especially railways; and
- The production of cash crops and minerals for export.

One of the instruments used to promote the colonial export-import economy and to facilitate administration was the railway network made of:

- A western line from Lagos through Kaduna and Kano to Nguru: and
- An eastern line that ran from Port Harcourt through Kaduna to Kaura Namoda State.

The railway network had a great impact on urbanisation. It led to:

- The development of new towns along the rail lines, towns such as Jebba and Minna on the western line and Enugu, Kafanchan and Makurdi on the eastern line. Kaduna developed as an administrative and railway function town.

• The rejuvenation of old towns through which the railways passed. These include Abeokuta, Ibadan, Oshogbo, Offa, Ilorin, Zaria and Kano. These towns grew as a result of immigration of people taking advantage of the opportunities offered for commercial activity by the new means of transport.

Meanwhile, old towns which did not lie on the new transport network, declined as they lost population due to out-migration. Towns which were affected by this decline included Ile-Ife, Benin City, Oyo, Ogbomosho, Ede, Katsina, Sokoto, Yauri, Yola and Maiduguri.

Export crop and mineral production also led to the growth of new towns such as Aba, Jos and Bukuru, as well as the rejuvenation of existing ones such as Ondo, Ibadan and Kano.

During the colonial period, Nigerian towns performed a wide range of functions including residential, administrative, commercial, educational, transportation, other service and industrial functions.

It is to be noted that towns which combined all of these functions grew very rapidly. Examples are Lagos, Port Harcourt, Kaduna, Enugu and Ibadan.

By 1953 fifty Nigerian towns had a population of over 20,000 and thirty six of them were growing at 6% per year.

### **3.4 Urban Development in the Post-Colonial Period**

Since independence, and especially since 1967, urbanisation in Nigeria has been phenomenal. The factors responsible include:

- the Civil War (1967- 1970);
- the creation of States;
- infrastructural development;
- educational development;
- industrial development;
- drought in the early 1970s and early 1980s; and
- the deteriorating conditions of living in rural areas.

Let us look at each of these factors briefly:

#### **The Effects of the Civil War (1967- 1970)**

In 1966, that is, prior to the Civil War, many people of eastern Nigeria origin fled from northern Nigerian cities because of civil disturbances. They moved in their thousands to swell the population of urban centres such as Owerri, Enugu, Onitsha and Aba. During the Civil War, these and other towns received refugees from rural areas of the war-affected areas. After the war, people of eastern Nigeria origin moved back into cities in other parts of the country.

#### **The Effects of the Creation of States**

We have seen how the creation of States has promoted rural-urban migration on a massive scale. You are encouraged to go back to the relevant section of that unit to refresh your memory.



## **The Effects of Infrastructural Development**

Again we have seen how the massive infrastructural development which has taken place in Nigeria since the Civil War has favoured urban centres, particularly the State capitals and Abuja, as against rural areas. This has made urban centres more attractive to would-be migrants and has played a major role in urban development since 1970.

## **The Effects of Educational Development**

The number of primary school, secondary school and tertiary institution graduates has been increasing very rapidly since 1970. Unfortunately,

- our educational system has not prepared them for life in rural areas;
- these graduates have high expectations; and
- life in rural areas is becoming increasingly unattractive.

The result is that many of these people move into the towns in the hope that they will find employment.

## **The Effects of Industrial Development**

Most of the manufacturing industries in Nigeria are located in urban centres and are concentrated in only a few of them, including Lagos, Kano, Kaduna, Ibadan and Port Harcourt. Many young people have migrated into these towns in the hope that they will find employment in the manufacturing industries.

## **The Effects of Drought**

The drought which hit the Sudan-Sahel belt of Nigeria in the early 1970s and early 1980s forced many people to move permanently from rural areas into towns within the belt (Sokoto, Katsina, Kano, Maiduguri and farther south (Kaduna, Jos, Ilorin, Ibadan, Lagos, Enugu, Owerri, Port Harcourt, etc).

The effects of deteriorating conditions of living in rural areas is pushing many young men and women to move from rural areas into the towns,

**Table 10.1. Levels of Urbanisation in Nigeria**

State	Percentage of the Population Living in Urban Areas
Abia	38
Adamawa	23
Akwa Ibom	12
Anambra	62
Bauchi	16
Benue	17
Borno	36
Cross River	25
Delta	33
Edo	45
Enugu	42
Imo	33
Jigawa	7
Kaduna	41
Kano	40
Katsina	30
Kebbi	12
Kogi	35
Kwara	43
Lagos	94
Niger	23
Ogun	45
Ondo	40
Osun	56
Oyo	69
Plateau	26
Rivers	31
Sokoto	14
Taraba	10
Yobe	24
Abuja (FCT)	29
Nigeria	36

### **3.4 Levels of Urbanisation**

According to the 1991 census, about 36% of the people of Nigeria live in urban settlements. However, the percentage varies greatly from State to State as shown on Table 10.1. It is highest in Lagos (94%), followed by Oyo (69%) and Anambra (62%) and lowest in Jigawa (7%) followed by Akwa Ibom and Kebbi (12%).

### **3.5 Functions of Towns in the Post-Colonial Period**

During this post-colonial period, Nigerian towns have performed basically the same functions as during the colonial period. However, there has been:

- a greater tempo of activity which has been made possible by earnings from crude oil exports;
- a greater emphasis on administrative functions, especially in the state capitals where any major delay in the payment of civil servants' salaries is often reflected in a downturn in commercial activity;
- a marked increase in manufacturing activities, many of them due to state-owned enterprises; and
- an increase in service provision in the form for example, of catering, entertainment, tailoring, indigenous banking, etc.

### **3.6 Problems of Urban Settlements in Nigeria**

The rapid growth of urban settlements in Nigeria has led to a number of problems including

- unemployment;
- inadequate housing (leading to overcrowding, the building of shanty towns and slum development);
- an urban culture which
  - i) encourages people to strive after material success at whatever cost.
  - ii) does not have the norms and sanctions by which traditional society approves of acceptable behaviour and punishes deviant behaviour.
  - iii) makes it possible for people to remain anonymous.
  - iv) is characterised by a wide gap between the rich and the poor.
- abundant opportunities for crime, e.g.,
  - homes with electronic gadgets;
  - thousands of cars and motorcycles;
  - many people moving about with large amounts of cash;
  - overcrowded market places, motor parks and buses, etc.

Little wonder that Nigerian towns are fertile grounds for property crimes such as pick-pocketing, burglary, larceny, motor vehicle theft, armed robbery, arson, looting and vandalism.

### **3.7 Tackling Problems of Urban Settlements in Nigeria**

Urban problems in Nigeria may be tackled by:

- reducing the rate of urbanisation by improving the conditions of living in rural areas;

- creating more employment opportunities in urban area through promoting small and medium-scale enterprises;
- helping people to build their own low-cost houses through the provision, for example, of site and services and cheap building materials;
- encouraging urban residents to develop a community spirit that will have a positive impact on their environment and their security; and
- encouraging people to be more security conscious.

#### **4.0 Conclusion**

Nigeria had had a long history of urbanisation before the coming of the Europeans. During the colonial period and especially since independence, the rate of urbanisation has increased, creating problems of unemployment, inadequate housing and a culture which is conducive for criminal activity. These problems need to be tackled in the interest of peace and security.

#### **5.0 Summary**

The development of towns in Nigeria dates back to pre-colonial times. By the time the British came to the country there were towns in Hausaland, in Yorubaland, in Kanuri country and in the Niger Delta area and in the south east corner. The British colonial administration promoted urbanisation by constructing railways and by encouraging export crop production and mining.

After independence, and especially since 1967, the rate of urbanisation increased as a result of

- the Civil War (1967 - 1970)
- the creation of states
- infrastructural development in towns
- industrial development in towns in the early 1970s and early 1980s; and
- the deteriorating conditions of living in rural areas.

Nigerian towns perform residential, administrative, commercial, educational, transportation, various service and industrial functions. The tempo of economic activities in them has increased since 1970 because of income accruing to government from crude oil exports.

The rapid rate of urbanisation has created problems of:

- unemployment
- inadequate housing
- an urban culture which favours criminality

These problems need to be tackled in the interest of peace and security.

#### **6.0 Self-assessment Exercise**

Discuss the factors which promoted urban development in Nigeria during the colonial period.

#### **7.0 Tutor-marked Assignment**

Explain the increase in the rate of urbanisation in Nigeria since 1967 and discuss the problems which it has created.

#### **8.0 Further Reading and Other Materials**

As for unit 9.

## **Unit 11: Mining**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Mineral Resources of Nigeria
- 3.2 Mining in Nigeria
  - Coal Mining
  - Tin Mining
  - Impact of Tin Mining
- 3.3 Petroleum Exploitation
- 3.4 Petroleum Exports and National Security
- 3.5 Impact of Petroleum in Exploitation in Areas of Production
- 3.6 Gas Exploitation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

In this unit, we start studying economic activities in Nigeria. These are activities which give Nigerians employment and through which they make a living and create wealth. They are important for us in this course because they:

- Determine how healthy the country is economically and this is very important to national security;
- Affect the country's food security;
- Determine levels of employment, standards of living and levels of poverty, all of which influence crime rates;
- Create opportunities for various types of crime;
- Often have impacts in the environment and on people which are underlying causes of crime.

In this unit we shall be looking at mining which is the extraction of minerals from the ground. The objectives of the unit are listed below:

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

- List the main types of minerals which are available in Nigeria;
- Give a historical account of past mining activities in the country;
- Discuss the environmental and socio-economic impact of tin mining on the Jos Plateau;
- State the oil-producing States of Nigeria;
- Discuss the impact of oil exploration and exploitation on the environment and the socio-economic implications of this impact.
- Discuss the adverse consequences of oil production for the

national economy and national security.

### **3.1 Mineral Resources of Nigeria**

Before we describe and discuss mining in Nigeria, let us look at the country's mineral resources. A mineral resource is any natural concentration of material in the rocks of an area which is useful to man and may be extracted profitably. The mineral resources of Nigeria include:

- Mineral fuels: coal lignite, crude oil, natural gas and tar sands;
- Metallic minerals: cassiterite (tin ore), columbite, wolframite, galena, tantalite, gold and iron ore;
- Industrial minerals: limestone, marble, gypsum, sands, clays, gravel, feldspar, graphite, etc.

Figure 11.1 shows the known occurrences of some of Nigeria's mineral deposits.

Most of these mineral occurrences have not been explored in any detail with a view to finding out which ones would be profitable to exploit. It is believed that the exploitation of the solid mineral deposits could make a substantial contribution to the country's economy through:

- Employment generation;
- Revenue generation;
- Foreign exchange earnings;
- Infrastructural development; and
- Industrial development.

This was why the Federal Ministry of Solid Minerals Development was established to promote the mining of Nigeria's solid minerals.

### **3.2 Mining in Nigeria**

The mining of minerals such as iron ore, gold, tin and galena were already going on before the coming of the British. Commercial mining either for export or for local use started in the early years of the twentieth century.

It included the mining of:

- Coal;
- Cassiterite (or tin ore) and associated minerals; and
- Limestone.

During the colonial period, production of crude oil started in 1958 while that of iron ore is an even more recent development.

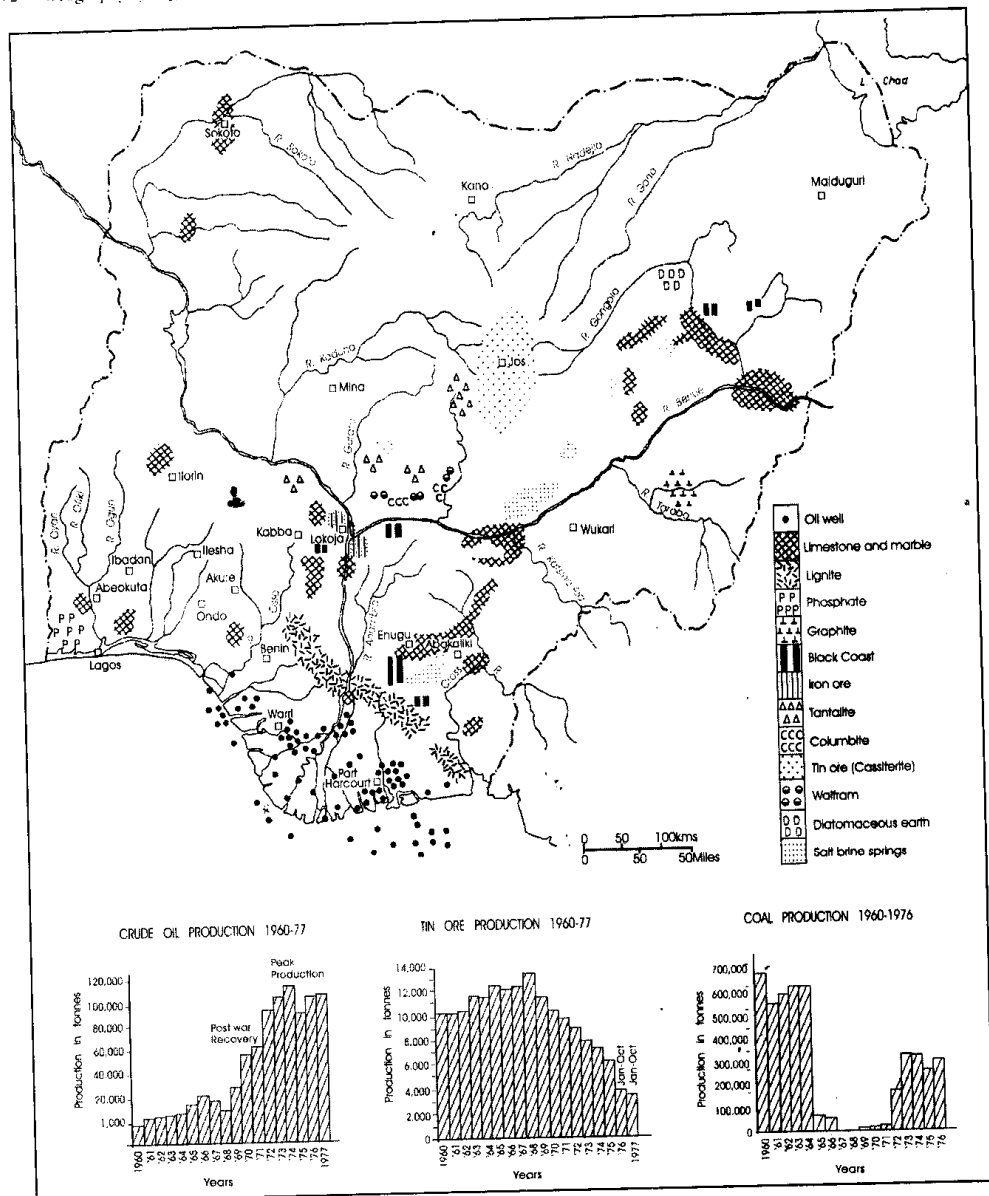


Fig. 11.1: Nigeria showing Known Occurrences of Mineral Deposits as well as Tin Ore Production 1960 - 1977, Coal Production (1960 - 1976) and Crude Oil Production (1960 - 1977)

## Coal Mining

Coal mining started near Enugu to supply fuel to the Nigerian Railway Corporation. Mining also took place at Ezima, Ogboyaga, and Orukpa, Okaba in Enugu, Benue and Kogi States. Mining declined in the late 1950s when the main consumer, the Nigerian Railway Corporation, dieselized its engines.

Only a small amount of coal is produced today for the Oji River Power Station which is owned by the National Electric Power Authority (NEPA) and the Nkalagu Cement Factory, both in Enugu State. Nigeria still has large reserves of coal.



## **Tin Mining**

Tin ore (or cassiterite) was mined in commercial quantities on the Jos Plateau from around 1905. It led to the extension of the railway line to the Plateau first from Zaria (the now defunct Bauchi Light Railway) and later from Kafanchan. It also led to the development of basic infrastructure on the Plateau: roads, electricity, telephone and water supply. There was a massive influx of population from various parts of Nigeria to work in the mines and also take advantage of the opportunities for commerce and various services which the mining industry offered. The result is the development of towns such as Jos, Bukuru and Barkin Ladi which have continued to grow till today.

Tin mining reached its peak in the 1960s. By the 1970s, the more accessible tin deposits had been exhausted and the rising cost of production caused most of the mining companies to close up their operations. Today, mining is done only by small-scale miners, operating mostly without licence.

## **Impact of Tin Mining**

Tin mining has left behind several environmental and socio-economic impacts which today constitute problems in the areas affected. The environmental impacts include:

- The devastation of the landscape. Mining has left behind mounds of earth and mining pits of various sizes some of which form lakes and ponds. Such devastated land is useless for agriculture. Animals and even people often drown in the ponds and lakes.
- Accelerated soil erosion;
- Removal of the original vegetation cover. The result is that firewood is scarce on the Jos Plateau.

The socio-economic impacts include:

- Mining left behind many former mine workers who, being strangers in the area, are landless. These people are unable or unwilling to go back home. By 1990, the average proportion of stranger elements in some of the settlements in the minefield was 67%. Because land is scarce, most of these people are unemployed and are therefore poor.
- Mining left behind camps which have lost their economic base. The inhabitants are poor, social infrastructures and services such as water supply, electricity and roads have broken down. Alcoholism is common. Such environments are favourable for criminal activities. Many of the settlements have been abandoned, the people having moved into Jos, Bukuru and Barkin Ladi to join the ranks of the unemployed.

## **Limestone Quarrying**

Limestone is the most important raw material for the manufacture of cement. Nigeria has large deposits of limestone in different parts of the country. It is quarried for use in cement factories located at Calabar (Cross River State), Nkalagu (Enugu State), Ewekoro and Shagamu (Ogun State), Ukpilla (Edo State), Sokoto (Sokoto State), Ashaka (Gombe State) and Yandev (Benue State).

Limestone quarrying is tied to the fortunes of these cement factories. In recent years, cement manufacturing has declined because of:

- Competition from imported cement;
- Ageing machinery in the cement factories and high cost of replacing these machines; and
- Poor management.

This decline has adversely affected limestone quarrying.

### **3.3 Petroleum Exploitation**

In terms of current production, petroleum is easily the most important of Nigeria's mineral resources. Prospecting for petroleum dates back to 1937. Petroleum was first found in commercial quantities at Oloibiri the Niger Delta and the first export was in 1958. Production increased rapidly but was interrupted by the Civil War (1967 - 1970). Production increased rapidly again after the war. Today, petroleum exports are the mainstay of Nigeria's economy so much so that changes in world petroleum prices have a major impact on economic activities in the country. Today, Nigeria is the world's sixth largest exporter of crude petroleum. The oil-producing States include Bayelsa, Delta, Akwa Ibom, Cross River, Rivers and Imo States.

