



# *The Essentials of African Studies*

**Volume 2**

*Edited by*

**SOPHIE B. OLUWOLE**

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# The Essentials of African Studies

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Book 2

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# A Geographical Overview of Africa

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## Introduction

The GAS Programme is concerned with providing students, irrespective of their basic disciplines, with a general basic knowledge of various aspects of the African environment. In line with this objective, the previous paper has dealt with some aspects of the African geosophic worldview, which are fundamental to a proper understanding of the African traditional appreciation of his physical environment and that of the tangible cultural components superimposed on it. We shall proceed in the present paper to address the other aspect of our assignment, which is to equip students with the knowledge of the salient aspects of the physical and human environments of the continent, with a view to enabling students to have a good background which the products of a university should have of their continent; moreso as supranatural groupings are becoming so important in national economic development and decision-making.

## Africa-Extent and General Features

Africa with an area of 11 million square miles about (30.4 million sq. kms.) is the second largest continent after Asia, and is one of the three earliest known continents (the third being Europe) to the world's peoples prior to the Age of Discovery (13th and 16th centuries). Since the discovery of the New world areas (mainly the Americas and Australia) these three continents have been labelled the Old World; thus Africa belong to the old world continents. Its northermost point is Cape Blanc Lat.37.20'N. while its southernmost point is Cape Agulhas Lat.34.50'S, both about

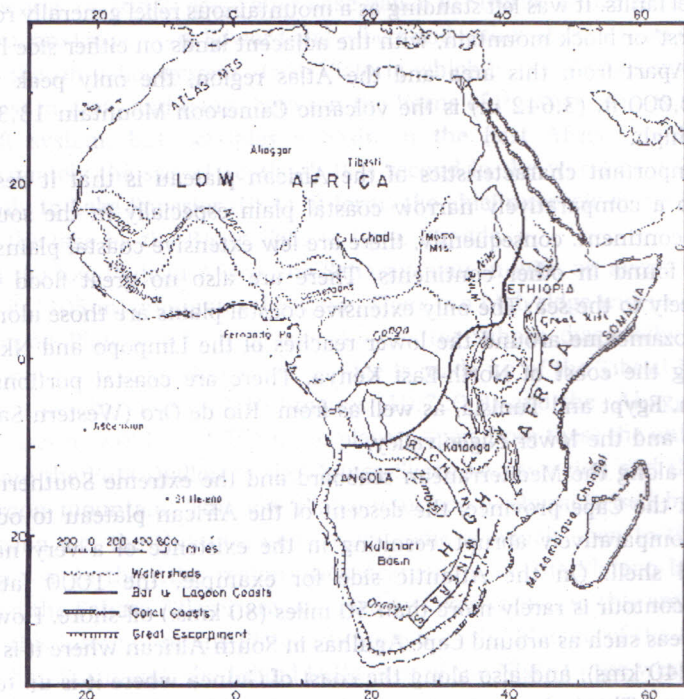
5,000 mls (8,000 km.) apart. Its farthest point to the West is Cape Verde (Long.10.23'W) and its most easterly point is Ras Hafen Long.51° 25'E, both 4,600 mls. (7,360 kms) apart.

Africa occupies between one-fifth and one-quarter of the inhabited area of the world, while the African states comprise about one-third the membership of the United Nations, and of the Afro-Asian groups about one-half. The continent is only 9 miles (14.41 kms.) from Europe at the Strait of Gibraltá (between Algeria and Spain) and 14mls. (22.4kms) from Asia at the Strait of Bab-el-Mandeb (between Djibouti and Aden). In the north-east, the Suez canal cut through the Isthmus of Suez separating the continent from South West Asia or Middle East, thus making Africa a very big island. Africa is the only continent that is crossed by the equator and the two tropics. The equator nearly bisects the continent into two equal halves, thus making it the most tropical of all the continents, with the mean sea-land temperatures above 50°F, while Longitude 20°F also nearly equally bisects it into West and East halves.

Africa is remarkably compact in its form with a short coastline in proportion to its size. It shows none of the elaborate configuration to be seen in the case of Europe or Asia or North America with many embayments, sea inlets, peninsular and off-shore islands. Thus Africa's coastline is distinguished by its generally smooth character. The continent as a whole is a land of great contrasts in many respects. Parts of it are hundreds of feet below the sea level, e.g. Quatterra Depression (-133m), while some exceed 5,800 metres above the sea level. Parts of it are covered with dense tropical rain forest and mangrove swamps such as along the West African coast, while others are vast, bare wastelands. The intense arid conditions and the accompanying geomorphological processes rendered the Sahara, throughout historical times, the greatest divide in the continent, such that movement across it were rather hazardous and were effected solely by carmel caravans. In Southwest Africa, the Kalahari and Namib deserts are also relatively large deserts with minimum support potentials for the inhabiting population. Yet in some other parts of the continents are mountains of considerable heights, some of which have snow-topped peaks e.g. Mt. Kilimanjaro in Tanzania, standing almost on the equator in close juxtaposition with one of the most spectacular relief features of the world, that is, the Great Rift Valley of East Africa.