### **3.4 Petroleum Exports and National Security**

Nigeria earns most of its revenue and foreign exchange from petroleum exports, making its economy a mono-cultural economy. This dependence on one commodity and on exports makes the country highly dependent on events which happen in other parts of the world. Anything which reduces the world demand for Nigeria's crude such as a relatively warm winter in North America and Europe, will reduce the price which other countries are prepared to offer for Nigeria's petroleum. Such a reduction in price means a reduction in foreign exchange earnings which translates into a cut-down in the amount of money accruing to the Federal Government. Therefore, Nigeria's over-dependence on petroleum exports is a threat to national security. The country must find an answer to this problem by diversifying its economy through:

- Solid minerals development;

- Agricultural development; and
- Industrialisation.

Dependence on crude oil exports have had other adverse effects on Nigerian society such as:

- Increasing the taste which Nigerian's have for foreign goods which has adverse effects on local manufacturing industries;
- Financing highly inflated contracts for infrastructural development (roads, ports, airports, universities, etc.) thus increasing the rate of inflation in the country;
- Promoting conspicuous consumption in which people who have managed to make money by whatever means, buy expensive cars, build mansions and show off their wealth in other ways. Such conspicuous consumption provokes criminal activity, especially property crimes and violent crimes.
- Relative neglect of agriculture by government making this occupation less and less attractive and so promoting rural-urban migration.

### **3.5 Impact of Petroleum Exploitation in Areas of Production**

Petroleum exploration and exploitation has had major adverse impacts on the environment of the oil-producing areas in the form of pollution caused by:

- Accidental blow-outs of oil pipes and installations;
- Leakage from oil pipes;
- Disposal of drilling muds;
- Gas flaring.

Oil pollution and gas flaring have had adverse effects on agriculture and the fishing industry as well as on water supply in these areas. Moreover, until recently, relatively little of the wealth taken out of the oil-producing areas has been used to develop these areas in terms of:

- Employment;
- Infrastructural development (roads, water supply, electricity, education and health delivery);
- Agricultural development and the development of the fishing industry;
- Industrial development. etc.

Thus, the oil-producing areas have been left in abject poverty after more than forty years of oil production. Meanwhile, the cost of living in these same oil-producing areas (such as Port Harcourt, Ward and Uyo) are some of the highest in the country.

In the face of all this, the people and especially the youth of these areas, having seen the developmental impact of oil wealth taken from their

land in other parts of the country, especially Abuja and in the State capitals, have become increasingly restive. From time to time, they have resorted to:

- Vandalization of oil installations:
- Kidnapping of expatriate oil workers:
- Killing of security personnel

In an attempt to drive home their demand for a better deal from the government of Nigeria. In response, the Federal Government has established the Niger Delta Development Commission (NDDC) to address the problems of development in the Niger Delta. Moreover, the oil-producing areas are now by law entitled to 13% of revenue accruing from petroleum exploitation in these areas.

### **3.6 Gas Exploitation**

Nigeria's reserves of natural gas are even larger than its petroleum reserves. Some of this gas occurs in association with crude oil and comes out inevitably when the crude oil is pumped out.

Most of the associated natural gas that comes out as oil is produced, is burnt off or flared as the country does not have the technology for collecting it for use. Some of it is used as fuel by manufacturing industries in the oil-producing areas. Some of it is used to generate electricity and some of it is distributed in bottled form for domestic use. But the proportion of the gas used in these various ways is small compared with the proportion flared.

Gas flaring is very wasteful. Therefore, oil-producing companies will soon be required to re-inject the gas produced back into the ground.

Exploitation of Nigeria's large gas reserves has now started with the building at Ome of a liquefied natural gas plant. Here, natural gas is liquefied and exported in large tankers to Spain and other countries. Plans are underway to build a gas pipeline to take gas to other West African countries and to build gas pipelines to take this product to other parts of Nigeria for domestic and industrial use.

### **4.0 Conclusion**

Nigeria is blessed with many mineral resources but only a few of them have been or are being exploited on a commercial scale. The exploitation of tin and crude petroleum has had both positive and negative impacts on the economy and people of Nigeria in general and of the producing areas in particular. The negative impacts need to be and are being addressed by government.

## **5.0 Summary**

Nigeria is blessed with a great variety of mineral resources but only a few namely, coal, tin, limestone, petroleum and natural gas have been or are being exploited on a commercial scale. Coal mining, which supplied fuel to the Nigerian Railway Corporation from about 1915, declined after 1958. Only a small amount is mined today.

Commercial tin mining took place on the Jos Plateau from about 1905 to the early 1970s when it declined. Tin mining has left behind several undesirable impacts on the environment and the socio-economic life of the areas affected.

Limestone is quarried and used for cement manufacturing in several parts of the country.

Petroleum mining, which started in 1958, is Nigeria's main source of foreign exchange. Nigeria has become over-dependent on this commodity with adverse consequences for national security. It has also had adverse impacts on the environment and the means of livelihood of the people of the producing areas. These have made the people increasingly restive. Attempts are being made by the Federal Government to deal with this problem by paying greater attention to the development of the Niger Delta area.

The exploitation of Nigeria's enormous gas resources has only just started with the establishment of a liquefied natural gas plant which liquefies natural gas for export.

## **6.0 Self-assessment Exercise**

Discuss the positive and negative contributions of tin mining to the economy of the Jos Plateau.

## **7.0 Tutor-marked Assignment**

None.

## **8.0 Further Reading and Other Materials**

None

## **Unit 12: Fishing**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Fisheries of Nigeria
- 3.2 Fishing in the Inland Waters
- 3.3 Fishing in the Coastal Belt
- 3.4 Fish Marketing
- 3.5 Problems of the Fishing Industry
- 3.6 Tackling the Problems of the Fishing Industry
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

Fishing is one of the main ways in which people in various parts of Nigeria make their living. It is the main occupation in the coastal belt, on and around Lake Chad and other natural lakes, around some artificial lakes, and along the main rivers.

Fishing is of great importance to the country's economy because:

- it provides employment to very many fishermen and so helps to keep people in rural areas. About four million people are directly or indirectly engaged in fishing activities;
- it supplies an estimated 40% of the total annual protein consumed by the average Nigerian. In some parts of the country (such as Rivers, Bayelsa, Cross River and Akwa Ibom States) the proportion may be up to 80%.
- because of the inability of the fishing industry to meet the demand for fish, the country has been importing fish at an increasing rate since 1971. This is a drain on the country's foreign exchange earnings that could be eliminated if the fishery resources were better exploited and managed.

In this unit we introduce to you, Nigeria's fishing industry. The objectives of the unit are stated below:

### **2.0 Objectives**

By the time you have completed this unit, you should be able to:

- discuss the importance of fishing to the Nigerian economy;
- describe Nigeria's fishing resources;
- describe the contributions of Nigeria's main fisheries to the country's fish catch;

- discuss the problems of Nigeria's fishing industry;
- suggest ways of tackling these problems.

### **3.1 Fisheries of Nigeria**

A fishery is simply a body of water which contains fish suitable for human consumption. Nigeria's fisheries may be divided into two:

- sea fisheries; and
- inland water fisheries.

Nigeria is blessed with a relatively long coastline and its offshore area has a high fishery potential. Thus, over 60% of the country's fishery resources are located in this offshore area.

The inland water fisheries may be sub-divided into:

- natural water bodies; and
- man-made water bodies.

In the first category, we have natural lakes such as Lake Chad, rivers such as the Niger and the Benue, flood ponds, flood plain swamps, creeks and lagoons. Man-made water bodies in which fish may be caught include artificial reservoirs such as Lakes Kainji and Shiroro, burrow-pits (left behind as a result of digging for mud, for example), mining paddocks (left behind in the tin mining areas of the Jos Plateau), cattle ponds (dug to store water for cattle) and fish ponds. From the point of view of fish stock, the most important of the inland water bodies are Lake Chad, followed by the creeks and lagoons of the coastal belt, the large rivers and flood plains and the artificial reservoirs.

### **3.2 Fishing in the Inland Waters**

Lake Chad has, for a long time, been an important source of fish for Nigeria. For example in 1967, the total domestic fish produced from all sonnies was about 119300 tonnes. Out of this, 30,000 tonnes or 25% came from Lake Chad. There are numerous fishing villages and camps along the shores of the Lake with Baga as the main centre. But fishing is mainly carried out from temporary camps located on islands within the Lake. Most of the fish catch is smoked or sun-dried on the shores of the Lake and packed in baskets and cartons ready for the market.

The country's numerous rivers, notably the Niger, Benue, Rima, Gongola, Hadejia, Kaduna, Gurara, Katsina Ala, Anambra, Cross River, Imo, Osun, Ogun and Osse support fishing populations. On the smaller of these rivers, the fishing is largely seasonal, being limited to the dry season. But on the larger ones, it is an all-year-round activity.

Fishing is also important on such natural lakes as the Oguta and the Aguleri in Imo and Anambra States.

An increasing number of reservoirs are being created in Nigeria primarily for hydro-electric power generation, irrigation and urban water supply. These include Lakes Kainji, Jebba, Shiroro (in Niger State), Bakolori (in Zamfara State), Tiga (in Kano State), Asejire (in Oyo State). All of these are now having a sizeable fishing population living around them.

On these various water bodies, fishermen use a variety of locally-built wooden boats propelled by paddling, poling or sails. On Lake Chad fishermen now use motor-powered canoes to take them 20 or 30 km. out to the fishing grounds. Each fisherman then transfers to his own canoe which he keeps permanently anchored out on the Lake. After the day's labour, the men return together to the Lake shore in the motor-powered canoe, taking their catch with them.

The fishermen use a great variety of fishing gear including nets of various sorts, lines, spears and traps, which are all locally fabricated. Unfortunately, they also use various poisons. The traditional poisons are not so dangerous; they are mostly herbal concoctions which merely stupefy the fish and break down quickly in the water. But the use of dangerous sophisticated insecticides such as Gammalin 20, is becoming popular and do a great deal of damage to fish stocks and to the other aquatic species.

### **3.3 Fishing in the Coastal Belt**

There is a thriving fishing industry in the creeks of the Niger Delta. A substantial part of the catch is eaten fresh locally. The rest is smoked and sold up country.

Fishing is also the primary occupation in the belt of creeks and lagoons to the east and west of the Niger Delta. The fishermen who operate here also fish on the open sea. They fish on the sea at night and in the creeks and lagoons during the day.

There has been a large expansion of industrial fishing since the 1960s. It involves both fishing on the continental shelf (inshore fishing) and distant fishing within and even outside the country's territorial waters. Both shrimpers (for catching shrimps) and general prowlers are used. Much of the trawling is done by foreign ships from Poland, Russia and Japan. The trawlers are chartered by Nigerian companies and the catches are delivered in frozen form to Nigeria from such distant fishing grounds as the coasts of Namibia and Senegal. Production in 1969 was 21,600



tonnes, increasing to over 65,000 in 1972. Since then, it has continued to increase.

### **3.4 Fish Marketing**

Fish is a highly perishable commodity and must be consumed within hours of being caught. It can be frozen or processed for long-term storage. A good deal of the fish caught in Nigeria is sold and consumed fresh within the vicinity of the landing areas. But since most of the landing points are located in areas of low population density, this leaves by far the greater proportion of the fish destined for more distant markets.

Along the coast and especially in Lagos, fishing companies have established refrigerated fish storage depots to receive their fish landings for temporary storage. From these depots, refrigerated trucks take the frozen fish upcountry. Today, there are thousands of large and small cold stores which, are supplied with frozen fish in this way. The result is a very efficient distribution system which makes frozen fish cheaply available in all parts of the country. When this frozen fish was first introduced into the market some thirty years ago, it was derisively called *Oku Eko* which literally means Lagos carcass. Only the poor would eat it. But today, it has become a major source of animal protein for the country's urban population and has made its way into many rural areas.

The frozen fish business is a major employer of labour, employing people in:

- The fishing itself;
- Handling the fish in the cold storage depots;
- Transporting the fish to cold stores across the country; and
- Retailing the fish to consumers.

Incidentally, at the retailing/consuming end of this chain are people who cut unsold fish into small pieces and smoke them. The pieces may be as cheap as 10 naira each, making it possible for the poor to be able to afford some animal protein in their diet. These small retailers buy wood from wood sellers, adding one more set of people to those employed by the frozen fish business.

Most fishermen who operate on the country's inland waters smoke their fish to preserve it. A great variety of methods are used, some of them more efficient than others. In the majority of cases, smoking is poorly done, partly because of the demands for firewood and other fuels which cannot be met (as on the shores of Lake Chad) and partly because of the volume of work involved. The result is that the quality of the end product is impaired by the time it reaches the consumer.

Once fish has been smoked, it is packed in baskets, cartons and reinforced bags and then transported by trucks to all towns in the country. From the town markets, the fish is taken in smaller quantities to the rural markets and ultimately to every village, hamlet and farmstead. There are very few homes in Nigeria where smoked fish is never eaten.

And the smoked fish business employs very many people including:

- canoe builders and makers of fishing gear;
- fishermen;
- fish smokers;
- suppliers of wood, baskets and bags;
- people who package the smoked fish;
- fish transporters;
- fish merchants in urban markets; and
- fish retailers, major and minor.

The smoked fish business is also important in that it makes animal protein widely available at affordable prices.

### **3.5 Problems of the Fishing Industry**

The main problem of fishing in Nigeria's territorial waters is:

- the problem of illegal fishing by foreign operators.  
The main problems of the fishing industry on the country's inland waters include:
- dam construction on such rivers as the Niger, Kaduna, Gongola. This has reduced flooding on the rich fishing grounds;
- drought which from time to time leads to reduced flooding on the flood plains in the north and to the shrinking of Lake Chad;
- inadequate enforcement of inland fishery laws and regulations. For example, the use of fine-mesh nets which leads to the catching of undersized fish and the depletion of fish stocks is illegal but it continues. Similarly, the use of chemicals and explosives for fishing, which is illegal, continues.
- inadequate facilities for fish landing, processing and transportation.

The problems are a threat to the fishing industry and therefore, to the country's food security. Also, by forcing more and more people to abandon the industry and migrate into the towns, they could increase urban problems.

### **3.6 Tackling the Problems of the Fishing Industry**

The problems of the fishing industry may be tackled through:

- Improving the sea patrol capability of the country's navy;
- The promotion of aquaculture (i.e. fish production in artificial ponds or through the stocking of natural water bodies);
- Enforcement of existing inland fishery laws and regulations;
- Encouraging fishermen to form cooperatives and empowering these cooperatives to tackle problems relating to the handling, processing, transportation and marketing of fish.

### **4.0 Conclusion**

The fishing industry is a major contributor to the economy of Nigeria. However, it is beset by a number of problems which threaten it and which need to be tackled if it is to continue to make its contribution.

### **5.0 Summary**

Nigeria has extensive sea fisheries and inland fisheries which support a thriving fishing industry that:

- is a major employer of labour; and
- supplies some 40% of the country's animal protein.

The main inland fishing grounds are Lake Chad, the main rivers, the coastal creeks and lagoons and the larger artificial reservoirs. Some of the catch is eaten fresh locally. But most of it is smoked, packed and transported to urban markets and then to the consumers.

Sea fishing on a commercial scale has increased since the 1960s. Most of the vessels used are chartered from Poland, Russia and Japan. The fish catches are landed in frozen form to cold storage depots on the coast. From here, they are transported into the interior by refrigerated trucks.

The fishing industry is beset by several problems such as:

- poaching by foreign fishermen;
- darn construction;
- drought;
- inadequate law enforcement;
- inadequate handling, processing and transportation facilities.

In the interest of national food security and employment, these problems ought to be tackled by:

- improving the sea patrol capability of the Nigerian Navy;
- encouraging aquaculture;
- improving law enforcement;

- encouraging fishermen to form cooperatives.

## **6.0 Self-assessment Exercise**

Describe Nigeria's inshore and distant fishing industry and discuss its contribution to the country's economy.

## **7.0 Tutor-marked Assignment**

None.

## **8.0 Further Reading and Other Materials**

1. Barbour, K. Michael *et al. Nigeria in Maps*, 1982

## **Unit 13:     Animal Husbandry**

- 1.0    Introduction
- 2.0    Objectives
- 3.1    Types of Animal Husbandry in Nigeria
- 3.2    Nomadic Animal Husbandry
- 3.3    Sedentary Animal Husbandry
  - Cattle
  - Sheep and Cats
  - Pigs
  - Poultry
  - Transport Animals
- 3.4    Distribution of Livestock
- 3.5    The Cattle Trade
- 3.6    Problems of Animal Husbandry
- 3.7    Tackling the Problems of Animal Husbandry
- 4.0    Conclusion
- 5.0    Summary
- 6.0    Self-assessment Exercise
- 7.0    Tutor-Marked Assignment
- 8.0    Further Reading and Other Materials

### **1.0     Introduction**

Animal husbandry is the keeping or rearing of domesticated animals such as cattle, sheep, goats and poultry. It is also called livestock production. Animal husbandry is a very important economic activity in Nigeria for several reasons:

- it is a major employer of labour;
- it generates-revenue both to the people engaged in it and to government;
- it is a major source of animal protein and so a major contributor to the country's food security;
- it is both the occupation and the way of life of two of Nigeria's ethnic groups, the Pastoral Fulani (also called the Fulbe or the Bororo) and the Shuwa Arabs of Borno.

In this unit we shall be studying animal husbandry in Nigeria. The objectives of the unit are set out below:

### **2.0     Objectives**

By the time you complete this unit you should be able to:

- discuss the importance of animal husbandry to the Nigerian economy;
- distinguish between the two main types of animal husbandry;

- describe the main characteristics of these two types of animal husbandry;
- describe the distribution of the different types of livestock;
- describe the main features of trade in cattle in the country;
- discuss the main problems of animal husbandry in Nigeria;
- suggest ways of tackling these problems.

### **3.1 Types of Animal Husbandry in Nigeria**

In Nigeria, there are two main types of animal husbandry:

- Nomadic animal' husbandry; and
- Sedentary or settled animal husbandry.

### **3.2 Nomadic Animal Husbandry**

This is practiced by the Borno and by the Shuwa Arabs who have adopted it as their way of life. While the former are based in the Sudan and Sahel belts, the latter are based in the Sahel belt. These environments are suitable for cattle breeding because they are free of tsetse flies which cause sleeping sickness or trypanosomiasis, a debilitating cattle disease. However, as we have seen in Unit 5, the Sudan-Sahel belt is characterised by a long dry season during which:

- natural fodder, in the form of grass and shrub foliage, is in short supply; and
- water is scarce except around Lake Chad and in the larger river valleys.

Based on this long dry season, the pastoralists have adopted a nomadic way of life. They spend the year in a cycle of movements as follows:

- During the wet season, they stay with their animals in the Sudan-Sahel belt which:
  - is free of tsetse flies;
  - has abundant supply of natural fodder; and
  - normally has a good supply of rain water at this time of the year.