FIG.1

# A GENERAL DEPICTION OF AFRICA'S PHYSIOGRAPHY



## Relief and Drainage

In its structure and relief, Africa is mostly a vast plateau consisting of ancient rocks, but the continent falls into two major physiographic parts as illustrated in Figure 1 above. The first is High Africa—the whole of Africa south of a line from the North of the River Congo to the Gulf of Aden. The second, the rest of Africa North of this line and ending at the feet of the Atlas Mountains in North-West Africa may be regarded as low Africa. Flanking these two parts are the two fold—mountains of Africa, that is, the Atlas range in the extreme North West and those of the Drakensberg in the Cape province of South Africa. The most notable general features of the plateau surface is the remarkable uniformity of level between 2,000 ft. (615 metres) and 4,000 ft. (1230m), over vast areas. Thus, notable contrasts in altitude are not common except in the volcanic area of East Africa and Ethiopia where lava outpours have raised the surface level over wide area.

On the High Plateau Africa, the highest peaks are almost invariably volcanic masses such as Kilimanjaro (17,040 ft. or 5240m.) and Elgon (14,000 ft. or 4,350m.) in Kenya, Ras Dashan (15,000 ft. or 4,613m) in Ethiopia, Mt. Ruwenzori (16,700 ft or 5138m) which rises in the extreme north



eastern part of Congo, which also forms part of the East-African plateau (Western margin) is of different origin. It represents the block of land between two parallel faults. It was left standing as a mountainous relief generally referred to as a 'horst' or block mountain, with the adjacent lands on either side having subsided. Apart from this area and the Atlas region, the only peak which exceeds 12,000 ft. (3,642 m) is the volcanic Cameroon Mountain 13,350 ft. (4,107m) high.

One important characteristics of the African plateau is that it descends abruptly to a comparatively narrow coastal plain especially in the southern half of the continent. consequently, there are few extensive coastal plains such as can be found in other continents. There are also no great flood plains opening freely to the sea. The only extensive coastal plains are those along the coast of Mozambique around the lower reaches of the Limpopo and Nkomati rivers along the coast of North-East Kenya. There are coastal portions also in Somalia, Egypt and Tunisia, as well as from Rio de Oro (Western Sahara) to Senegal, and the lower Niger valley.

Except along the Mediterranean seaboard and the extreme Southern part of Africa in the Cape province; the descent of the African plateau to oceanic depths is comparatively abrupt, resulting in the existence of a very narrow continental shelf. On the Atlantic side for example, the 1000 fathoms submarine contour is rarely more than 50 miles (80 kms.) off-shore. However, there are areas such as around Cape Agulhas in South African where it is some 150 mls. (240 kms). and also along the coast of Guinea where it is up to 120 mls (192 kms.) This lack of extensive continental shelf means that there is little feeding ground for fish, which partly explains the fact that there are no world class fishing grounds in Africa.

The Great Rift Valley of East Africa (produced by tectonic movements and volcanism) is one of the most spectacular relief features of Africa and indeed one of the most remarkable phenomena in the world. It has a total length of 4,000 miles (6,400 kms). It commences from Syria in Palestine extending southward including the Jordan valley, the Gulf of Aqaba and the entire Red Sea. Its terminal end on the Red Sea, coincides with the northern end of the African sector of the valley. The great valley in Africa begins near the mouth of the Zambezi river and runs northwards including in its course; the Shire river valley and Lake Malawi (350 mls or 560 kms. long with an average width of 30 mls or 48 kms). North of Lake Malawi, it branches forming the Eastern and Western rift valley system.

The eastern arm of the Rift valley goes through mainland Tanzania and Kenya, its path marked by a chain of small lakes – Natron, Navasha, Rudolf and others. It then runs through Ethiopia onwards to the Red Sea, covering a distance of 3,000 mls. (4,800 kms) of the entire system. The western arm of the Rift runs in a general northwesternly direction and contains the exception-



ally long trough containing Lake Tanzania (Tanganyika) which is the longest lake in the world. It is about 420 mls (672 kms) long and the second deepest in the world, (4,708 ft. deep) after Lake Baikal in Siberia. Other lakes along this direction are Lakes Kivu, Edward and Albert and is thus shorter than the eastern arm of the rift valley system. Lake Victoria which is 26,000 sq. mls. (60,560 sq. kms) in area, and lying between the horns of the two Rifts, is not part of the rift system, but occupies a basin in the East African plateau. It is approximately the size of Scotland. It is second in the world as a fresh-water lake only to Lake Superior (USA). It forms the chief reservoir of the Nile which leaves the lake by the Ripon Falls at Jinja, Uganda.