As the dry season begins to set in, the pastoralists are able to supplement the supply of natural fodder with the crop residues left behind after the farmer's harvest of crops such as millet, rice and cowpeas. There is a reciprocal (or mutually-beneficial) relationship with the farmers in that the animals leave behind their droppings which help to fertilise the soil. As the dry season intensifies, natural fodder becomes less and less available and water becomes scarce. Therefore the pastoralists move their animals and all their belongings to dry season grazing grounds.

- The pastoralists trek sometimes for weeks to these grazing grounds which are located:
  - further south in the wetter savannahs;

- in the low-lying areas around the Jos Plateau and the Mambila Plateau;
- in the larger river flood plains such as those of the Hadejia; and
- around Lake Chad.

In these movements, the pastoralists take cognizance of:

- The tsetse free nature of the areas into which they move;
- Availability of pasture;
- Availability of water.

Figure 13.1 shows the general pattern of movements of the nomadic pastoralists. The following movements are particularly noteworthy:

- From Niger Republic into Nigeria, the pastoralists often take over areas vacated by their Nigerian counterparts as too poor in fodder and too dry!
- From the Sudan-Sahel belt into the Niger valley, the Benue valley and the Middle Belt in general;
- From the Mambilla Plateau and the Eastern Highlands into the Benue Valley;
- From the Jos Plateau into the Benue Valley; and
- From Yobe State and Western Borno to the shores of Lake Chad.

When the rainy season starts in the Middle Belt (around April-May), the nomads abandon these dry sea; on grazing grounds because of:

- increased tsetse fly infestation; and
- increased dampness of the air and the ground which favours various cattle diseases, and move northwards back to their Wet season grazing grounds.

Among the pastoralists, the herd (which usually includes cattle, sheep and goats) is managed by the family. Several families belonging to a lineage group usually spend all or part of the year together in the same camp. Cattle are highly valued, a man's worth being measured by the size of his herd of cattle. The cattle belong to the men who give them to their growing sons when they reach maturity. The main objective of the system of management is that the herd is maintained and if possible increased as it is passed on from father to sons. The second objective of herd management is to achieve a large and regular output of milk and butter which is marketed by the women and the proceeds used to buy grain and other needs of the family. The pastoralists usually sell animals for slaughter when they need more money than can be made from the sale of milk and butter.

### **3.3 Sedentary Animal Husbandry**

In Nigeria, sedentary animal husbandry is a secondary activity in all rural areas. It involves several types of animals. The herd of each animal is usually small and the animals are acquired either by purchase from the local market or by breeding. They are sold or (in the case of some) they are killed and eaten when the need arises. The animals involved include cattle, sheep, goats, pigs, poultry, rabbits and transport animals.

#### **Cattle**

In the far north, settled Fulbe who abandoned the nomadic way of life and have settled down, often acquire one or more herds of cattle. Kanuru and Hausa farmers and urban dwellers do the same. Such animals are put in the care of semi-nomadic Fulbe herdsmen for part or all the year.

In the wetter Savannahs and in the forest belt, small herds of a special breed of cattle which is trypanosomiasis-tolerant, are owned and kept by a similar arrangement. The cattle are slaughtered at various ceremonies and also used to pay dowry.

#### **Sheep and Goats**

Apart from the ones kept by the nomadic pastoralists, sheep and goats are kept by women in most parts of rural Nigeria. They are left to range freely although in areas of high population density, they are penned during the rainy season in order to keep them off the farms. In the extreme north, they are milked but in the south they are kept for their meat. They are slaughtered at ceremonies and accepted as part of dowries.

#### **Pigs**

Pigs are widespread in the south and in the non-Muslim areas of the north. They are kept in the same way as sheep and goats and are a valuable source of meat.

#### **Poultry**

Chickens and other forms of poultry (ducks and guinea fowls) are widely kept in the country and are an important source of meat. They are mostly of the small, hardy, local variety and are free-ranging.

In the wake of the meat shortages which resulted from the drought of the early 1970s, the Federal and State Governments encouraged commercial poultry keeping. It has become a lucrative business around the country's urban centres, supplying eggs and meat.



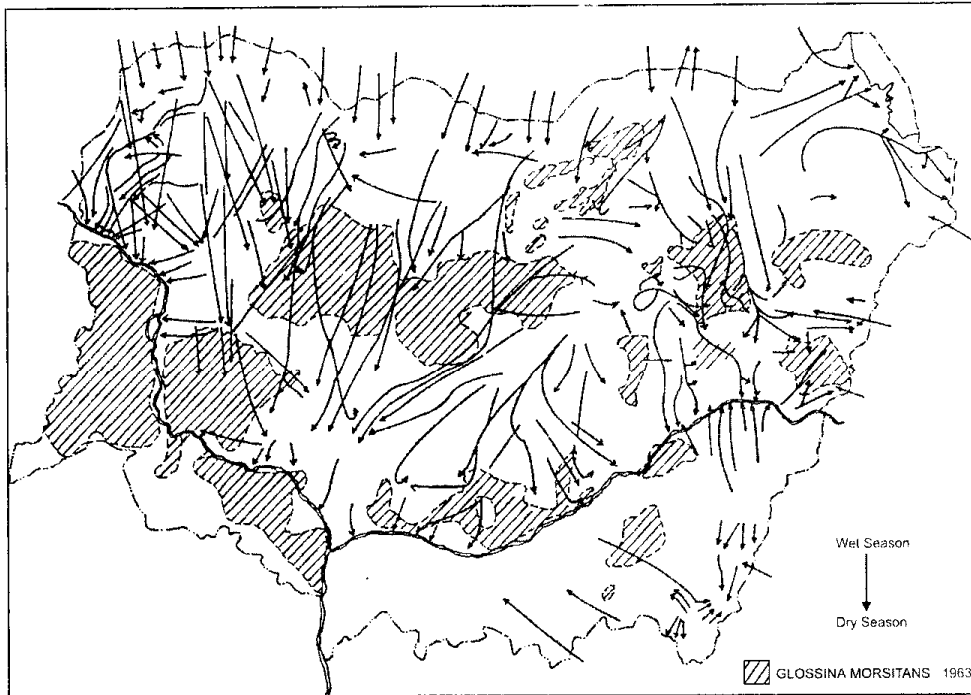


Fig. 13.1: General Pattern of Nomadic Cattle Movement

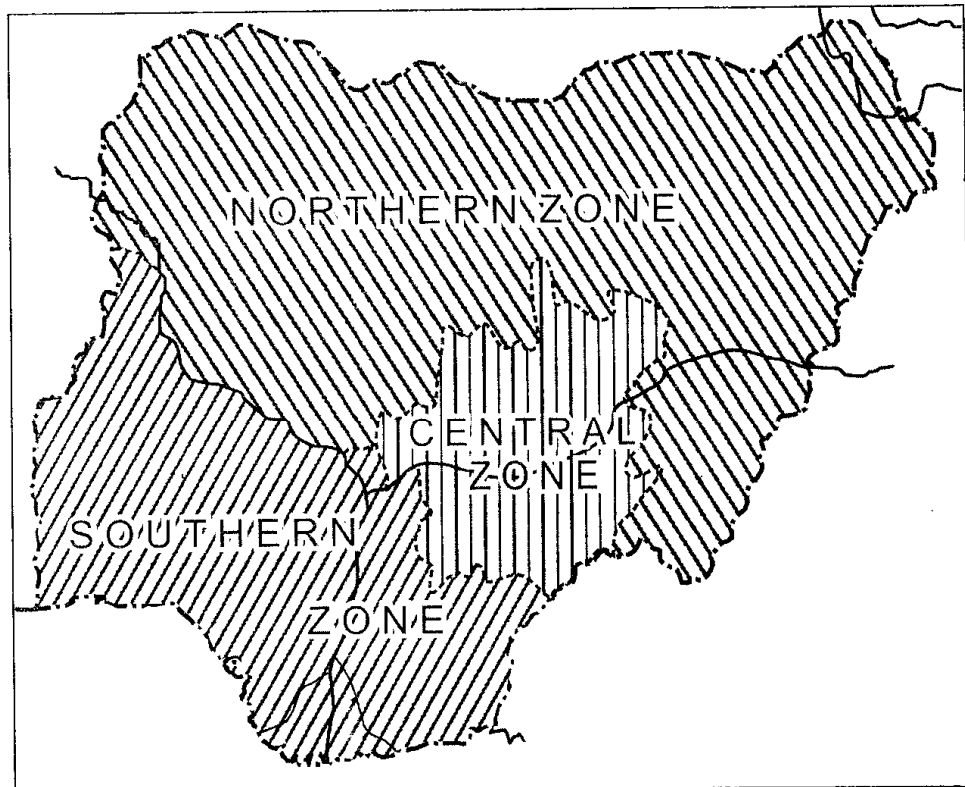
### Transport Animals

Horses, donkeys and camels are kept in the northern part of the country and used both for transportation and for meat.

### 3.4 Distribution of Livestock

Figure 13.2 shows that from the point of view of livestock population, the country may be divided into three zones:

- the northern zone comprising Borno, Adamawa, Taraba, Gombe, Bauchi, Yobe, Jigawa, Kano, Katsina, Kaduna, Zamfara, Sokoto, Kebbi and a large part of Niger State;
- the central zone made up of Plateau, Nasarawa and Benue States and the FCT, and
- the southern zone made up of all the other States and the western part of Nigeria.



*Fig. 13.2: Nigeria: Livestock Zones*

The northern zone contains large areas which are free from tsetse flies throughout the year. More than 90% of the country's cattle population are to be found here. It also contains over 65% of the sheep and goats.

Because the area is predominantly Muslim, it contains less than 10% of the pigs, mostly in the non-Muslim areas.

The central zone is located between the other two. There are as many cattle here as in the southern zone.

These are to be found mainly on and around the Jos Plateau. It also has a substantial population of sheep, goats and pigs.

The southern zone contains over 70% of the country's population of pigs. The small cattle population is largely found in Kwara and Kogi States. There are substantial populations of sheep and goats.

Note that poultry keeping, which is not limited by trypanosomiasis nor by religious taboos, is evenly distributed across the country, following the pattern of distribution of the human population.

### 3.5 The Cattle Trade

There is a large volume of trade in cattle in Nigeria because:

- about 97% of the cattle is reared in northern Nigeria;
- about half of the human population in the south live in urban centres with a large demand for meat.

Thus there is massive movement of cattle from northern Nigeria to southern Nigeria. The trade network starts with small cattle dealers in the producing areas going into the bush to buy cattle from the owners and bringing them for sale to larger dealers in the urban centres. The animals are either:

- slaughtered and eaten in northern towns such as Kano, Katsina, Kaduna, Sokoto, Maiduguri, etc., or
- exported to the southern part of the country; Sahel belts are the most conducive for cattle rearing in Nigeria;
- periodic drought which occurs from time to time is a threat to the livestock industry especially in the Sudan-Sahel belt. For example, the drought of the early 1970s shook the industry down to its foundations in this area. An estimated 1 million cattle, sheep and goats died. Many livestock-keeping people from drought-stricken parts of Nigeria and neighbouring countries abandoned their occupation and way of life and moved into urban centres, including provincial towns such as Nsukka, Auchi and Ile-Ife, where they became beggars, street hawkers, petty traders and security men. Others moved farther south on a more permanent basis.
- increased competition for land. As the human population has increased in the Sudan and Sahel belts, so cultivation has expanded into areas which were traditionally cattle-grazing areas. This has led to frequent violent conflicts between pastoralists and farmers in these areas.

The animals are transported:

- mostly "on the hoof" through cattle tracks that lead from the extreme north through the wetter savannahs into the forest belt;
- by rail; and
- by road.

A large number of animals are lost on the way through death and shrinkage.

A large proportion of the animals slaughtered in the north are exported to the south in the form of canned, frozen or sun-dried meat.

Sheep and goats are also exported from the northern zone to the southern zone, particularly for the various Muslim and Christian festivals.

### 3.6 Problems of Animal Husbandry

Animal husbandry in Nigeria, particularly the keeping of cattle, is beset by a number of problems including:

- **Pests and diseases:** Diseases such as trypanosomiasis, rinderpest, bovine pleuro-pneumonia, tuberculosis and anthrax and the pests which transmit them, are a threat to the cattle keeping industry. Elsewhere, government projects (such as dam construction, airport construction, the movement of the Federal Capital to an area which was a major dry season cattle grazing area), have tended to restrict the movement of the Bororo. Movement of these people into Benue, Kogi and Kwara States in the wake of the drought of the 1970s, has also led to violent conflicts with local farmers.
- **Overgrazing in grazing reserves:** Grazing reserves are areas set aside for the Bororo to graze their animals. In recent times, State governments have provided boreholes and cattle ponds in these reserves. The provision of water has enabled the Bororo to stay and graze their animals longer than previously in the Sudan-Sahel belt. This has led to overgrazing in many of these reserves.

### 3.7 Tackling the Problems of Animal Husbandry

The above problems need to be tackled if the country's livestock industry is to be sustained and improved upon. The following measures may be suggested:

- Strengthening the capacity of the Federal Livestock Department; the Federal Department of Pest Control Services, the Nigerian Institute for Trypanosomiasis Research and the Nigerian Veterinary Research Institute, Vom to deal with animal pests and disease;
- Tsetse fly clearance with environment friendly chemicals;
- A deliberate policy of accommodating the Bororo in the wetter savannahs so that they can enjoy the fodder and water resources and contribute manure to farmers fields;
- Creation of grazing reserves and cattle tracks in the wetter savannahs to reduce conflicts between pastoralists and farmers in these areas; and
- Restricting grazing in areas which show signs of overgrazing.

### 4.0 Conclusion

Because of the problems of increasing human population and periodic drought in the Sudan-Sahel belt, it has become necessary to redistribute Nigeria's stock of cattle moving some of them into the wetter savannahs. In order to facilitate this, it is necessary to create a social and land use

environment that will reduce conflicts between pastoralists and farmers.

## **5.0 Summary**

There are two main types of animal husbandry in Nigeria: nomadic and sedentary. Nomadic animal husbandry is the way of life of the Pastoral Fulani and the Shuwa Arabs. These people graze their animals in the Sudan-Sahel belt and the Jos and Mambilla Plateaus which are tsetse free during the wet season but spend the dry season in the wetter savannahs farther south in the larger river valleys and on the plains around the plateau during the dry season.

Sedentary animal husbandry involving the keeping of goats, sheep, pigs, transport animals and poultry, is an important secondary activity in all rural areas in Nigeria.

There are three livestock zones in the country. The northern zone contains 90% of the country's cattle and 65% of the sheep and goats as well as donkeys, horses and camels. The central zone has cattle, sheep, goats and pigs. The southern zone contains 70% of the country's pigs as well as a substantial population of sheep and goats.

There is a large volume of cattle trade in the country involving the movement of cattle, sheep and goats from the north to the south.

The animal husbandry industry is under threat from several problems such as:

- Pests and diseases;
- Periodic drought;
- Increased competition for land; and
- Overgrazing in grazing reserves.

These problems may be tackled by:

- strengthening the capacity of pest and control agencies;
- tsetse fly clearance;
- a deliberate policy of accommodating the pastoralists in the wetter savannahs;
- the creation of grazing reserves in the wetter savannahs;
- restricting grazing in areas which are overgrazed.

## **6.0 Self-assessment Exercise**

Discuss the main problems of animal husbandry in Nigeria and suggest ways of tackling them.

## **7.0 Tutor-marked Assignment**

None.

## **8.0 Further Reading and other Materials**

As for Unit 4.

## **Unit 14: Food Crop Agriculture**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Principal and Secondary Crops
- 3.2 Agriculture Zones
- 3.3 Agricultural Land Use:
  - Shifting Cultivation
  - Rotational Bush Fallowing
  - Terrace Agriculture Permanent Cultivation
  - Mixed Farming
- 3.4 Other Aspects of Food Crop Agriculture
  - Land Ownership and Land Use
  - Form Holdings
  - Technology
  - Crop Yields
  - Food Demand and Supply Situation
  - Crop Marketing
- 3.5 Problems of Food Crop Agriculture
- 3.6 Tackling the Problems of Food Crop Agriculture
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

Agriculture is the mainstay of the economy of Nigeria in the sense that:

- it is the largest employer of labour;
- it provides most of the food for the country's teeming population;
- it provides income directly or indirectly for millions of people;
- it provides raw materials for various industries;
- until crude oil took over, it was the country's main source of foreign exchange earnings;
- it provides a market for some of the products of the industrial sector.

Thus, agriculture is not only the basis of Nigeria's food security but is crucial to its survival as a country. Agriculture in the country may be divided into:

- Animal husbandry
- Food crop agriculture
- Export crop agriculture
- Irrigation agriculture

The first three types of agriculture are all based on rainfall without the artificial supply of water. They are distinguished from one another partly on the basis of what is produced, whether animal products or crops, and partly on the objective of production, whether for local consumption or for export to other parts of the world.

The fourth type of agriculture is distinguished on the basis of the fact that it depends on artificial supply of water. Most, if not all the crops produced under irrigation actually consists of food crops. Thus we might say that irrigation agriculture is an aspect of food crop agriculture in Nigeria.

We have already studied animal husbandry in Unit 13. We shall be studying export crop agriculture in Unit 15 and irrigation agriculture in Unit 16. In this unit, we are concerned with food crop agriculture.

## **2.0 Objectives**

By the time you complete this unit, you should be able to:

- discuss the importance of agriculture to the Nigerian economy
- identify the principal and secondary food crops in the country
- identify the agricultural zones in the nation
- discuss the types of agricultural land use and also
- describe the food demand and supply situation in the country.

## **3.1 Principal and Secondary Crops**

The principal food crops grown in Nigeria are cassava, yam, maize, rice, sorghum, millet, groundnuts, cowpeas, acha or "hungry rice" and sweet potatoes. Some of these crops are widely grown (e.g. cassava, yam, rice, sorghum and maize). Others have a more restricted distribution (e.g. "hungry rice" which is grown, on and around the Jos Plateau).

Nigerian farmers grow a great variety of secondary food crops. These include wheat, sugarcane, bambara nuts, a great variety of vegetables, dates, citrus trees, oil palm, paw-paw, guava, kolanuts, plantain, banana, melonseed, beniseed, soyabeans, etc.

## **3.2 Agricultural Zones**

Nigeria may be divided into three broad agricultural zones which show the dominant influence on agriculture of the amount and distribution of rainfall. The zones which are shown in Figure 14.1 are:

- The southern tree and root crop zone;
- The mixed root crop and grain crop zone.

The southern tree and root crop zone which includes all the southern



States as well as parts of Kwara, Kogi, Benue and Taraba States, is an area of high rainfall and a long rainy season. Root crops such as cassava, yams and cocoyams grow well in this zone together with plantain which is neither a root crop nor a tree crop and cowpeas which are largely imported from the north. These are dietary staples in these parts.

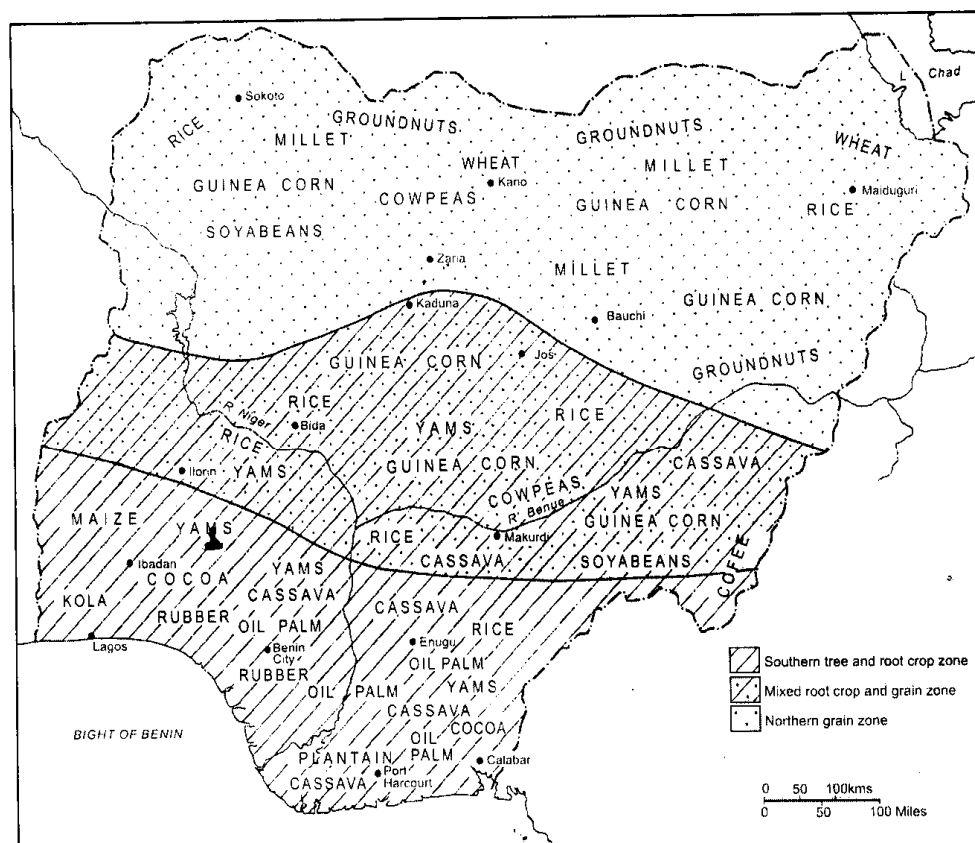


Fig. 14.1: Agricultural Zones of Nigeria

Crops which are also grown here include sweet potatoes, maize, rice and a great variety of vegetables. Trees which are grown for food include the palm tree, kolanut and citrus.

The mixed root crop and grain crop zone has a climate which is not as wet as the southern tree and root crop zone or as dry as the northern zone. It covers parts of Adamawa and Bauchi States, most of Kwara, Niger, Kaduna, Kogi, Benue and Taraba States as well as all of Plateau, Nasarawa and the Federal Capital Territory (FCT). In the southern parts of this zone, there is sufficient rainfall for successful root crop production. The southern part of the zone is therefore noted for surplus production of yams. Cassava and cereals such as rice and guinea corn are also grown. The drier, northern part of the zone is noted for maize, guinea corn and millet. In addition to these cereals, acha or "hungry rice", sweet potatoes and Irish potatoes are grown on the Jos Plateau. Rice cultivation is widespread in Niger, Nasarawa and southern Plateau State.

The diets of the people in this zone are built around the staples of yam, cassava, sorghum, millet and rice. Subsidiary foods include maize, groundnuts, cowpeas and bambara nuts which are also grown. A great variety of vegetables are produced. Some fruit trees such as mangoes and citrus are grown although the climatic conditions are not as favourable as in the southern part of the country.

The northern grain zone covers parts of Niger, Kaduna, Bauchi and Adamawa States and all the States to the north of them. It suffers from low rainfall and a short wet season. These conditions restrict the kinds of principal crops which can be grown successfully to grains (millet rice and guinea corn), pulses (beans, cowpeas and groundnuts) and irrigated sugarcane. While guinea corn is more important in the wetter southern parts of the zone, millet is more important in the north. Subsidiary crops include soyabeans, wheat and vegetables.

As is to be expected, the staple foods in the zone are millet and guinea corn with wheat, groundnuts, rice, beans, sugarcane and vegetables as subsidiary foods.

### **3.3 Agricultural Land Use**

Land use simply means the way the land is used. There are six main types of crop agricultural land use in Nigeria:

- Shifting cultivation;
- Rotational bush fallowing;
- Terrace agriculture;
- Permanent cultivation;
- Mixed farming; and
- Intensive irrigated cultivation.

Intensive irrigated agriculture is the subject of Unit 16. Therefore we shall not say anything further about it in this unit.

#### **Shifting Cultivation**

In this system of cultivation, the farmer selects a plot of land, clears the vegetation which may be forest or Savannah and burns it, the resultant ash supplying nutrients to the soil. He cultivates the land into heaps or ridges and plants his crops. He grows crops on the piece of land until the yield decreases to a point when it is no longer worth his while. He therefore abandons it and moves his farmstead to a fresh area of the forest and Savannah. There, he repeats the process. It is this movement of the farmer together with his farmstead and farming activity from place to place that has given the term "shifting" to this system of

cultivation. It can only be practised where land is plentiful, i.e. where population density is low. In such areas, the farmer can afford to leave a piece of land to lie fallow for many years before coming back to farm it again.

Because of rapid increase in population, shifting cultivation is highly restricted today, being found only *in* the lightly populated parts of the Middle Belt and the Cross River plains.

### **Rotational Bush Fallowing**

Rotational bush fallowing is basically similar to shifting cultivation, the only difference being that settlement—whether it is a farmstead, a hamlet or a village—is fixed. The farmer cultivates his plot of land until the yield - becomes too low. He leaves it and allows it to remain fallow during a period ranging from one or two years to more than ten years depending on the pressure of population on the land in the area and on how rapidly the soil can regain its fertility. At the end of the fallow period, the fanner returns to cultivate the plot of land again.

Bush fallowing is the dominant form of agricultural land use for food production in Nigeria. One of the main problems of agriculture in the country is the fact that because of population increase, fallow periods ', have become shorter and shorter. Thus, the land is not being allowed to recover fully before it is cultivated again. The result is a progressive decline in soil fertility.

### **Terrace Agriculture**

In the days when people had to settle on hill tops and grow their crops on hillsides for security reasons, terrace agriculture was a must. The hillsides were intensively terraced with stones, the terraces being meticulously maintained over time. Animal droppings, human waste and compound sweepings were applied to the terraces to maintain the fertility of the soil. In this way, quite large populations were able to grow their food away from the insecurity of the surrounding plains. This was the way people lived in many of the hilly areas of the Middle Belt such as the Jos Plateau and its surroundings and Ebira country in Kogi State.

When British rule became firmly established in most parts of Nigeria, it became safe for hill-dwellers to move down and settle on the plains. And this is exactly what happened. In many areas people left their hilltop refuge settlement sites, abandoned their age-old terraced farms and settled on nearby plains. They also adopted their traditional system of manuring to main soil fertility instead of shifting cultivation or bush

fallowing.

Relics of terrace agriculture still exist today in a few areas such as the Gwoza Hills of Borno. But it is only a question of time before the people in such areas also abandon their hill settlements and system of agriculture.

### **Permanent Cultivation**

In areas of high population density where land is relatively scarce and it is no longer possible to have fallow periods, people have adopted the system of permanent or continuous cultivation. In this system, the land is cultivated every year, soil fertility being maintained by the use of simple crop rotation and animal manure. It is the predominant system of food crop cultivation in Kano, Zaria, Katsina and Sokoto areas of northern Nigeria and in some parts of eastern Nigeria.

### **Mixed Farming**

Mixed farming is a system of agriculture in which the farmer grows crops and also keeps some animals, using the manure from the animals to fertilize the soil. It has been a traditional system of agriculture among the Mumiye of Adamawa State and in Dikwa Emirate in Borno. The various Ministries of Agriculture have tried to introduce it into other areas. But this attempt has had limited success because almost the entire cattle population of the country is in the hands of the nomadic Fulbe who, generally speaking, have little interest in crop production.

## **3.4 Other Aspects of Food Crop**

### **Agriculture**

There are several other aspects of food crop agriculture which we ought to know about because they are important. These include:

- land ownership and land use;
- the nature of farm holdings;
- technology;
- crop yields;
- food demand and the supply situation in the country and
- crop marketing.

### **Land Ownership and Land Use**

In Nigeria, land may be categorised under four ownership classes:

- individually-owned land;
- family-owned land;
- communally-owned land; and
- government-owned land.

In most parts of Nigeria, land belongs to the family, the clan or the community. Individual members of these groups may be granted access to farm a piece of the land but not the right to own it or alienate it through sale, lease, pledge or gift. Such a system of land ownership is inimical to socio-economic development because individuals cannot make permanent improvements to it.

In areas of high population density such as the Kano close-settled zone, land may be owned by individuals and passed on from a father to his son or sons. When a man dies in such areas, his land is split among his sons. Thus, unless the heirs have been able to add to the original total holding through purchase for example, the successive fragmentation of land will mean that the amount of land available to the average person in the family continues to decrease. Land fragmentation is a major problem in many parts of rural Nigeria.

The problems of family ownership and communal ownership of land and of land fragmentation were some of the reasons why government decided to enact the Land Use Act of 1978. The main objective of the Act is to make land for development readily available to individuals, groups, institutions and governments. Unfortunately, the Land Use Act has become increasingly unpopular because:

- ordinary Nigerians are experiencing immense difficulty in securing land under the Act while at the same time,
- rich or influential Nigerians find it easy to acquire vast areas of land originally belonging to poor and illiterate rural dwellers.

### **Farm Holdings**

Two features characterise farm holdings in most parts of Nigeria

- their small size;
- their fragmented nature.

Farm sizes are generally small since the farmer relies largely on:

- his own labour and the labour of members of his family; and
- uses traditional labour-intensive technology.

For most farmers, the size of holdings is limited to his ability to keep the farm free of weeds. Thus, the area of land he can hoe effectively is what determines the size of his farm.

Another feature of farm holdings is their fragmented nature. A farmer's total holding may be split into four or as many as ten different locations separated by several kilometers of footpath. Thus, a great deal of time is wasted moving between the various fragments of his farm holding.

### **Technology**

Fanning in Nigeria is still done with the traditional tools of hoe, cutlass,

digging stick and sickle. It is backbreaking work which is part of the reason why people are leaving the rural areas and moving into the towns. Movement from settlement to farm is, for the majority of rural dwellers, still on foot and the means by which farm inputs are taken to the farm and the harvest brought home.

The ox-plough has been introduced in the Sudan-Sahel belt and has been widely adopted by farmers who can afford the initial capital outlay and the cost of feeding the animals during the long dry season.

The Federal and State Governments, through their Ministries of Agriculture and through extra-ministerial agencies and programmes — National Accelerated Food Production Project, Operation Feed the Nation, Agricultural Development Projects, River Basin Development Authorities, Green Revolution Programme and Directorate of Food, Roads and Rural Infrastructures— have tried to introduce modern inputs to Nigerian farms. These include tractors, improved seeds, chemical fertilizers and pesticides. But several factors have militated against widespread adoption and use of these inputs including:

- cost;
- untimely or inadequate supplies;
- inadequate knowledge of use by farmers;
- unreliable rainfall;
- resistance to change by farmers.

### **Crop Yields**

By comparison with many other parts of the world, the yields of food crop agriculture in Nigeria are low because of:

- declining soil fertility in many areas;
- the low level of technology;
- unreliable rainfall;
- pest and disease attack.

Reference has already been made to declining soil fertility under rotational bush fallowing in many parts of the country. The introduction of chemical fertilizers has not really helped matters because:

- many farmers do not know how to use them;
- they are unaffordable;
- they are often not available at the time they are needed;
- they can do permanent damage to the soil.

The low level of technology used in food crop agriculture in Nigeria has already been discussed.

Unreliability of rainfall is a serious problem in most parts of Nigeria but especially in the northern part of the country. In some years, rainfall is too much, causing extensive flooding and the washing away of standing

crops. In other years, the rainfall is well below average, causing crop failure.

Nigerian farmers have to contend with a number of:

- virus diseases such as:
  - lanceolate mottled leaf, which affects yams;
  - leaf mosaic, which affects yams, groundnuts and cassava;
  - leaf spot which affects yams, cassava, rice, sugarcane, guinea corn and millet;
- fungal diseases such as:
  - withbroom which attacks yams;
  - rusts which attack the grain crops; and
- bacterial diseases such as:
  - bacterial blight which attacks guinea corn.

Nigerian farmers also have to contend with a wide range of plant pests, including:

- stem borers which destroy maize, millet, sugarcane, rice and other crops;
- worms which attack yams, okro, pepper, tomatoes, etc.;
- grasshoppers which damage a wide range of crops; and
- birds like the weaver bird (*Quela quela*) which is notorious for destroying whole crops of maize, rice, guinea corn and millet.

These diseases and pests can destroy the harvest over large areas, causing deficits in food supply. For example, in 1950, a type of rust destroyed large quantities of maize in various parts of the country.

### **Food Demand and Supply**

Until the early 1970s, Nigerian farmers were able to supply virtually all the food required by the country. But since then, the country has had to import food on an increasing scale largely because of:

- population increase at a rate faster than the rate of increase in food production;
- drought in the early 1970s and 1980s;
- changing tastes of the people (for example, bread and other wheat-based foods have increased greatly in popularity; people prefer stone-free imported rice to locally-produced rice, etc.);
- increased urbanisation leading to the loss of labour in rural areas and the increase in the number of mouths to be fed in urban areas.

The main food imports apart from fish, include wheat, rice, sugar and vegetable oils.

## **Crop Marketing**

There are areas of Nigeria which produce more food than they can consume. They are called food surplus areas. There are other areas which produce less food than they need. They are called food deficit areas.

The existence of food surplus and food deficit areas is the basis of a massive inter-regional 'trade in foodstuffs which we shall be examining in Unit 18.

## **Problems of Food Crop Agriculture**

Food crop agriculture in Nigeria is beset with many environmental, social and economic problems. They include:

- Soil management problems. There is need to find a viable alternative to rotational bush fallowing so that land can be kept under permanent or sedentary agriculture.
- Inadequate seasonal and unreliable rainfall over large parts of the country;
- Communal ownership of land which militates against large-scale farming and land improvement;
- Low-level technology which makes agriculture labour-intensive and relatively unproductive;
- Diseases and pests which destroy standing crops and stored products;
- Low prices of agricultural crops at harvest time which means that farmers may have to sell below their cost price;
- Labour scarcity due to the rural-urban migration of the youthful population; and
- Inadequate infrastructure such as roads which are necessary for marketing of crops, potable water which is necessary for healthy living and electricity which is necessary for comfortable living.

## **Tackling the Problems of Food Crop Agriculture**

The problems listed above may be tackled in various ways such as:

- Promoting irrigated agriculture;
- introducing appropriate technology to farmers at affordable prices;
- Environmentally-sound disease and pest control;
- Promoting cooperative societies that can intervene effectively in agricultural marketing to the benefit of farmers;
- Making life in rural areas more tolerable through the provision of basic infrastructure; and
- Promoting individual ownership of land while ensuring its equitable distribution.



## 4.0 Conclusion

Because of its overwhelming importance to the economy of Nigeria and especially to its food security, every effort needs to be geared towards ensuring its survival and promoting its modernisation.

## 5.0 Summary

Agriculture is the mainstay of Nigeria's economy, employing most of its working population and producing most of its food supply. The country is divisible into three agricultural regions:

- The southern tree and root crop zone;
- The mixed root crop and grain crop zone of the Middle Belt; and
- The northern grain crop zone.

Six main types of agricultural land use may be distinguished in the country:

- Shifting cultivation;
- Rotational bush fallowing;
- Terrace agriculture;
- Permanent cultivation;
- Mixed farming; and
- Intensive irrigated cultivation.

Food crop agriculture in the country is characterised by

- The predominance of communal ownership of land;
- Small size of farm holding;
- Low-level technology; and
- Relatively poor crop yields.

There are food surplus areas in the country as well as areas of food deficit. Food crop agriculture in Nigeria is beset by problems such as:

- problems of soil management;
- inadequate, seasonal and unreliable rainfall;
- communal land ownership;
- low-level technology;
- diseases and pests;
- low prices of agricultural crops;
- labour scarcity; and
- inadequate infrastructure.

These problems may be tackled through:

- promoting mixed farming, crop rotation and the correct use of fertilizers.
- promoting irrigated agriculture;
- introducing appropriate technology;
- promoting cooperative societies;

- providing basic infrastructure in rural areas;
- providing rural roads; and
- promoting individual land ownership.

### **6.0 Self-assessment Exercise**

Discuss the main problems of food crop agriculture in the northern grain zone of Nigeria.

### **7.0 Tutor-marked Assignment**

Describe five major problems of food crop agriculture in Nigeria and discuss how they may be tackled.

### **8.0 Further Reading and other Materials**

As for Unit 4.

## **Unit 15: Export Crop Agriculture**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 The Main and Minor Export Crops
- 3.2 Oil Palm Production
- 3.3 Rubber Production
- 3.4 Cocoa Production
- 3.5 Cotton Production
- 3.6 Groundnut Production
- 3.7 The Place of Export Crop Agriculture in the Nigerian Economy
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

One major aspect of agriculture in Nigeria is the production of crops for export. It was an important factor in the economic development of the country during the colonial period and also during the first decade after independence. It was important because:

- it provided employment for the producers and for the people involved in the transportation and marketing of the export crops;
- it provided government with revenue in the form of taxes;
- it was the most important source of foreign exchange for the country;
- it provided revenue for the producers, transporters and traders;
- it encouraged and helped to finance the development of rural infrastructures, especially roads;
- it provided industrial raw materials;
- some of the crops produced were also consumed as food in the country, e.g. groundnuts and palm oil.

Export crop production was a major source of income which kept people usefully occupied in rural areas.

The promotion of export crop production by the small farmer was a very important aspect of the colonial economic policy in the country. The idea was to supply manufacturing industries in Britain with raw materials as cheaply as possible. Export crop production was promoted in various ways, notably through:

- the introduction of new crops and new crop varieties;
- the provision of rural infrastructures;
- the provision of an assured market and marketing channels;

- the provision of technical advice through agricultural extension services.

With all of the above, it is not surprising that export crop production increased rapidly in the early years of colonial administration.