In the low Plateau Africa, the Saharan plateau with an average height of 1,000 ft. (305 m) dominates the scene. There is a high ridge widening in places to a broad Plateau which crosses the Central Sahara diagonally from east-south-east to west-north-west. The ridge is made up of the Tibesti Mts. which attains a height of over 3,360 metres (10,720 ft) and the Ahaggar Plateau which rises to 9,000 ft (2,754 m) in places. Apart from these the only highland areas are the Futa Djallon in the Guinea-Sierra Leone region and the volcanic Cameroon mountain. This low Plateau surface is characterised by extensive depression e.g. the Quattara depression, some of which open to the Mediterranean sea. In the Atlas region, such depressions on the Plateau between the Tell and the Sahara Atlases are occupied by lakes known in this area as shotts; hence this intermountains Plateau is known as the Plateau of the Shotts. The Lake Chad Basin and the Inland Delta area of the Niger to the west and south of Timbuktu are other examples.

There is the absence of deep penetrating indentations along the coast and the rarity of well-defined peninsular along the coastal stretches. Similarly, the neighbouring island coasts are not endowed with natural harbours, a reflection of what characterizes the mainland (African) continent. There are coastal stretches of 1,000 mls. or more in length which are virtually harbourless. On the Guinea coast of West Africa, for example, there is no first class natural harbour between Freetown and the Niger Delta. The harbours there have to be constantly dredged at considerable cost. The same event characterizes the Atlantic coast from Dakar (Senegal) to Morocco, the Somalian coast bordering the Indian Ocean, and the entire Red Sea Coast. Also, it is frequently difficult for ships to approach the coast on account of the existence of sand-bars deposited by sea currents flowing parallel to the coast and by rivers in their lower courses. The port of Lagos for example suffers from such constraints requiring constant dredging to ensure safe passage for ocean-going vessels.

Another notable feature of the physiography of the African continent is that although the continent has one of notable rivers and there is also a close network of streams in the equatorial zone, none of the rivers provides long and uninterrupted passage into the heart of the continent as is often the case in

Europe, Asia and North America. Waterfalls, rapids and cataracts are common features in the lower courses of the rivers where they plunge off the plateau on to the coastal plains. For example, the Crystal Falls on the Congo and the Cuabrabasa rapids on the Zambezi provide obstacles to through passage. Moreover, the mouths of some rivers such as those of the Nile, Niger and Zambezi are choked with sand bars and deltaic muds, while some rivers such as the Benue and Orange suffer from seasonal shallow water conditions which frequently impede navigation upstream.

The drainage system of the African continent can be divided into 2 broad categories.

- (i) *drainage areas with outlet to the sea*
- (ii) *drainage areas with no outlet to the sea.*

The latter is known as areas of inland or interior drainage. The rivers that belong to the first category are of two classes:

- (1) those that flow for long stretches before making their way to the sea in series of rapids and waterfalls over the plateau edge, e.g. the Nile, Congo, Niger and Zambezi.
- (2) the short energetic coastal streams that rise from the Plateau edge and by headward erosion, try to capture the head stream of the large rivers. Examples include the Senegal and the rivers of Sierra Leone trying to capture the headstream of the Niger, the Ogowe trying to capture the headwaters of Ubangi and the Benue, those of the Shari river.

**The Nile:** The Nile, the longest African river with a length of 4,000 mls (6,400 kms) is unique among African rivers in that it has no tributary stream through the last 1,000 mls. (1,600 kms) of flow to the sea, consequently it has very restricted influence on the physical geography of this lower part. However, its annual flood mainly caused by the large volumes of muddy water fed into it by its tributary rivers which include the Blue Nile and the Atbara from the Ethiopian Island have historically brought life into Egypt through irrigated agriculture.

**The Niger,** 2,600 mls. (4,160 kms.) long is the principal artery of West Africa, flowing as it were through the heart of the region. Its basin includes a vast depression which formerly was the centre of a great inland drainage system which is still filled with water every summer. Its flood waters has been used advantageously by the French in various agricultural settlement scheme.

**The Congo River:** The Congo river 3,000 mls (4,800 kms.) long and occupying a drainage area of nearly 1.5 million square miles (3.8 million sq.



kms) is largest African river in terms of the volumes of water it carries to the sea annually, the most navigable (it is regularly navigable for 1,000 mls. or 1,600 kms above Stanely pool) and carries heavy traffic. Its basin lies within the equatorial zone, and so there is no season in which rain does not fall heavily in some part of it, for which reason the main river is fed by a complicated system of tributary streams of large volume, among them the Kasai and the Ubangi rivers.

**The Zambezi** 2,000 mls (3,200 kms.) long is the major river of Southern Africa, and flows through Zambia, Zimbabwe and the Mozambique into the Indian ocean including in its course the Great Victoria Falls and the Quebrabasa Rapids. The Orange River 1,300 mls (2,080 kms.) long, unlike the others, does not have perennial flow but it is often dry or reduced to a series of pools.