In this unit we shall be studying export crop production in Nigeria. The objectives of the unit are stated below:

## **2.0 Objectives**

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

- discuss the importance of export crop agriculture to the economy of Nigeria.
- state how and why the colonial administration encouraged it;
- state the main export crops of the country;
- state the areas of production of these crops;
- give an account of the development of each of the main crops in Nigeria;
- account for the vicissitudes in earnings from these crops;
- explain the relative decline in the production of these crops since 1970;
- discuss the impact of export crop production on economic development in Nigeria;
- discuss the problems of export crop agriculture; and
- suggest ways of tackling these problems.

## **3.1 The Main and Minor Export Crops**

The five most important export crops in Nigeria are groundnuts, cocoa, rubber, cotton and oil palm. They still make up more than 90% of Nigeria's export crop production. Other export crops which are of minor importance are beniseed, soyabeans, and in more recent times, kolanut. These crops are still produced largely by small farmers.

Although various governments have put a great deal of effort into plantation production of some of these crops, notably palm produce, most of the production is still done by the small farmer, using the traditional tools of hoe and cutlass. New crops have also been introduced, notably cashew and citrus.

Figure 15.1 shows the areas where the major export crops are produced. They are in two major climatic and ecological belts of the country, namely:

- the forest belt where the oil palm, cocoa and rubber are grown;

- and
- the Sudan-Sahel belt where cotton and groundnuts are produced.

The oil palm belt stretches from Ogun State through Oyo, ORM, Ekiti, Undo, Edo, Delta, Anambra, Enugu, Imo, Rivers, Abia, Ebonyi, Akwa Ibom States to Cross River State. The cocoa growing area lies in Ogun, Oyo, Osun and Undo States while rubber is produced in Edo, Delta and Cross River States. The main groundnut growing areas are Jigawa, Kano and Katsina States. Cotton is produced mainly in Zamfara, Katsina, Kaduna, Niger, Bauchi, Gombe and Adamawa States.

### **3.2 Oil Palm Production**

The oil palm is an indigenous plant of the Tropical Rain Forest of West Africa. The oil from its fruit (palm oil) and kernel (palm kernel oil) have been used for food, soap, cosmetics, lighting and medicine from time immemorial. But these products were to become Nigeria's oldest export crops.

Trade in palm oil was already well developed between the "oil rivers" of Nigeria (that is the Niger Delta) and Europe in the 1830s. But when the slave trade was abolished, trade in this commodity took its place and so increased considerably, there being a large demand for vegetable oils in the manufacturing industries of Europe.

By the beginning of the 20th century, Nigeria was the largest exporter of palm oil in the world. It accounted for 90% of the country's exports by value. By 1930 export of the commodity had increased by 300% but it made up only 47% of the country's total exports - an indication of the extent to which the country's export trade had been diversified largely through the development of other export crops. The relative contribution of palm produce to the country's exports continued to decline (to 36.4% in 1969 and 13.2% in 1974).

Nigeria's palm oil was of poor quality because of:

- poor harvesting methods
- poor processing methods

However, the introduction of pioneer oil mills has helped to raise the quality of the palm oil.

It is noteworthy that most of the palm oil was obtained from self-sown plants in Imo, Anambra, Enugu, Abia, Cross River, Akwa Ibom, Delta and Edo States. Since the 1950s, production has increased largely due to various governments establishing plantations growing improved high-yielding oil palms bred at the Nigerian Institute for Oil Palm Research in

Benin.

Local demand for palm oil and palm kernel oil has increased tremendously in recent years:

- partly for food, because of rapid increase in population; and
- partly as industrial raw materials for the manufacture of margarine and soap.

As a result of this, Nigeria is today a net importer of palm oil. Incidentally, the imports are from Malaysia, a country which obtained its first oil palm seeds from Nigeria.

### **3.3 Rubber Production**

The rubber tree is indigenous to the Tropical Rain Forest of Brazil. It was introduced into Nigeria by the British. By 1905 the Miller Brothers Rubber Plantation, occupying an area of 2000 acres, had been established in Sapele. However, over 95% of Nigeria's rubber output is produced in small holdings with an average size of only 20 acres.

Because of fluctuating world prices, the production of rubber fluctuated with 1906 and 1914 as years of peak output. During the First World War, production dropped to practically zero. It resumed after the war and reached a peak in 1928. Production fell again during the Great Depression of 1929- 1934. Between 1949 and 1951, exports of rubber from Nigeria tripled and by 1964, Nigeria had displaced Liberia as Africa's leading producer of the commodity. Production reached a peak in 1974 and since then, there has been a steady decline due to:

- Unfavourable world prices;
- Over-tapping and improper tapping of rubber trees by producers in an effort to increase production;
- Urban expansion which has led to the clearance of rubber trees around towns such as Benin and Sapele.

The rubber produced today is either:

- Exported; or
- Used locally for the manufacture of shoe soles; tyres and tubes which are sold locally or exported.

### **3.4 Cocoa Production**

The cocoa tree is a native of the Tropical Rain Forest of the Amazon Basin. It was introduced into the forest belt of southwestern Nigeria in the late 19th century. The first export of cocoa beans from Nigeria was in 1892. Production increased rapidly from 1905 as a result of the construction of a network of rural roads making production possible in

formerly inaccessible areas. Production was 9000 tonnes in 1915, rising to 114,000 tonnes in 1939 as production spread throughout Yorubaland. By 1929, cocoa made up 15% of Nigeria's exports by value. It was the mainstay of the economy of the producing areas throughout the colonial period.

Although there was a price collapse in the 1930s, the volume of exports of this commodity continued to increase. However, there was a slowing down of new plantings of the crop. Since the mid-1950s, there has been a steady decline in production as a result of:

- Decline in the productivity of cocoa trees due to age and disease infestation;
- Acute shortage of farm labour due to:
  - The Universal Primary Education Programme: the graduates of which mostly find their way ultimately into urban centres;
  - Increased opportunities elsewhere in the Nigerian economy for migrants who used to come into the cocoa belt from other parts of the country.

Various governments have been encouraging farmers in the cocoa belt to diversify by planting citrus, cashew and coffee and this has been quite successful.

One noteworthy feature of the cocoa belt is the neglect of food crop agriculture in favour of export crop agriculture. The result of this is that today, the area is a major food deficit area which must import food from northern and eastern Nigeria.

### **3.5 Cotton Production**

There are varieties of cotton which are indigenous to Nigeria. They had been grown from time immemorial and their lint spun into fabrics for local use and even for export. In the 19th century, for example, cloth woven from cotton grown in Nupeland and Borno could be found in the markets of Timbuktu. Cotton was also grown in Ogun, Oyo and Sokoto States.

The first export of raw cotton from Nigeria was in 1851. Cotton production was later encouraged by the colonial administration through:

- The introduction of better varieties from Egypt and the Sudan; and
- The extension of the railway network to northern Nigeria.

Exports of cotton rose and fell as a result of:

- Changing world prices for the commodity; and

- Rainfall variation.

The establishment of textile mills at Ikeja, Kaduna and Kano led to most of the cotton produced in Nigeria being consumed locally. The result is a considerable decline in cotton exports.

### **3.6 Groundnuts Production**

This legume has been grown for local consumption in Nigeria for a long time. The vegetable oil extracted from it was in high demand in Europe at the time the British colonised the country. But the main areas of production of groundnut were inaccessible. One of the reasons for building the rail line to Kaura Namoda, Kano and Nguru was to facilitate the transportation of the crop to the coast, the Lagos-Kano rail line was completed in 1912 and the amount of groundnuts available for export immediately jumped from only 2000 tons in 1911 to 20,000 tons in 1913, and 50,000 tons in 1916. Exports remained stagnant between 1919 and 1923. But by 1929 it had risen to 147,000 tons. In 1934 it was 245,000 tons and in 1937, 326,000 tons. This rapid increase continued into the 1950s and 1960s, although production in some years was adversely affected by drought and disease.

In the 1940s groundnut oil mills were introduced. In 1949 about 400 tons of groundnut oil were exported.

By 1963 groundnut oil exports had reached 69,000 tons. In the early 1960s groundnuts and groundnut oil made up between 17% and 26% of the country's total exports.

Production was badly hit by the drought of the early 1970s and Nigeria had to import groundnuts in 1974. Since then exports have declined as a result of a rapidly increasing demand for local consumption.



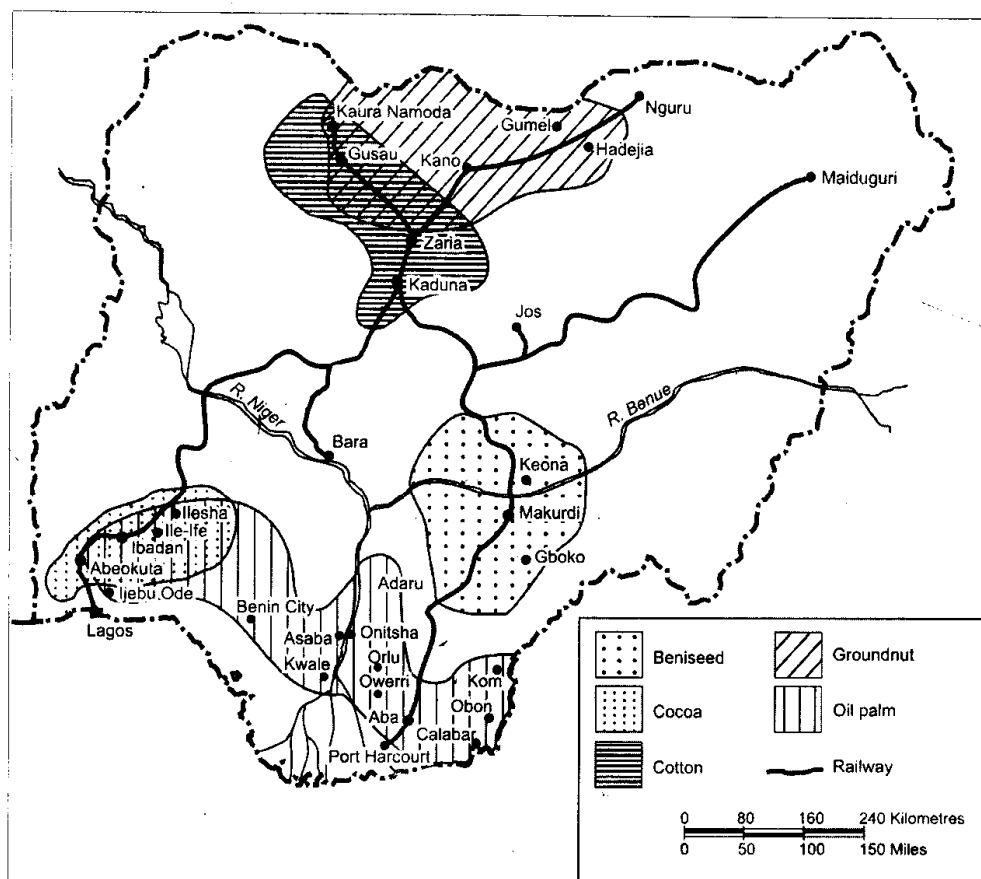


Fig. 15.1 Export Crop Producing Areas of Nigeria (After M.O. Ijere, "The Impact of Nigerian Railways on Agricultural Development", *Nigerian Geographical Journal*. 16, 1973).

### 3.7 The Place of Export Crop Agriculture in the Nigerian Economy

Export crop agriculture has had a major impact on the Nigerian economy by:

- Generating foreign exchange earnings. Until the late 1960s when crude oil took over, export crops were the main source of export earnings for Nigeria. They made up 81% of the export earnings in 1900, 59% in 1929, 75% in 1946, 81% in 1949 and 77% in 1960. These earnings were subject to major changes over short periods of time because of:
  - world price fluctuations;
  - weather conditions; and
  - world political climate.

The percentage contribution to export earnings dropped to 59% in 1964, 31% in 1968 and only 5% in 1975. In the 1970s, various governments made efforts to improve agriculture in general and revive export crop production in particular. They did this by

- improving producer prices; and
- improving food production which is necessary for sustained or

increased export crop production.

Export of these crops have continued to decline due to:

- crude oil exports which have led to the neglect of agriculture;
- increased domestic consumption of export crops.

In the period that export crops thrived, they were:

- generating income for the producers and for people involved in transporting and marketing them;
- generating income for the Western, Eastern, Northern and Mid-Western Regional Governments. It was this income that was used to finance the development of education, health care delivery, roads, etc.
- they provide raw materials for manufacturing industries;
- they provide employment.

#### **4.0 Conclusion**

The production of export crops played an important role in the Nigerian economy during the colonial and immediate post-colonial period. Exportation of these commodities has declined in recent years for a variety of reasons including:

- uncertain world prices;
- poor production methods (rubber);
- ageing trees and lack of new plantings (cocoa);
- scarcity of farm labour;
- drought and disease (groundnuts and cotton); and
- increased domestic consumption.

#### **5.0 Summary**

The colonial administration promoted the growth of five major export crops in Nigeria, namely groundnuts, cocoa, rubber, cotton and oil palm, through:

- the introduction of new crops and crop varieties;
- the provision of modern means of transport;
- the provision of technical advice. The production and export of cocoa, rubber and palm produce (in the forest belt) and of cotton and groundnuts (in the drier savannahs), grew rapidly but were subject to the vicissitudes of world prices, world politics and the weather.

Export crop production played an important part in the economy of the country before crude oil took over in the late 1960s. It provided:

- foreign exchange earnings;
- revenue for the various regional governments;
- income to the producers and marketers;

- employment;
- industrial raw materials.

Exportation of the agricultural commodities has declined due to:

- uncertain world prices;
- poor production methods for rubber;
- ageing trees and lack of new plantings for cocoa;
- scarcity of farm labour;
- drought and disease affecting cotton and groundnuts; and
- increased domestic consumption.

#### **6.0 Self-assessment Exercise**

Examine the importance of export crop agriculture.

#### **7.0 Tutor-marked Assignment**

None.

#### **8.0 Further Reading and other Materials**

As for Unit 5.

## **Unit 16:     Irrigated Agriculture**

- 1.0   Introduction
- 2.0   Objectives
- 3.1   Traditional Irrigation
- 3.2   Large-Scale Irrigation Projects
- 3.3   Irrigated Agriculture on the Jos Plateau
- 4.0   Conclusion
- 5.0   Summary
- 6.0   Self-assessment Exercise
- 7.0   Tutor-marked Assignment
- 8.0   Further Reading and Other Materials

### **1.0    Introduction**

Irrigated agriculture is the growing of crops by artificially supplying them with water from rivers, natural and artificial lakes, wells, etc. It has been practised in Nigeria for a long time. It is becoming increasingly more widespread, larger in scope and more important in terms of its contribution to the country's economy. It is important because:

- it extends the agricultural calendar sometimes from only three months to twelve months. Therefore it increases agricultural production;
- it provides employment at a time of the year when farmers would have been idle or would have had to migrate temporarily because there is no rain;
- it makes it possible to produce certain crops — notably wheat and vegetables — and so supply urban markets in the country with them;
- it generates income for farmers and the long chain of marketers of irrigated farm products;
- it generates income to the government in the form of taxes and of charges on the use of artificial reservoir water;
- it cushions farmers against the vagaries of the weather. As a form of insurance against drought it is very important to the country's food security.

It is for these reasons that we shall be studying irrigated agriculture in this unit.

### **2.0    Objectives**

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

- discuss the importance of irrigation to the Nigerian economy;
- describe the most important form of traditional irrigation;
- discuss the importance of the introduction of petrol pumps to

- irrigated agriculture;
- discuss the reasons behind the introduction of modern irrigation;
- describe the main irrigation projects in the country;
- describe the basis and importance of irrigation agriculture on the Jos Plateau.

### **3.1 Traditional Irrigation**

The most important form of traditional irrigation is Shaduff irrigation. The source of water may be a pond, a lake, a river or a water hole. The method involves the use of a container such as a large calabash or skin bucket. This is suspended on a rope tied to one end of a rod which is counter-balanced at the other end by a large weight. The rod is balanced in the middle on a vertical stand fixed to the edge of the source of water and serving as its fulcrum.

The farmer pulls the bucket down into the water, holds it down and allows it to fill up. Then he allows the weight at the other end of the rod to lift up the bucket. As the bucket comes up, he grabs it and empties the water into a canal which leads to the farm plot.

This ancient, crude but serviceable irrigation technology reminds one of the Nile Valley where it has been in use for hundreds of years. It is used extensively especially by Hausa farmers in northern Nigeria for dry season cultivation of a great variety of vegetables — lettuce, cabbage, carrots, cucumber, tomatoes, green pepper, garden eggs, french beans, radishes, etc — to supply such urban markets as Kano, Kaduna, Zaria, Katsina, Sokoto, Maiduguri, Bauchi and so on. Shaduff irrigation is highly labour intensive therefore farm plots are small but the total production in any one year is large. Often, the same plot of land is used for rain-fed cultivation of maize and other crops during the wet season.

Hausa farmers have taken the art of shaduf irrigation to other parts of the country such as the Jos Plateau, using the mining ponds, the flood plains or rivers and streams in and around Ibadan, Ilorin, etc., and the lagoons and canals in Lagos. They are also found in some of the flood plains crossed by the country's highways, including the Abuja-Lokoja road. They take advantage of easy transportation of their products from these locations and the truckloads of produce which leave their roadside depots testify to their success and the contribution which they are making to the country's economy.

### **The Introduction of Petrol Pumps**

The introduction of petrol pumps into the traditional form of irrigation has all but revolutionised it. The petrol pumps which became

increasingly popular from the 1970s onwards have several advantages:

- They are relatively cheap;
- They are small but powerful;
- They are easy to operate and maintain;
- They reduce the amount of human labour required; and
- They are readily moveable — a man can carry a small one on his head or at the back of his bicycle.

Petrol pumps are extremely popular with irrigation farmers in Nigeria and have virtually taken over from the shaduff. Indeed, one of the things which has made irrigation farming so widespread today is the petrol pump. It has led to an increase in farm sizes and in crop production.

### **3.2 Large-Scale Irrigation Projects**

During the colonial period, a new dimension was introduced into irrigated agriculture in Nigeria in the form of dam construction. The first dams built for irrigation were low barrages and dykes built in the Sokoto Basin in 1918 and subsequent years. The purpose of these schemes were the cultivation of rice under irrigation.

In later years, but particularly in the 1960s, small earth dams were constructed in various parts of northern Nigeria for irrigation. By 1966, about 5200 hectares (ha) were under irrigation through these schemes.

The Federal and State Government turned to modern, large-scale irrigation as a result of the drought of 1969 - 1973 which led to the total or near total loss of agricultural crops in many areas. At first, pilot irrigation schemes were established. One of the best known of these is the Kadawa Irrigation Project near Kano, where a variety of crops was grown, including wheat, rice, tomatoes and maize.

The pilot schemes gave way to larger, more ambitious ones as various governments became convinced that large-scale irrigation was the answer to the problem of highly seasonal rainfall in general and drought in particular. Kano State (including Jigawa) led the way. The Tiga Dam, commissioned in 1974 was meant to irrigate 62,000ha in the Hadejia Valley. The Chalawa Gorge Dam was planned for 50,000ha while another 50,000ha were to be irrigated by smaller reservoirs. Smaller valley-floor or Fadama Schemes covered 5,000ha in 1984/1985.