### **Deserts**

The area of interior drainage are to be found in the Sahara desert in north Africa, the Kalahari and Namib desert in South West Africa, and in the Plateau of the Shotts in North West Africa. In the vast Sahara, there are several large and small areas of internal drainage, the many oases in the desert being the foci of this basin. The Chad Basin, one of the largest basin of interior drainage in the continent, stretches from the heart of the Sahara to the Eastern Sudan with its focus on Lake Chad, into which many streams in Northern Nigeria and Northern Cameroon empty their waters. The Shari river 700 mls (1,120 kms.) long, and flowing into Lake Chad is the longest African river flowing into an inland drainage area. In large parts of the Kalahari and Namibia deserts including much of the Orange river basin, there are areas of interior drainage into which short streams of seasonal regime empty their waters, although in the Northern Kalahari, some streams drain into the head waters of the Zambezi rivers. Elsewhere much of the precipitation that occurs collect in shallow lakes known locally as *Vleis* or *Pans* which when completely evaporated during the dry season exposes a salt encrusted surface. Salt pans of Mekarikari and Etosha lying further East are examples of these features. The Plateau of the Shotts another, though smaller, area of inland drainage, lies between the Tell and Sahara Atlas ranges.

### **Climate and Vegetation**

As has been noted, Africa is the only continent crossed by the equator and the two tropics – the Tropic of Cancer and the Tropic of Capricorn. The result of this is firstly that no part of the continent is sufficiently far from the equator or precluded from enjoying the warming effect of the sun in any part of the year. Secondly, the climate of the greater part is tropical, and only sub-tropical in limited areas. Temperature is constantly high, 80°F (26.7°C) and above in the

largest part, with little diurnal (daily) and annual ranges, except in the desert areas. Thirdly, because the equator nearly bisects the continent equally and because of an apparent "migration" of the sun between the two tropics, the climatic belts grade out from the equator northwards and southwards. Detailed zonal "belting" is however moderated by other physical forces such as altitude.

Certain air masses dominate the continent at different times of the year in relation to the varied positions of the inter-Tropical Front (ITF), or Inter-Tropical Zone of Convergence (ITCZ), which in turn is largely related to the apparent migration of the sun. The sun migrates between the tropic of Cancer  $23\ 1/2^\circ$  N and the tropic of Capricorn  $23\ 1/2^\circ$  S crossing the equator twice (March and September) in the process. This movement of the sun which is accompanied by that of the air masses affect the humidity and distribution of rainfall over the continent. The air masses that prevailed over most of the continents are two. In the wet season, they are the tropical maritime (mT) air masses, warm and moisture-laden of the Atlantic and the Indian oceans, while in the dry season, they are the tropical continental (cT) air masses, hot, dry, and often dust-laden; such as the harmattan blowing from the landmasses of North Africa and of Arabia and causing hot, dry, conditions in the day and chilly nights. The zone of meeting of these extremes is known as the Inter-Tropical Front or Inter-Tropical Zone of Convergence. This zone is not static but oscillates a little to the North or South from season to season.

High pressure cells of the virtually permanent nature exist on the North Atlantic (the Azores High), the South Atlantic and the Indian Ocean, while migratory (shifting) ones exist above the landmass of both Northern and Southern Africa during the Northern and Southern winters (January and July respectively). The two areas are however, taken over by low pressure cells during the Northern and Southern summers (July and January respectively). The regions dominated by the high pressure cells are the source areas of the airstreams while the directions of flow are to the low pressure cell areas. Other air masses affecting the continent are the North-East trade or Monsoon winds of the Eastern Horn region – a dry continental tropical (cT) air at first (because they originate from the land mass of Asia) becoming rather moistened further South as they move across the Indian ocean. There is also the South East trade or Monsoon winds of the Indian ocean, a maritime tropical (mT) air mass which affect the South East of Africa. The Mediterranean coast land of North West Africa and the South Western part of the Republic of South Africa are under the influence of moist Westerly and North Westerly winds respectively from the Atlantic and experienced Mediterranean type of climate characterised by relatively cool, wet winter and hot dry summer.

Climate and vegetation in Africa are closely related. Both climatic and vegetational belts are arranged systematically about the equator to the North



and South (although they are wider in the North with a more extensive land area), with about two-thirds of the continent having tropical conditions of high temperature all the year, and with either an all the year or seasonal rainfall. Around the equator to about latitude 5 degrees north and south of the equator, lies the tropical rain or evergreen forest belt (containing mangrove and fresh water swamp forests along the coast) with rainfall throughout the year (80 inches or 2032 mm. and above) or with a maxima of rain (early and late rains), separated by a short cool usually cloudy, mild-dry period, except on the East Africa Plateau where lower temperatures (due to altitude and mainly grassland vegetation) prevail.

Flanking this belt to the North and South is the *Guinea Savannah* which is the widest climatic and vegetation belt in Africa. It experiences between 30 and 60 inches of rainfall (762 - 1524mm). This vegetation is composed of a succession of forest savannah combination. Following this is another grassland habitat with varied extent and richness in grass composition after which comes the semi-desert or steppe (with 5-10 inches or 127mm - 254 mm. of rainfall) and finally the desert scrub (with under 5 inches or 127 mm. of rain annually). Beyond the tropical grasslands and the deserts are the temperate grasslands (known as veldt) in South Africa, and the Mediterranean of low evergreen woodland, interspersed by patches of grassland or thickets of bush and scrub in the extremes South West and North West of the continent; where annual rainfall is from 10-20 inches or 254mm-508 mm. The Mediterranean is unique for being the only climatic and vegetation type which is dry in summer but wet in winter. In the East of South Africa, chiefly in the province of Natal, is a wet (about 30 inches or 760 mm.) sub-tropical or warm temperate wood land region, almost similar to the more open tropical forest in luxuriance, and in which coconut are common. Finally on the mountains of Africa are mountain vegetations consisting of distinctive zonation of tree types thickest at the bottom, becoming more open and shorter upslope and ending in mountain pastures.