Today, Kano and Jigawa have more than 22 earth-filled dams in operation supplying water for the irrigated production of wheat, tomatoes, rice and onions.

Next to Kano and Jigawa in area actually irrigated or planned for irrigation is Borno State. The south Chad Irrigation Project based on the pumping of water from Lake Chad was planned for 122,000ha of wheat and cotton fields. In Sokoto, Zamfara and Kebbi States, the Bakolori Dam was planned to irrigate 33,000ha while other projects in the Sokoto-River Basin are expected to irrigate some 50,000ha.

There are many modern irrigation projects operating or planned in all the northern states. Even in the humid southern part of the country, states such as Oyo, Ogun, Anambra and Edo have plans to go into irrigated agriculture.

In 1976, the Federal Government divided the country into a number of river basins and created River Basin Development Authorities to, among other things, develop the water resources of these basins for irrigation.

### **3.3 Irrigated Agriculture on the Jos Plateau**

We ought to take a separate look at irrigated agriculture on the Jos Plateau. Tin mining brought Europeans to this area in substantial numbers as from the beginning of the 20th century. Therefore, there was a growing demand for market garden crops — tomatoes, carrots, cabbage, lettuce, etc. The Europeans brought with them seeds of new crops as well as new varieties of crops which were already being grown in northern Nigeria.

Hausa farmers were quick to respond to the opportunities which existed on the Plateau for market gardening, namely:

- Demand for market garden crops especially by Europeans; and
- Valley floors suitable for market gardening.

These Hausa farmers carried out irrigated agriculture, using the shaduf. With time, this became a major activity on the Jos Plateau especially as the population increased and towns such as Jos and Bukuru grew, increasing the demand for their crops.

Tin mining on the Plateau has practically ceased, leaving behind a devastated landscape. One of the features of this landscape is the mining ponds of which there are many. These mining ponds are hazardous to livestock and people so much so that the government and people of Plateau State have often called on the Federal Government to reclaim the land by filling them up with the heaps of earth around them. The same mine ponds have been turned into a valuable asset by people engaged in irrigated agriculture. The following are the factors which have favoured the expansion of market gardening on the Jos Plateau in recent years:

- The availability of tremendous quantities of water in the mine ponds;
- The availability of labour, the tin mining industry having left behind thousands of former mine workers;
- Great demand for vegetables during the dry season both on the Jos Plateau itself (Jos, Bukuru, Barkin Lath, etc.) but in urban centres located south of the Plateau (Abuja, Minna, Makurdi, Ibadan, Lagos, Benin, Onitsha, Port Harcourt, Calabar and Owerri to mention but a few);
- The availability of petrol pumps.
- The availability of good roads linking Jos with these urban centres.

During the dry season, the truckloads of market garden produce which leave Jos and its environs daily for the southern part of the country is an indication of how successful the market gardeners have been in turning what was regarded overwhelmingly as a hazard into a valuable asset.

#### **4.0 Conclusion**

We conclude by saying that irrigated agriculture has been on the increase in Nigeria in recent years and that the governments of Nigeria see it as an answer to the occurrence of drought.

#### **5.0 Summary**

Irrigated agriculture has been practised on a small scale in Nigeria for a longtime. The introduction of petrol pumps has made it more popular. Modern irrigation, often involving the construction of dams has become necessary because of:

- Increasing population and urbanisation making demands on agriculture that cannot be met by rain-fed agriculture alone;
- Drought;
- Most farmers are idle during the dry season.

Modern irrigation is expanding and there are plans for it to expand even more in the future.

Irrigated agriculture, practised during the period of tin mining mainly to supply the European mines, has expanded in recent years because:

- Water is available in the mine ponds;
- Labour is available;
- There is a great demand for market garden produce both on the Jos Plateau itself and in the urban centres in the southern parts of the country;
- Petrol pumps are available; and



- There are good roads to facilitate the transportation of the produce to the market.

## **6.0 Self-assessment Exercise**

Discuss the basis and importance of irrigated agriculture on the Jos Plateau.

## **7.0 Tutor-marked Assignment**

Why has large-scale irrigated agriculture become necessary in Nigeria?

## **8.0 Further Reading and other Materials**

1. Barbour, K.M. *et al. Nigeria in Maps*, 1982.
2. Iloeje, N.P. *A New Geography of Nigeria*. New Edition, 1972.

## **Unit 17: Modern Manufacturing**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Traditional and Modern Manufacturing in Nigeria
- 3.2 History of Modern Manufacturing in Nigeria
- 3.3 Distribution of Industries
- 3.4 Attempts to Develop Basic Industries
- 3.5 Problems of Modern Manufacturing in Nigeria
- 3.6 Possible Solutions to these Problems
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

Manufacturing is the process by which people take raw materials, subject them to some processing and end up with new products. Manufacturing may be very simple, e.g. producing flour from wheat, cassava or guinea corn. Manufacturing may also be complex, e.g. producing a car from a wide range of raw materials, such as steel, aluminium, copper, plastics, and so on.

There are two main types of manufacturing industries;

- light industries such as textile industries, printing, furniture making, food processing and electronic industries; and
- heavy industries such as iron and steel, chemical manufacturing, copper and aluminium smelting and shipbuilding.

Manufacturing industries are important in the economy of a country for several reasons:

- they help to conserve foreign exchange by producing goods that would otherwise have had to be imported;
- they can earn foreign exchange if their products are exported;
- they provide income to factory workers and to government;
- they provide a market for agricultural products;
- they supply inputs to the farming population.

Industries generally promote other industries and economic activities and so help to diversify and modernise the economy of a country. No wonder the process of industrialisation is seen today as necessary for the economic development of a country.

In this unit, we shall be studying manufacturing industries in Nigeria. We shall look at the history of manufacturing industries in Nigeria. Then we shall look at the types of industries as well as the distribution of industries. We shall examine the attempts which have been made and are being made to develop basic industries. Finally we shall consider the problems of manufacturing industries and suggest ways of tackling them.

But let us start with the objectives of the unit:

## **2.0 Objectives**

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

- Discuss the importance of manufacturing industries in a country's economy;
- Give a historical account of the development of modern manufacturing in Nigeria;
- Classify Nigeria's manufacturing industries;
- Describe the distribution of manufacturing industries in the country;
- Discuss the various attempts to develop basic industries in Nigeria;
- Discuss the problems of manufacturing industries in the country; and
- Suggest possible ways of tackling these problems.

## **3.1 Traditional and Modern Manufacturing in Nigeria**

Let us start by making a distinction between traditional industries and manufacturing. The former dates back to prehistoric times and involves the use of raw materials obtained locally to make various art and craft objects by hand in a small-scale cottage setting. They include the processing of agricultural food products (e.g. hand milling of guinea corn), leather works, textile works, brass, gold, silver and bronze works, glass works, wood works, works based on various natural fibres, cane works, dry-grass works, clay works and calabash works. These cottage industries are still to be found in various parts of the country and are important economically.

In this unit we are concerned with modern manufacturing industries. They are called modern because they involve:

- Machine-like production of goods in a factory setting;
- A larger labour force than cottage industries; and
- Mass production of goods for a larger market.

## **3.2 History of Modern Manufacturing in Nigeria**

The earliest form of modern manufacturing in Nigeria was the initial factory processing of agricultural raw materials to enhance their value

before export. In the 1920s, the hand oil press was introduced for better and more economical extraction of palm oil from palm fruit. Also, by the 1920s, modern ginneries were introduced for the extraction of cotton lint from seed cotton. Power-driven sawmills were introduced for the processing of logs, which used to be exported in their raw form, into timber.

Various finishing operations were introduced quite early, including printing, publishing, baking and furniture works. Table 17.1 shows pre-1945 industrial establishments in Nigeria. It was after the Second World War and especially in the 1950s that modern manufacturing became a major feature of the country's economy. That was when Nigeria formally adopted manufacturing as a development strategy. The country chose the import substitution strategy of industrialisation. The idea was to produce locally as many as possible of the consumer goods which were being imported.

**Table 17.1: Pre-1945 Industrial Establishments in Nigeria by Type**

Industrial Type	Frequency	Product Type	
		Processed	Finished
Meat Processing	1	1	-
Saw Milling	1	1	-
Fruit Processing	1	-	1
Vegetable & Animal	-	-	-
Oil Processing	3	2	1
Bakery	6	-	6
Food Processing	1	1	-
Line and Block	1	-	1
Cotton Ginning	10	10	-
Wearing Apparel	1	-	1
Tannery	3	3	-
Drugs & Medicine	1	-	1
Furniture & Fixture	2	-	2
Printing & Publishing	9	-	9
Soap	1	-	1
Coal Products	1	-	1
Rubber Processing	3	3	-
Wood carvings	1	-	1
Total	47	21	26

By 1958, the main types of manufacturing industries in Nigeria may be grouped into the following categories:

- Food (including Tobacco) and Confectionary
- Beverages (including Soft Drinks)
- Vegetable Oil Milling
- Textile
- Garments Footwear Furniture and Fixtures
- Glass and Pottery
- Paints

- Bricks and Tiles
- Cement and Concrete Products
- Basic Industrial Chemicals, Petroleum Products and Misc.
- Chemicals
- Electrical Equipment
- Basic Metal and Metal Products
- Motor Vehicle Assembly (including Bicycle Assembly)

The number of manufacturing establishments, the range of manufacturing activities, the size of the labour force in the manufacturing sector, have all increased over the years since 1950. By 1970, Nigeria had more than 700 industrial plants. Table 17.2 shows the types and dates of establishment of manufacturing industries in Nigeria up to 1970. The most important industries belonged to the following groups:

- Food and beverages
- Textiles
- Wood products
- Chemicals
- Rubber products and plastics
- Printing and publishing
- Cement and building materials
- Metal products

Table 17.2 Structure of Manufacturing Industry in Nigeria by Type and Age

No.	Industry Type	Number of establishments by years							Total
		Before 1911	1911 to 1920	1921 to 1930	1931 to 1940	1941 to 1950	1951 to 1960	1961 to 1970	
1.	Meat processing and preserving	-	-	-	-	-	-	-	-
2.	Dairy products	-	-	-	-	-	-	-	-
3.	Fruit & Veg. Processing	1	-	-	-	-	-	-	-
4.	Veg. & animal oils & fats	-	-	1	-	-	-	-	-
5.	Grain mill products	-	-	-	-	-	-	-	-
6.	Bakery produce	-	-	1	-	-	-	-	-
7.	Sugar refining	-	-	-	-	-	-	-	-
8.	Confectionaries	-	-	-	-	-	-	-	-
9.	Animal feeds	-	-	-	-	-	-	-	-
10.	Distilling spirits	-	-	-	-	-	-	-	-
11.	Beer & stout brewing	-	-	-	-	-	-	-	-
12.	Tobacco products	-	-	-	-	-	-	-	-
13.	Spinning, weaving	-	-	-	-	-	-	-	-
14.	and ginning	2	2	3	-	-	-	-	-
15.	Made up textile goods	-	-	-	-	-	-	-	-
	Knitting mills	-	-	-	-	-	-	-	-
16.	Manufacturing	-	-	-	-	-	-	-	-
17.	Carpets and rugs	-	-	-	-	-	-	-	-
	Wearing apparel	-	-	-	-	-	-	-	-
18.	Tannery and leather	-	-	-	-	-	-	-	-
19.	Finishing	-	-	-	-	-	-	-	-
	Footwear	1	2	-	-	-	-	-	-
20.	Saw mills	-	-	-	-	-	-	-	-
21.	Man. of wood & Cork	-	-	1	-	-	-	-	-
22.	Furn. & Fixtures	-	-	-	-	-	-	-	-
	Paper Containers	-	-	-	-	-	-	-	-

23.	Pulp & paper &	-	-	-					
24.	Paper board	-	-	-					
25.	Printing and publishing	-	-	-					
26.	Basic industrial chemicals	4	-	2					
27.	Fertilizer and pesticide	-	-	-					
28.	Paints, Varnish & lacquers	-	-	-					
29.	Drugs & medicine	-	-	-					
	Soap & perfumes	-	-	-					
30.	Misc. chemicals	-	-	-					
31.	products	-	-	-					
32.	Petroleum refineries	-	-	-					
	Misc. products &	-	-	-					
33.	petroleum & coal	-	-	-					
34.	Tyres & tubes	-	-	1					
35.	Other rubber products	-	-	-					
36.	Plaster products	1	1	1					
	Pottery, china	-	-	-					
37.	Glass & glass	-	-	-					
38.	products	-	-	-					
39.	Structural clay products	-	-	-					
40.	Cement	-	-	-					
	Non-metallic mineral products	-	-	-					
41.	Industry Type	-	-	-					
42.	Iron & steel basic industry	-	-	-					
43.	Non-ferrous metal basic industries	-	-	-					
44.	Cutlery	-	-	-					
	Metal furniture	-	-	-					
45.	Structural metal	-	-	-					
46.	Fabricated metal products	-	-	-					
47.	products	-	-	-					
48.	Agric. machinery	-	-	-					
	Machinery & equip	-	-	-					
49.	Electrical industry	-	-	-					
50.	Radio & T.V.	-	-	-					
51.	Electrical apparatus	-	-	-					
52.	Shipbuilding &	-	-	-					
53.	repairing	-	-	-					
54.	Motor assembly	-	-	-					
	Motor-cycle assembly	-	-	-					
55.	Jewellery	-	-	-					
56.	Misc. pro.	-	-	-					
57.	Leather prod. &	-	-	-					
58.	language	-	-	-					
59.									
Total		9	5	12	11	66	286	357	746

The industrial workforce, estimated at 55,000 in 1962 was about 141,000 in 1972. On the other hand the expatriate labour force went down from 13,415 in 1962 to only 2,258 in 1972, an indication of the extent to which Nigerian industries had indigenised its labour force.

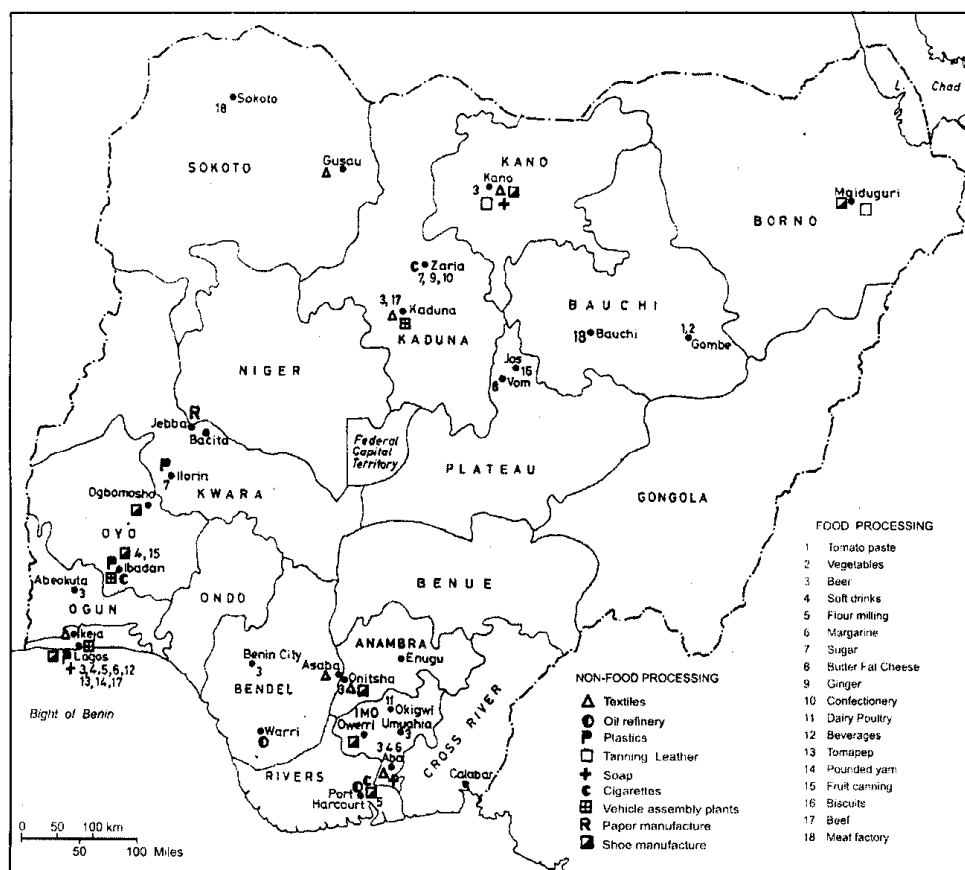


Fig. 17.1 Nigeria Showing the Location of Manufacturing Industries as of 1982.

One significant aspect of manufacturing industries in Nigeria is that many of them still rely on imported raw materials.

### 3.3 Distribution of Industries

The distribution of modern industries in Nigeria is to be explained in terms of five main factors:

1. **Nearness to raw materials:** This factor explains the location of:
  - industries which use heavy and bulky low-value raw materials such as cement factories which are located at Nkalagu (Enugu State), Calabar (Cross River), Ukpilla (Edo), Ewekoro and Shagamu (Ogun), Yandev (Benue), Ashaka (Gombe) and Sokoto, all near large limestone deposits;
  - industries which use readily perishable raw materials, e.g. fruit canning at Ibadan.
2. **Nearness to a large market:** Industries whose end products are readily perishable tend to locate in or near a large market, e.g. bread baking in urban centres. The same is true of industries whose end products are bulky, e.g. soft drinks manufacturing in Lagos, Kaduna, Kano, Jos, Ibadan and Benin.

3. ***Nearness to labour supply:*** This was the initial reason for textile factories to be located in Kaduna.  
There was a large pool there of cheap labour made up mostly of primary and secondary school leavers. One of the reasons why people continue to locate modern industries in urban areas such as Lagos, Kano and Kaduna is the availability of cheap labour.
4. ***Availability of water and electricity:*** From colonial times, urban centres have been favoured with the provision of water and electricity which are both important for modern industries.
5. ***Transport and communications:*** Areas with a good transport and communication system tend to attract manufacturing industries. This is because modern communications facilitate the making of business contacts while a good transport system helps in assembling raw materials and shipping out finished goods. Thus urban centres, which are well served with roads, railways and telecommunications such as Lagos, Kaduna, Kano and Ibadan have been preferred for industrial location.
6. ***Political influence:*** Many industries were located where they are today because government took a political decision to locate them there. Examples include the steel rolling mills at Katsina, Oshogbo and Jos. Many if not most of the industries in state capitals were located there by the respective state governments.

All of these factors have tended to favour the location of manufacturing industries in towns and cities. As a matter of fact, about 83% of manufacturing establishments in Nigeria in 1972 were located in towns with a population of 50,000 or more. Only 3.8% of the industries were located in villages. About 70% of the industries were located in Lagos!