### Political Division

The political map of Africa today shows that it is the second most politically divided (or balkanized) continent after Europe. This situation is a consequence of the scramble for Africa that was sequel to the Berlin Conference of 1884-85 after which the continent was carved up by many several leading West European powers of that time — Britain, France, Germany, Belgium, Portugal, Italy and Spain. As at now, all colonial territories have become independent, the last of which is the Republic of South Africa. It is at present a unique nation where both blacks (who were the original settlers and aborigines) and a white minority are trying to build a nation battered in the past by an obnoxious apartheid rule by the minority white.

There are about 54 independent states in Africa today, 48 of these are contained in Mainland Africa, while the others are Island states. Seven of the states are island states – Madagascar (Malagasy Republic); the Mauritius, Reunion, Comoros, Cape Verde, Sao Tome and Principe and Seychelles; two states have mainland and island parts – Tanzania (with the islands of Zanzibar and Pemba) and Equatorial Guinea (with the island of Fernando Po), the rest are mainland states. Fourteen of the mainland states are land-locked namely: Botswana, Burkina Faso (formerly Upper Volta), Burundi, Central African Republic, Chad, Lesotho, Malawi, Mali, Niger, Rwanda, Swaziland, Uganda, Zambia and Zimbabwe.

There is tremendous variation in the size of African states where demarcation was the work of non-Africans in the first place. Many of the states boundaries were the limits of penetration by the European countries that colonised them, others the result of territorial exchange (such as African Zanzibar for European Heligoland) or of colonial administrative convenience. Consequently, while some states are extremely large, e.g. Sudan (the largest), Zaire and Algeria, others are very small e.g. Gambia, Rwanda, Burundi, Lesotho and Swaziland. Boundary disputes are the major problems facing African after independence for these boundaries as laid out are usually unrelated to the physiographic or to the ethnic or economic patterns of the continent.

### **Population**

Africa has a population estimated at about 730 million people giving it a density of 66 persons per sq. ml. or 24 per sq. km. and thus has the second lowest population density of all the six inhabited continents after Australia. This population is very unevenly distributed both in total amount and in density. Hence several areas have large totals and densities while others are virtually empty. The areas of high population densities are (a) the lower Nile Valley in Egypt; (b) the Mediterranean littoral (coast lands) of North West Africa; (c) the Guinea Coast lands and the Savannah zone of West Africa; (d) the Ethiopian plateau; (e) the two small republics of Rwanda and Burundi; (f) around the shores of lake Victoria in East Africa; (g) the Zaire- Zambia copperbelt and (h) the South and East coast lands and the gold mining area centred on Johannesburg in South Africa.

Nigeria is the most populous country in Africa with an estimated total of about 118 million today or close to one-sixth of the African total, followed by Egypt with about 60 million. The continent is, however, experiencing rapid population increases with annual growth rate of the various countries ranging between 2.5 and 4.0 percent, and urban population growth being even more phenomenal. The total population of the continent may however not represent the true position of things for many countries either have never had real censuses, due to variety of factors, or have had one very long ago.



Many factors account for the lower population density in Africa. Vast areas are uninhabited or uninhabitable because of aridity or semi aridity e.g. the Sahara and Kalahari desert areas. The Sahara covers 2.5 million sq. kms. or more than one-fifth of the continent, while the Kalahari and Namibian deserts cover more than one-third of the area of Southern Africa. Many areas have too few resources and thus cannot support a dense population; while the agricultural economy, both arable and pastoral, which is common to all parts is constantly afflicted by drought conditions, desert encroachment, virus diseases and the ravages of animal and insect pests, causing crop failure and food shortages. The incidence of diseases especially insect borne diseases like sleeping sickness and malaria takes a heavy toll on human life every year. There is also high mortality rate among infants, resulting from malnutrition, underfeeding, inadequate medicare, malignance. The legacy of pre-colonial times which decimated many parts, as well as Arab and the European slave trade by which millions were carried away to the Middle East countries, and across the Atlantic to America and the West Indies respectively, have also left their imprints on the continent's population.

### **Ethnography**

The Africa's ethnographic landscape is to a large extent diverse and complex. The ethnographic groups vary from the Semites in north Africa to the Bantu in South Africa. The Semites are found in Western Sahara, Mauritania, Morocco, North-Western half of Algeria, Tunisia, Libya and Western two thirds of both Egypt and Sudan. The Hamites occupy southern Algeria and Libya, Western half of Mali about one-quarter of Nigeria and Chad, eastern one-third of Egypt and Sudan, Ethiopia, Somalia and Western one-third of Kenya. The Sudanese Negroes occupy almost the whole of West Africa, Cameroon, Central African Republic, extreme North of Congo, Northern third of Zaire, and Western half of Uganda. The Bantu Negroes occupy the whole Central and South Central Africa, East Africa to the eastern half of the Republic of South Africa. The Nilotes and half-Hamites are to be found in the Southern fifth of Sudan, South Western Ethiopia, Western two-thirds of Kenya and North East Uganda. The Klagian (Bushman and Hottentots) occupy South West Namibia and Southwest Botswana while the pygmies who occupy parts of the dense forests of the Congo basin belong to a group known as Negroillos.

### **Economy**

The agricultural economy of most parts of Africa is characterized largely by subsistence food and animal husbandry as well as by export oriented 'cash' crop primary production. Other characteristics of both types are reliance on rainfall availability, small holding, labour intensiveness of gruelling non-scientific methods, over tillage and variable output. Africa is mainly and may

for quite sometime continue to be a producer of vegetable and mineral raw materials. The typical food crops raised are yam, cassava, cocoyams, millet, guinea corn and a large variety of kitchen vegetables while the leading cash crops and export commodities are cocoa, palm produce, groundnut, rubber and cotton in West Africa; palm produce and cotton in Central Africa; cotton, coffee, tea and sisal hemp in East Africa, and cotton in Egypt and Sudan. In the latter two countries, the largest irrigated agriculture run on scientific commercial lines, is practised. However, in many parts of the continent, the setting up of mills, crushing plants and factories to process substantial part of the agricultural and forest raw materials such as sugar, cotton, rice, palm produce and timber had been embarked upon as part of industrialisation and diversification drives. Much of Africa's timber is exported as logs, there are ultra-modern sawmills producing sawn timber, plywood and veneer in Nigeria, Ivory Coast, Ghana and Gabon.

Mineral production constitutes a second component of the economy of Africa. Many areas produce solid minerals – iron ore, tin and allied products, copper, gold and manganese. Algeria, Morocco, Tunisia, Mauritania, Sierra-Leone, Liberia, Guinea, Swaziland and Gabon are the leading producers of iron ore; Ghana and Gabon of manganese; Zaire and Zambia of copper; Nigeria of tin ore and allied products; the Republic of South Africa of gold and diamond. The leading producers of coal are the Republic of South Africa, Zimbabwe and Nigeria while the great oil fields of Africa are to be found in Nigeria, Algeria and Libya, although several other countries also produce substantial quantities e.g. Egypt, Gabon, Congo, and Angola. Oil production has led to the establishment of refineries in all the producing countries as well as in a few others which depend on imported crude.

Industrialisation is gathering momentum in many parts of African especially in countries with large populations and diversified resource base. Industries are commonly grouped on industrial estates as well as in and around major ports. Some of the industries are assembly plants (of vehicles, electrical and electronics goods, and various types of machinery), refineries (oil, sugar), fabricating (saw mills, furniture and cabinet making); construction (clay brick), cement block and reinforced or pre-stressed concrete, manufacturing (cotton, textiles), processing (cement, chemicals, detergents, breweries), and metal smelting (copper, iron ore). Industrialisation has stimulated the development of electric power production both thermal and hydro. Substantial hydro-electric power development (some of which is multi-purpose) has been effected on African rivers with large volumes of water. Apart from several plants on the Congo and some of the tributaries (dating from colonial times), other major installations are the High Aswan Dam in Egypt, the Kariba Dam on the Upper Zambia river serving Zambia and Zimbabwe, the Owen Falls in Uganda, the Volta Dam and the Akosombo in Ghana, the Kainji and Jebba Dams on the



Niger in Nigeria, the Eduan Dam in Cameroon and the Natubes, Bopo and Nataka plants in Angola.

## **Transport**

Intra-African trade is very negligible. Since African countries are mainly primary producers of raw materials, their trade is export-oriented largely to the former metropolitan countries. Internal trade is fairly extensive within individual states. To handle this, there are fairly dense road networks in each country and these are constantly being added to or improved upon through realignment, widening and surfacing. Some of the roads provide inter-state links. Railways have also been developed in most countries dating from early colonial times but these are confined to individual countries possessing them and are often isolated line which proceed from a port on the coast to inland destinations.

Apart from the north western part of Africa and the Republic of South Africa, there are no railway networks anywhere, nor is there any trans-continental railway. There are four major trans-regional railways. The line from the Katanga mining region of Zaire through the Zambia copperbelt and Zimbabwe to the port of Beira in Mozambique, the Tan-Zam railway linking Zambia with Tanzania, the South Africa-Zimbabwe line and the Morocco-Algeria - Tunisia line. The first ever trans-continental highways that have been planned or completed under the auspices of the United Nations Economic Commission for Africa (ECA) are the Trans-Central Africa Highway from Lagos (Nigeria) to Mombasa (Kenya); the West African Coastal Highway from Lagos to Dakar (Senegal), the Trans-Sahelian Highway from Dakar through Mali, Burkina Faso, Niger and Nigeria to Chad and Sudan and the Trans-Sahara Highway from Algeria and Tunis (Tunisia) to Kano and onward to Lagos (Nigeria). Air services are the only mode of transport that today link most African countries. Most of the countries have their own airline operating numerous internal services as well as international ones. It is the only mode of transport that has provided intra-African mobility for various purposes - social, economic, cultural and political - and can thus be regarded as the pace setter of Pan Africanism. Many maritime African countries also own shipping lines but these only participate in handling export-import traffic between individual and overseas countries.