### **Industrial Zone**

Most of the manufacturing establishments in Nigeria are located in three areas which we may call the industrial zones of the country. They are:

- The south western zone, comprising Lagos, Epe, Abeokuta, Ibadan, Oshogbo and Ilorin. This is by far the most important industrial zone where most of the industries are to be found. 70% of Nigeria's manufacturing industries are located in Lagos alone;
- The northern zone, comprising Kaduna, Zaria, Funtua, Gusau, Kano, Jos and Bauchi;
- The south-eastern zone, comprising Onitsha, Enugu, Nkalagu, Umuahia, Aba, Port Harcourt and Calabar.

Between them these industrial zones account for over 95% of the manufacturing industries in Nigeria. Figure 17.1 gives you some idea of the types of industries to be found in various towns.



### **3.4 Attempts to Develop Basic Industries**

The Federal Government of Nigeria has made some attempts to develop a modern industrial base for the country by establishing basic industries. These industries are called basic because they can give rise to so many other industries and so help to develop an industrial economy.

These basic industries include:

- iron and steel
- petrochemicals
- liquefied natural gas

Government's attempt to establish these industries have been largely frustrated by political instability, policy inconsistencies and official corruption.

#### **Iron and Steel**

The iron and steel industry is the most important industry for a country that wants to industrialise, as Nigeria does. This was why in the late 1970s, the Federal Government decided to establish a gigantic iron and steel complex at Ajaokuta in Kogi State based on:

- iron ore from Itakpe near Okene
- coke made from Nigerian coal
- limestone from various parts of Nigeria
- imported manganese ore and bauxite

By 1983 most of the complex had been built, including:

- a raw materials preparation plant
- a coke oven and by-product
- an iron making plant
- a steel making plant
- four rolling mills
- repair facilities
- an electric power plant
- gas and oxygen supply facilities
- industrial water supply
- thousands of residential accommodation together with social services
- a river port

The project was about 98% completed when the Armed Forces seized power in December 1983. About N60 billion had been spent. Unfortunately, the new government was not interested in the project. Work stopped and eventually the contractors pulled out. Some of the production and repair units which were already operating, were starved

of funds until they closed down. For sixteen years, the iron and steel complex was forgotten.

Fortunately, the civilian government that was voted into power in 1999 is now making strenuous efforts to revive the project and complete it.

### **3.5 Problems of Modern Manufacturing in Nigeria**

Modern manufacturing in Nigeria faces a number of problems. These include:

- the fact that many industries import their raw materials;
- lack of venture capital;
- lack of an industrial base;
- inadequate and inefficient services (water, electricity, transport and communications);
- poor management in government owned industries;
- frequent changes of government and therefore of government industrial policy.

#### **Possible solutions to these problems**

The following may be suggested as possible solutions to these problems:

- Government should encourage and help industries to obtain more and more of their raw materials locally;
- Industries should be able to source for venture capital from the banks at attractive rates of interest;
- The Ajaokuta iron and steel complex should be completed and commissioned;
- Services could be improved through privatisation, and
- Government should privatise its industrial establishments.

### **4.0 Conclusion**

Although there are many industries in Nigeria, they are mostly of the import substitution type. There is a need for Nigeria to develop an industrial base through the completion of the Ajaokuta Iron and Steel Complex.

### **5.0 Summary**

Modern manufacturing in Nigeria started in the 1920s with the introduction of the hand oil press for palm oil extraction, of cotton ginneries and of power-driven saws. Modern manufacturing became a significant aspect of the country's economy only after the Second World War. The country chose the import-substitution strategy of industrialisation. By 1970, the most important industries belonged to:

- Food and beverages
- Textiles
- Wood Products
- Chemicals
- Rubber products and plastics
- Printing and publishing
- Cement and building materials
- Metal products.

Factors of industrial location in Nigeria include:

- Nearness to raw materials;
- Nearness to a large market;
- Nearness to labour supply;
- Availability of water and electricity;
- Transport and communications;
- Political influence.

Therefore in 1972, 83% of the manufacturing industries were located in towns with a population of 50,000 and about 70% in Lagos alone. Most of the industrial establishments are to be found in three industrial zones: one in the south-west, one in the south-east and one in the north.

Attempts which have been made to develop basic industries such as iron and steel, petrochemicals and liquefied natural gas, have so far not yielded the expected results.

The problems of modern manufacturing in Nigeria include the following:

- Many industries depend on imports for their raw materials;
- Lack of venture capital;
- Lack of an industrial base;
- Inadequate and inefficient services;
- Poor management in government-owned enterprises; and
- Frequent changes of government policy.

These problems may be tackled by:

- Domestic sourcing of raw materials;
- Getting the banks to lend money to industrial establishments at attractive interest rates;
- Completion and commissioning of Ajaokuta Iron and Steel Complex;
- A more stable industrial policy.

## **6.0 Self-assessment Exercise**

Why are most of Nigeria's modern manufacturing industries located in urban areas?

## **7.0 Tutor-marked Assignment**

None.

## **8.0 Further Reading and other Materials**

As for Unit 4.

## **Unit 18: Internal Trade**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 The Basis of Internal Trade in Nigeria
  - The Role of Differences in Regional Environment
  - The Role of the Distribution of the Human Population
  - The Role of Urbanisation
  - The Role of Industrial Location
  - The Role of Infrastructural Development
- 3.2 Foodstuff Trade Regions of Nigeria
- 3.3 Trade in Livestock
- 3.4 Trade in Forest Products
- 3.5 Trade in Manufactured Goods
- 3.6 Problems of Internal Trade
- 3.7 Tackling the Problems of Internal Trade
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and other Materials

### **1.0 Introduction**

In the olden days it was possible for a particular region or part of the country to produce everything or virtually everything it needed. This was largely because people's needs were very simple. In the present day, people's needs are complex and it is therefore no longer possible for a region to produce them. Trade is the means by which people and regions obtain the things they need or want but do not or cannot produce. In order to be able to do so, they usually sell off some of the things they produce.

In this unit, we are going to study internal trade in Nigeria, that is, trade between different parts of the country. The Nigerian economy has a very large commercial sector which is important for several reasons:

- it helps to satisfy people's needs and wants in different parts of the country and so performs a vital function;
- it provides employment indirectly to categories of producers who need to market their products and directly to traders and transporters;
- it provides income for producers, traders and marketers;
- it provides income to government in the form of taxes; and
- unfortunately, internal trade also offers various opportunities for criminal activity.

The objectives of the unit are stated below:

## **2.0 Objectives**

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

- explain the basis of inter-regional and local trade in Nigeria;
- divide the country into trade regions;
- describe the nature and flow of trade in manufactured and non-manufactured goods;
- discuss the impact of internal trade on the economy;
- describe the nature and functions of rural and urban markets;
- state some of the problems of internal trade in the country: and
- suggest possible solutions to these problems.

## **3.1 The Basis of Internal Trade in Nigeria**

When we talk of the basis of internal trade, we mean the factors that promote and support it. The basis of internal trade in Nigeria are five. In other words, there are five factors which are responsible for internal trade in the country:

- regional differences in the natural environment, particularly climate;
- the way the human population is distributed;
- urbanisation;
- the location of manufacturing industries; and
- in frastructural facilities, especially transport.

Let us now look at these factors one at a time.

### **The Role of Differences in Regional Environment**

From the point of view of internal trade, the most important difference in regional environment in Nigeria is offered by climate. This is what determines the types of crops each part of the country is most suited for. It therefore determines the likely areas of surplus production of particular crops.

On the basis of climatic differences and agricultural production, Nigeria may be divided into three zones (see Figure 14.1):

- The dry northern zone of livestock and grain crop production, comprising Kebbi, Sokoto, Zamfara, Katsina, Kano, Jigawa, Yobe, Gombe, Borno and Adamawa States and parts of Niger and Bauchi. This zone supplies other parts of the country with livestock and grains.
- The wet southern zone of tree and root crops, comprising Lagos, Ogun, most of Oyo, Ekiti, Ondo, Edo, Delta, Bayelsa, Rivers, Imo, Anambra, Enugu, Ebonyi, Abia, Akwa Ibom, Cross River

and parts of Taraba, Benue, Kogi and Kwara States. This zone supplies the rest of the country with timber, cocoyam, palm oil, kolanuts, fruits, yams and cassava products; and

- The intermediate Middle Belt zone which is not as dry as the northern zone and not as wet as the southern zone. It comprises Plateau, Nasarawa, most of Kaduna, Niger, Benue, Bauchi States, as well as the FCT. It is a mixed grain and root crop producing area exporting yams, cassava, beniseed, guinea corn and rice to other parts.

Thus the source-regions of surplus production of food crops in Nigeria is determined by climate. Another feature of the environment which is important to internal trade in the country is the occurrence of large water bodies which serve as fisheries. Although the large rivers are important fisheries, by far the largest fisheries are:

- The Atlantic Ocean; and
- Lake Chad.

These are the main source regions for a large proportion of the fish which features in inter-regional trade in the country.

### **The Role of the Distribution of the Human Population**

Provided the people have the purchasing power, areas of high population concentration are areas with a high demand for various trade goods such as foodstuff. In Nigeria, there are three major areas of high population concentration:

- The eastern States of Anambra, Enugu, Imo, Abia and Akwa Ibom;
- The western States of Lagos, Oyo, Ogun, Osun, Ekiti, Ondo and Edo; and
- The northern States of Kano, Jigawa and Katsina.

Other areas of high population concentration are Sokoto State and the Jos Plateau. In each of these areas, the large population means a great demand for food and other materials which can be met only partially by local production. Moreover, there are major urban centres which have to rely on food brought from other parts of the country. In other words, there are food deficits in each of these major areas of population concentration. These food deficits are offset largely by supplies from the Middle Belt zone. Thus there is a large inter-regional trade in food products in the country.

### **The Role of Urbanisation**

In Nigeria's urban centres there are large concentrations of people of diverse ethnic origins with diverse food tastes. These people tend to

retain their dietary habits. Thus:

- Immigrants of southern Nigeria origin living in northern towns retain their tastes for yams, cassava, cocoyam; palm oil and various products of the forest belt; and
- Immigrants of northern Nigeria origin living in southern towns retain their taste for guinea corn, millet, cowpeas, etc.

The result is that there is need for foodstuff to be exchanged between the northern and southern zones and between them and the Middle Belt.

Moreover, urban centres serve as nodal points in the distribution of commodities between the different parts of the country. This is true of such large cities as Lagos, Kano, Onitsha and of cities that are located close to the boundaries of the three zones discussed above, such as Ilorin, Otuokpo, Bauchi, Jos and Kaduna.

### **The Role of Industrial Location**

In unit 17 we saw how most of Nigeria's manufacturing industries are located in large towns particularly in:

- Lagos, Epe, Ibadan and Ilorin
- Kaduna, Zaria, Gusau, Kano and Jos; and in
- Port Harcourt, Owerri, Aba, Onitsha, Enugu and Nkalagu.

These industries demand raw materials which often have to be obtained from long distances within the country, e.g.

- Cotton from the cotton-producing areas of the north to textile factories in Lagos; and
- Palm oil and palm kernel oil from Abia or Imo to Lagos for the manufacture of margarine and soap.

Of course, goods manufactured in the areas of industrial concentration and in other towns are marketed in all parts of the country.

Thus, there is a massive flow of raw materials from the areas where they are produced to the areas of industrial location and an equally massive flow of finished products to all parts of the country.

### **The Role of Infrastructural Development**

Means of transport such as roads and railways are developed for the purpose of moving people and goods from place to place. In Nigeria, large-scale inter-regional trade was first made possible by the development of railways which passed through the three zones earlier identified. The railways facilitated the exchange of goods between the three zones up to the 1960s.



The development of the road network in the 1950s, 1960s and especially since 1970 has opened up the country even more, facilitating inter-regional trade in foodstuffs, cattle, sheep, goats, kolanuts and petroleum products as well as a wide range of manufactured goods.

### 3.2 Foodstuff Trade Regions of Nigeria

A large proportion of the internal trade in Nigeria is in foodstuff. The country may be divided into six foodstuff trade regions as follows (Figure 18.1):

- i) Lagos, made up of Lagos State and adjoining parts of Ogun;
- ii) West, made up of the rest of Ogun State, Oyo, Osun, Ekiti and Ondo States;
- iii) Mid-West, made up of Edo and Delta States;
- iv) East, made up of Bayelsa, Rivers, Akwa Ibom, Cross River, Ebonyi, Abia, Imo, Enugu and Anambra States.
- v) Central, made up of Kwara, Kogi and Benue, and parts of Niger, FCT, Nasarawa and Taraba; and
- vi) North, made up of the rest of the country.

**Table 18.1: Inter-regional Flow of Foodstuffs in Nigeria**

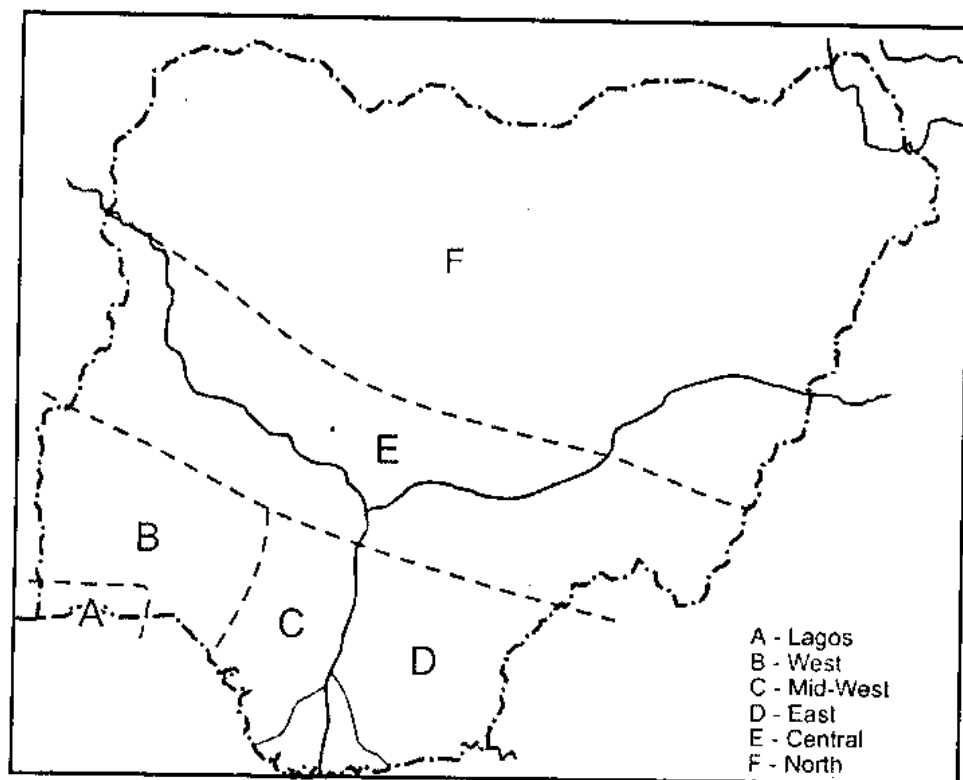
From/To	Lagos	West	Bendel	Middle Belt	East	North
Lagos	X	-	-	-	-	-
West	Gari Yam Plantain Rice Oranges Pineapple	X	Pineapple	Oranges Plantain Maize Rice	Pineapple	Gari Rice Pineapple Oranges
Mid-West	Gari Plantain Banana	Yam Rice Gari	X		Gari	Yam Plantain Banana
Central	Yam Grains Yam Gari Rice	Yam Grains Yam	Grains Yam Rice Yam	X Gari Yam	Grains Yam X	Yam Yam Gari Oranges P/Wine Plantain
East						
North	Grains Beans Onions Potatoes Peppers Rice	Beans Rice Onions Potatoes Peppers Grains	Grains Onions Potatoes	Rice Onions Grains	Rice Beans Onions Grains Potatoes Peppers	X

**Source:** Adapted from Hay, Alan and R. Smith (1970) *Inter-regional Trade and Money Flows in Nigeria 1964*, Oxford University Press, Ibadan.

Table 18.1 shows the pattern of flow of locally produced foodstuff in the country. The Table shows that:

- the west is a supplier of gari, yarns, plantain, rice, oranges and pineapple to Lagos, the central and northern regions.
- the mid-west supplies gari, plantain and bananas to Lagos; yams, rice and gari to the west; gari to the central region and yam, plantain and bananas to the north;
- the central region supplies yarn to the north and yarn and grains to all the other regions;
- the east supplies yarn, gari and rice to Lagos; yam to the west; rice and yarn to the mid-west; gari and yarn to the central region and yam, gari, oranges, palm wine and plantain to the north; while
- the north is supplier of grains, onions and potatoes to the mid-west; rice, onions and grains to the central region and grains, beans, onion, potatoes, pepper and rice to Lagos, the west and the east.

About 90% of the total volume of regional trade in foodstuff is made up of rice, gari, yarn and beans. This is understandable in the light of the fact that these are some of the country's most important staple foods.



### 3.3 Trade in Livestock

Internal trade in livestock which is a very important aspect of internal trade in Nigeria, has been covered in Unit 13.

### **3.4 Trade in Forest Products**

Because of the large demand by Nigeria's construction industry, there is a large volume of internal trade in wood. Logs are Boated down the creeks and lagoons from Delta, Edo and Ondo States to Lagos where they are sawn into timber for local use. Timber is also hauled by road from Delta, Edo, Ondo and Cross River States and by road and rail from Ogun State to the northern parts of the country.

### **3.5 Trade in Manufactured Goods**

A great variety of manufactured goods feature in the country's inter-regional trade. These goods fall into two groups:

- those that are imported; and
- those that are manufactured within the country.

Imported manufactured goods include machinery and equipment, vehicles, chemicals, cement and building materials and various other manufactures. They are mostly landed at the country's main port, Lagos and either consumed locally or transported mainly by road to other parts of the country.

Since the 1950s, there has been increase in the volume of locally manufactured goods which are traded within the country. These include:

- vehicles assembled in Lagos. Enugu and Kaduna;
- cement from Nkalagu (Enugu), Calabar (Cross River), Vandev (Benue), Ewekoro and Shagamu (Ogun), Sokoto (Sokoto) and Ashaka (Gombe);
- premium motor spirit (petrol). kerosene, diesel oil, lubricants from the refineries at Port Harcourt, Warri and Kaduna;
- beer from breweries at Lagos, Ibadan. Benin, Kaduna, Jos and Aba; and
- a very wide range of other consumer goods (soaps and detergents, plastic containers, tyres and tubes, vegetable oil. etc.) from the main areas of industrial location.

These are widely traded across the country, the main mode of transport being road transport. It is to be noted that Lagos is by far the most important supplier of locally manufactured goods.