## **Contemporary Spatial Problems of Africa**

The fallout of the exploitative practices associated with the political economy of the Africa's colonial regime is the sharp differentiation between the rural and the urban areas of many African nations. Many African nations and or political units are as such characterized by urban entities that are markedly different in terms of their socio-economic characteristics in contrast to their

rural appendages.

Ideally the relationship between the rural and the urban settlements should be symbiotic, in which the impact of the spontaneous innovations within the urban areas diffuse as development "energies" to the rural regions.

In the case of Africa, the urban centres have developed as enclaves of the colonial metropolises, lacking the necessary organic cohesion with their hinterlands. They grow at such a rate that surpasses the urbanization trend experience of the western nations. The incidence of this scenario is that the productive forces and will within the rural areas have generally diminished. In the absence, of meaningful agro-mechanical breakthrough as Africa approaches the 21st century, famine or food import, and or food aid, seem to be the only option opened to many of the African nations.

Adegbola (1998) for example has shown that given the trends of demographic changes, as well as the probable dynamics in land technological input in agriculture in most African countries, it is highly *unlikely that African countries would survive pronounced famines and poverty within the next two decades.*

On the reverse side of this dual problem is the consequence of unbridled human migration into the emergent primate or near primate cities that dot many African countries. Prominent examples of primate cities are Maputo (Mozambique) and Mogadishu (Somalia) as well as Morovia (Liberia). About 90% of Liberia's urban population live in Morovia. The most pronounced problems incident upon such skewed locational distribution of the urban population are mass unemployment, social insecurity via crimes and gross shortages of social infrastructure needed by the rapidly urbanizing population.

In most African cities, this has resulted in the emergence of residential 'cultures' that expose the inhabitants to social economic and health risks. The peculiar trait of the emergent slums include gross overcrowding and the absence of necessary domestic utilities and conveniences. Quite often, even some of the basic needs that are available in some rural habitats are grossly absent in many of such structures.

In recent years, the problems of refugees have increased in African nations. This has been exacerbated by socio-political instabilities. Significant source countries of refugees include Liberia, Somalia, Sudan, Sierra-Leone, Burundi and Rwanda. From some of these countries, refugee migrants numbered almost a quarter of a million as at December 1996. Prominent among the refugee recipient nations are Guinea, Cote d'Ivoire, Kenya and Uganda. In many instances, the same countries have performed the dual role, serving both as sources and destinations of refugees.

The impact of such social destabilization and disorientation of refugees on national social integration can only be imagined, especially when such phenomenon is attributable to intensive warfare underpinned by ethnic or



religious considerations, such as occurred in Liberia, Sierra Leone, Rwanda and Burundi and Sudan among others.

### **The Problem of Land Degradation**

Land degradation may be simply defined as the gradual degeneration in the structure and function of land. Within the African setting, land degradation is believed to have started long before the colonial contact, although at a rather less perceptible rate than now.

Secondly, the locus of primary concern with land degradation in Africa is the negative impact on the sustainability of the African population where over 70 percent are employed in agriculture. In explaining land degradation in Africa, both the natural and anthropogenic (human) causes need be examined. It is however, difficult to make a clear demarcation in terms of their relative impacts. Individually, each of these causative factors may appear insignificant, but mutually, they tend to reinforce one another, making it difficult to separate the impact of one from the other.

While the natural causes of land degradation such as drought, flooding, desertification and other physical environmental factors, particularly the climatic factors are connected with the natural bio-physical environmental processes, the anthropogenic causes of land degradation are man-focused.

Drought, which implies a long period of dryness, in which rain falls short of its average value for a particular region, has in many instances triggered off land degradation most especially in the Sudano-Sahelian regions of Africa.