### **3.6 Problems of Internal Trade**

Internal trade in Nigeria faces a number of problems. We shall highlight only four of them here. They are:

- poor transport
  - i. In many parts of the country, rural areas are poorly served

with roads. Getting locally produced crops out of and manufactured goods into these areas are both arduous and expensive. This is one major reason why food stuff is relatively expensive in urban areas while manufactured goods are expensive in rural areas.

- ii. Because railway transport has been run down over the years, most bulk transportation of trade goods across the country has to be done by road. Unfortunately, most of the roads were not built to handle such volume of traffic. Therefore accidents frequently occur, resulting in much wastage of lives and goods.
- iii. Road transport which accounts for most of goods movement in the country is slow, resulting in perishable items such as fruits and vegetables, losing much of their quality by the time they reach the consumer.
- poor communication which means that most transactions have to be done face to face. This is a slow and wasteful way to do business and results ultimately in higher prices than would have been the case;
- the fact that the Nigerian economy is a cash economy. Virtually all transactions have to be paid for in cash. Apart from the fact that this wastes time, it means that businessmen often have to move with large amounts of cash, creating very fertile opportunities for armed robbers. Armed robbery incidents in which traders lose large sums of money, if they are lucky to escape with their lives, are now virtually a daily occurrence on important trade routes such as Lagos-Ibadan, Lagos-Benin; Benin-Asaba; Onitsha-Owerri; Makurdi-Lafia; Abuja-Kaduna; Kano-Maiduguri; Jos-Bauchi and Maiduguri-Mubi and
- poor storage facilities for perishable goods as well as for non-perishable ones such as tubers and grains. Waste resulting from damage while goods are temporarily stored in depots across the country results in higher prices, as the trader still tries to make a margin that will keep him in business.
- poor organisation. There are far too many intermediaries between a producer and the ultimate consumer of a produce. The chain of intermediaries from producer to consumer may include:
  - i. Collectors who buy from farms and village compounds;
  - ii. Itinerant traders who assemble goods from collectors;
  - iii. Inter-regional traders who buy from itinerant traders;
  - iv. Urban wholesalers who are supplied by inter-regional traders;
  - v. Itinerant traders and hawkers who buy from urban retailers and sell to consumers.

Every stage in the long chain means a price increase. Ultimately, the consumer pays a much higher price than if the chain had been

shorter. For example, a tuber of yam which costs N50 at a village market in the Eastern part of the country may sell for as much as N300 on a street in Lagos or in the Federal Capital Territory, Abuja.

### **3.7 Tackling the Problems of Internal Trade**

The above problems may be tackled by:

- extending and improving the quality of rural roads in the country;
- reviving the Nigerian Railway Corporation and modernizing and extending the rail network;
- improving telecommunications in the country;
- promoting the banking culture and the culture of cashless transactions; and
- encouraging traders to form cooperatives for the purchase, appropriate storage transportation and sale of goods.

### **4.0 Conclusion**

Internal trade is an extremely important part of the economy of Nigeria. It is therefore necessary to remove every impediment to its smooth and effective flow.

### **5.0 Summary**

Internal trade in Nigeria is made necessary and possible by five major factors:

- regional differences in environment;
- population distribution;
- urbanisation;
- industrial location; and
- transport infrastructure.

A large proportion of internal trade in the country is made up of trade in foodstuff. There are six main foodstuff trade regions:

- Lagos;
- West;
- Mid-West;
- East;
- Central; and
- North.

About 90% of the trade in foodstuff is accounted for by rice, gari, yam and beans. There is also trade in:

- Forest products from the south to the north;
- Manufactured goods from the ports and the areas of industrial

location to other parts of the country. The problems of internal trade include:

- poor road network in rural areas;
- road accidents;
- poor communication;
- the cash nature of the Nigerian economy;
- poor storage facilities; and
- poor organisation.

These problems may be tackled by:

- extending and improving the rural road network;
- reviving the Nigerian Railway Corporation;
- improving telecommunications;
- promoting the banking culture; and
- encouraging trader cooperatives.

## **6.0 Self-Assessment Exercise**

Describe and explain the basis of internal trade in Nigeria.

## **7.0 Tutor-marked Assignment**

Describe and explain the pattern of internal trade in foodstuff in Nigeria.

## **8.0 Further Reading and Other Materials**

None.

## **Unit 19: Rail and Road Transport**

- 1.0 Introduction
- 2.0 Objectives
- 3.1 Rail Transport
  - Historical Development
  - Contributions of Rail Transport to National Development
  - Problems of Rail Transport
  - Possible Solutions to these Problems
- 3.2 Road Transport
  - Contributions of Road Transport to National Development
  - Problems of Rail Transport
  - Possible Solutions to these Problems
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Self-assessment Exercise
- 7.0 Tutor-marked Assignment
- 8.0 Further Reading and Other Materials

### **1.0 Introduction**

Transportation is the movement of people and goods from place to place. It is what makes interaction between places possible. This interaction may take various forms such as:

- journey from places of residence to places of work in a town;
- migration of people from one place to another;
- movement of various goods from place to place.

There are six main means of transport in use in Nigeria namely:

- human portage by which load is carried on the head, back or shoulders;
- transport by animals such as horses, donkeys and camels;
- water transport
- rail transport;
- air transport; and
- transport (of liquid) by pipeline. Each of these means of transport is important in its own way. However, by far the most important in terms of:
  - movement of goods and
  - movement of people, are rail and road transport. These are the means of transport which make the Nigerian economy to tick. That is why we are rounding off our study of the Geography of Nigeria by looking at rail and road transport.

## **2.0 Objectives**

By the time you complete this unit you should be able to:

- give a historical account of the development of railways in Nigeria;
- state the reasons for the development of railways in the country;
- discuss the contribution which railway transport has made to national development;
- discuss the problems of railway transport in Nigeria;
- suggest possible solutions to these problems;
- give a historical account of the development of roads in Nigeria;
- state the reasons for the development of roads;
- discuss the contribution which roads have made to national development;
- discuss the problems of road transport in Nigeria;
- suggest possible solutions to these problems.

### **3.1 Rail Transport**

Rail transport has played a very important role in the development of many countries such as the U.K., the U.S.A. Canada, Australia, South Africa and the former Soviet Union. The same is true of Nigeria. Railway development in the country started quite early in the colonial period and had several objectives:

- to use the railway to provide access routes into the country and so gain effective political and commercial control over it;
- to promote export crop production, e.g. cotton and groundnuts in northern Nigeria and cocoa in western Nigeria;
- to tap existing agricultural, mineral and forestry resources of the country: and
- to provide a means of moving troops and supplies in times of emergencies.

### **Historical Development**

Railway development in Nigeria started in 1890 with the Lagos - Ibadan line which was completed in 1901 to serve the cocoa belt. It was extended to Jebba in 1906. Work started on the Baro - Kano line in 1907 and was completed in 1911, the objective being to tap the cotton and groundnut growing potentials of the north by providing a rail link to the river port of Baro. The Lagos -Jebba line was extended to join the Baro - Kano line at Minna in 1915. A narrow-guage line was built from Zaria to reach Jos in 1913 to serve the tin mines.



In the meantime, with the discovery of coal at Enugu in 1915, work started to link the area to Port Harcourt by rail. This Eastern Rail Line reached Enugu in 1916 and, was extended northwards to the tin mining area of Jos in 1927. The tin had to be ferried across the Benue River until 1932 when the Makurdi Bridge was opened. The extension to Jos served two purposes:

- it provided an outlet for the Enugu coal; and
- it provided a shorter route to the sea for the tin mined on the Jos Plateau.

By 1929, a branch line was built from Zaria to Kaura Namoda to carry groundnuts, cotton and hides from that part of the country. For the same reason, the Baro-Kano line was extended to Nguru in 1930. Nigeria now had two integrated railway systems (Figure 19.1):

- the Western Line from Lagos to Nguru; and
- the Eastern Line from Port Harcourt to Kaura Namoda.

Meanwhile, a number of branch lines had been or were to be built from these main lines as follows:

- the Ilaro branch which runs into the cocoa country of the west and terminates at Idogo was built in 1930;
- Nkalagu was linked to the Eastern Line at Ogbaho so that coal and gypsum could be carried to the cement factory;
- the Alesa Eleme Petroleum Refinery was linked also to the Eastern Line.
- mention has already been made of the Minna-Baro Line and the Zaria-Jos narrow-gauge Line which has since outlived its usefulness and was closed down in 1958.

More recently, the Borno railway extension was built between 1958 and 1964 to open up the potential groundnut and cotton districts of the northeast. Finally, a new railway line is being constructed from Aladja to Ajaokuta to link the Steel Complex to the coast.

All in all, Nigeria has a total of 3505 km of rail line. Figure 19.1 shows Nigeria's rail network.

### **Contributions of Rail Transport to-National Development**

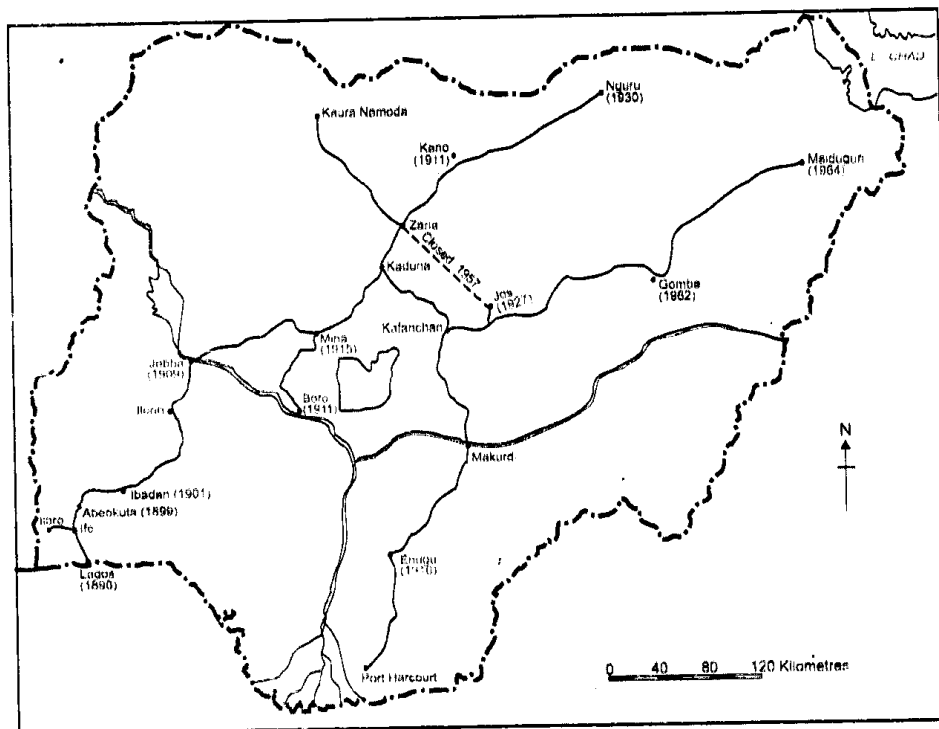
The objectives for which rail transport was introduced into Nigeria were fully realised and this modern means of transport also contributed to national development in other ways. Thus:

- In the early days of colonial administration, the railways provided the only means of reaching the northern part of the country relatively quickly. Thus, they helped the British to gain effective political control over the Nigerian territory;
- The railway played a very significant role in the promotion of the production of export crops such as cotton, groundnuts, cocoa and palm produce.
- The railways helped in the evacuation of tin from Jos Plateau.
- The railways opened up the country to long distance inter-regional trade involving:
  - the movement of foodstuff particularly palm produce kolanuts and livestock across the country.
  - manufactured goods such as cement and petroleum products from the ports into the interior.
- The railways facilitated travel across the country and led to the growth of existing towns such as Ibadan, Ilorin, Zaria and Kano through which they pass and the development of new towns such as Enugu, Makurdi, Kafanchan and Minna.
- The railways are a major employer of labour.

### **Problems of Rail Transport in Nigeria**

Up until the 1950s rail transport was the most important means of moving goods and people over long distances in Nigeria. But since then, its importance has decreased for a variety of reasons including:

- the narrow guage nature of the rail lines and the winding nature of the tracks: This means a permanent speed restriction of 16 to 55 km per hour and the maximum speed of 64km per hour. Thus, rail transport is much slower than road transport, putting and latter at competitive advantage;
- ageing tracks and rolling stocks which again reduce speeds and cause traffic interruptions;
- obsolete signaling system which cause frequent communication problems. One of the problems with the communication system is thieves cutting the copper wires used for transmitting messages along the tracks.



*Fig. 19.1 Landmarks in the Historical Development of the Nigerian Railways*

## Possible Solutions to these Problems

The following suggestions should help in solving these problems of rail transport in Nigeria:

- modernising the rail tracks (including the introduction of standard gauge, cutting down the number of bends and reducing the gradients in many places);
- replacing rolling stock;
- modernising the signaling system.

## 3.2 Road Transport

Road transport development in Nigeria started in the first decade of the 20th century when the existing footpaths in the southwest were widened and made motorable. There were two main initial objectives for road development in Nigeria:

- to link up the nearest urban centres to the railway stations to facilitate the evacuation of export crops.  
Thus, Oyo was linked to Ibadan in 1906 and later Ire, Ilesha and Ogbomosho were linked with Oshogbo;
- to reduce and eventually phase out the expensive and cumbersome system of moving goods by head porters, a system that put a considerable strain on the colonial administration.  
Other objectives were added with time, including:
- opening up of areas which had potential for export crop production such as other parts of south-western Nigeria, the Kano

- region and the south-eastern part of the country: and linking the tin mines on the Jos Plateau together and linking them to the collecting centres of Jos and Bukuru.

Because of financial constraints, the road network grew slowly to about 51,000 km in 1946, 74,000 km in 1960 out of which only 11% were tarred and 96,000 km in 1973. Today there are well over 150,000 km of roads of various categories. The road network is densest in four areas which were areas of export crop or mineral production. They are:

- the cocoa and rubber growing area of south-western Nigeria;
- the oil palm belt of south-eastern Nigeria;
- the groundnut producing area centred at Kano; and
- the tin-mining area of the Jos Plateau.

Other parts of the country are relatively lightly served by roads with the Middle Belt and the Niger Delta being the worst served.

Nigerian roads may be divided into three categories based on who has responsibility for building and maintaining them:

- Trunk “A” roads. These are major north-south and east-west roads which link the States together (Figure 19.2). They are built and maintained by the Federal Government. They are mostly tarred and some of them are now dual-carriageways, including Lagos-Ibadan, Lagos-Asaba, Port Harcourt-Enugu and Abuja-Kano.
- Trunk “B” roads which are the responsibility of State Governments; and
- Other roads which are the responsibility of Local Governments. These are generally of poor quality and many of them are motorable only during the dry season.

Until the 1970s road transport in Nigeria was seriously handicapped by the major rivers especially the Niger and the Benue which divided the country into three blocks. There were numerous ferry points which caused long delays in road transport. But since the 1970s, the Federal and State Governments have invested heavily in bridge construction to remove these bottlenecks. Some of the most notable bridges include:

- Those on the Niger at New Bussa, Jamata (near Lokoja) Ajaokuta and Asaba;
- Those on the Benue at Makurdi, Numan and Yola;
- The one on the Cross River at Itu.

### **Contribution of Road Transport to National Development**

In the hey-days of rail transport in Nigeria, roads played the crucial role of being feeders, linking the railway stations to the countryside for the

evacuation of agricultural and mineral products and distributing imports. As rail transport declined, so road transport took over as from the 1950s as the most important means of moving goods and people across Nigeria. Thus, road transport is today what keeps the economy of the country moving. Its contribution to national development may be summarised as follows:

- Opening up the country for development in general;
- Facilitating inter-regional trade;
- Facilitating the movement of people. including rural-rural, rural-urban and urban-urban migrations;
- Directly employing hundreds of thousands of people;
- Indirectly employing many more people in the various services which road transport demands (vehicle repairs, petroleum depots and filling station services, spare parts trade, food selling, catering, etc.);
- Promoting the establishment of manufacturing industries such as Vehicle assembly plants; and
- Promoting the development of tourism.

### **Problems of Road Transport**

The problems of road transport in Nigeria include:

- inadequacy and poor quality of rural roads;
- lack of maintenance of roads including the major ones; ,
- traffic congestion both in major urban centres such as Lagos and on some intercity roads such as Onitsha Owerri:
- a rising wave of highway armed robbery attacks: and
- an increasing rate of road accidents.

### **Possible Solutions to these Problems**

These problems may be tackled by:

- governments devoting more attention to rural road construction and Maintenance;
- governments establishing road maintenance agencies whose primary responsibility would be maintain the major roads;
- the construction of bypasses that would take through traffic away from city centres;
- more intense policing of highways by well-armed security men;
- better policing of road traffic to ensure that road users obey vehicle regulations and the Highway Code in every respect.

## **4.0 Conclusion**

Road transport is today the most important means of moving goods and people across Nigeria and there is therefore a need to do everything

possible to make it both smooth and safe.

## **5.0 Summary**

Within the first thirty years of colonial administration in Nigeria, two south-north railway lines were built:

- the Western Line from Lagos to Nguru; and
- the Eastern Line from Port Harcourt to Kaura Namoda.

Rail transport played a major role in the political, economic and social development of Nigeria by:

- enabling the British to gain firm control over the colonial territory;
- stimulating export crop production;
- helping to evacuate tin from the Jos Plateau;
- promoting long-distance trade;
- facilitating travel in the country; and
- employing labour.

From about the 1950s, rail transport declined because of a number of problems including:

- its narrow gauge;
- ageing tracks and rolling stock;
- obsolete signalling systems.

It is necessary to modernise the tracks and replace the rolling stock if rail transport is to be revived.

Road transport was developed initially to link the railway stations to surrounding areas and to replace transportation by head portage. Other objectives were later added including opening up areas of potential exports crop production and serving the till mining area of the Jos Plateau.

The road network is relatively dense:

- in the cocoa and rubber belt;
- in the oil palm belt of the southeast;
- in the Kano region: and
- on the Jos Plateau.

The most poorly served areas are the Middle Belt and the Niger Delta. Road transport has contributed immensely to the development of Nigeria by;

- opening up the country for development;
- facilitating inter-regional trade;
- facilitating travel;

- employing people both directly and indirectly;
- promoting modern manufacturing industries;
- promoting tourism.

The problems of road transport in the country include:

- inadequacy and poor quality of rural roads;
- lack of maintenance of major roads;
- traffic congestion;
- highway armed robbery; and
- road accidents.

These problems may be tackled through:

- governments devoting more attention to the construction of rural roads and to road maintenance;
- establishment of road maintenance agencies;
- building by-passes around towns;
- more intense policing of highways; and
- better supervision of road traffic.

## **6.0 Self-assessment Exercise**

Discuss the contributions which road transport has made to the socio-economic development of Nigeria.

## **7.0 Tutor-marked Assignment**

None.

## **8.0 Further Reading and other Materials**

As for Unit 4.

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