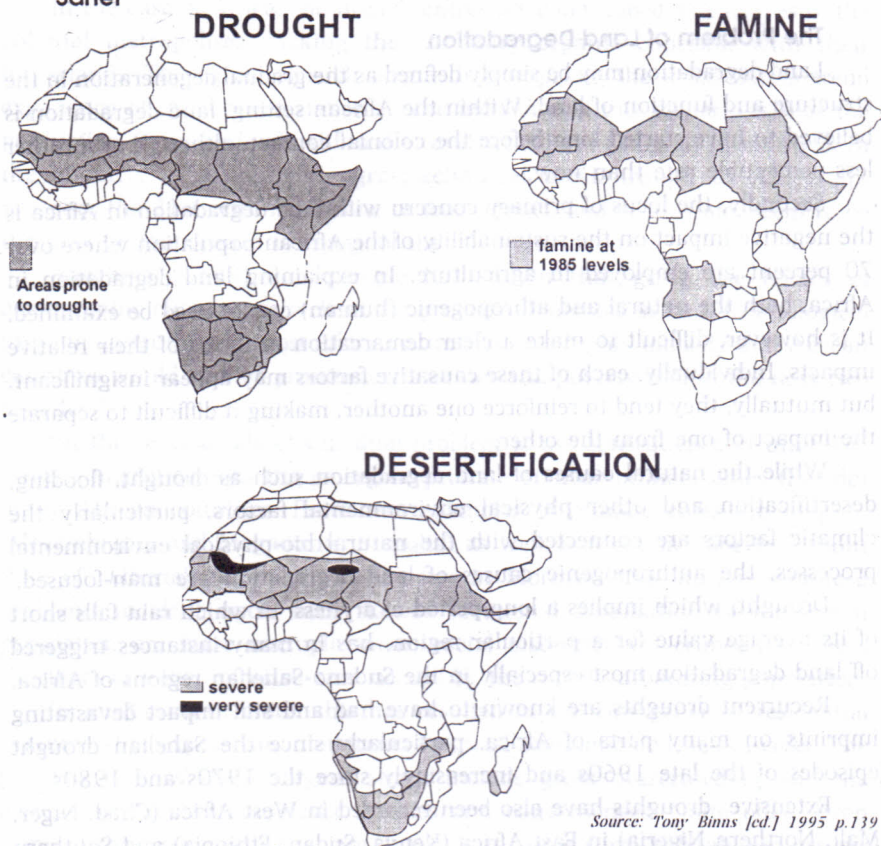
Recurrent droughts are known to have had and still impact devastating imprints on many parts of Africa, particularly since the Sahelian drought episodes of the late 1960s and increasingly since the 1970s and 1980s.

Extensive droughts have also been recorded in West Africa (Chad, Niger, Mali, Northern Nigeria) in East Africa (Kenya, Sudan, Ethiopia) and Southern Africa (Zimbabwe, Botswana and Malawi) as illustrated in Figure 2 as the case may be which shows the coincidental areas of famine, drought and desertification in Africa.

Another physical process which sometimes incorporates human causative actions is desertification, a process of sustained land, soil and vegetative degradation in the semi arid and dry sub-humid areas, caused at least partly by man, it reduces the productive potentials to an extent which can neither be readily reversed by removing the cause, nor easily reclaimed without substantial investment.

FIG 2

# Coincidental Areas of Farming Drought and Desertification areas in the Sahel



Source: Tony Binns [ed.] 1995 p.139

Desertification has four main causes: Overcultivation, overgrazing, deforestation and poor irrigation. Research findings has shown that in Africa, overcultivation is by far the most serious cause of the four. There are two reasons: first, ploughing and sowing disturbs the soil far more radically than stock rearing, leading more directly to rapid erosion. Second, many more Africans get their living from cropland than from rangelands or forests.

In Africa South of the Sudano-Sahelian countries, severe desertification affects 4.5 million people on rangelands compared to 20 million people on rainfed croplands.

The desert environment which once restricted to areas outside the Sahelian region is making serious incursion into the Sudan threatening the survival of animals and man. This prompted the United Nations to set up a programme to confront desertification in Africa in 1977. It is yet to be ascertained the degree of success attained by that effort. Notwithstanding



evidences abound to show the crippling effect of desertification in the African Sahel, Timbuktu which was once one of the world's greatest flourishing centres is today a decayed desert town, as the Sahara extends at an alarming rate. This however, does not imply that the problem of land degradation in Africa is confined only to the Sudano-Sahelian region, as the moist tropical area of Africa is also confronted with another variant of the land degradation problem. In fact, it has been estimated that Africa on the average suffer from degradation which involves forest clearance at the rate of 1.33 million hectares per year compared to 108,000 hectares of forest renewal. It is thus evident, that without any significant improvement in the poor management practices of logging, as well as a reduction in the rate of forest to farm conversion, land degradation in the humid zone will be very devastating in the coming decades.

There are already areas in the humid areas such as the East Central part of Nigeria where large population concentration has incited ecologically devastating practices which engender land degradation at alarming rate. It need be rehearsed however, that the domain of serious degradation in terms of the affected population, the size of the area affected, as well as the agricultural potentials hindered is the Sudano-Sahelian regions of Africa. In many of these areas, the precarious balance that once existed between the users of vegetated land for fuel, food crops, grazing and for protection from wind and water erosion is today breaking down. Hence many of the countries can no longer produce sufficient food both for its rural and urban populations.

In any of the regions where land degradation is pronounced, Westoby (1988) has shown that the phenomenon often starts with the removal of the covering vegetation, via any of the following processes which ultimately reduces the lands capacity for plant growth. One, much of the incident rain water translates to run off instead of infiltrating the soil to boost the underground water storage. Two, the top soil nutrients and basic substances may be washed down into lower layers of the soil or the entire top soil itself eroded away by the run off water, while in the drier region, increased wind speed at surface blow away the surface soils. Three, the capability of the soil to serve as storehouse of water and mineral nutrients may deteriorate, as its organic matter breaks down or is not replaced by continuing input of litter and dead roots from the vegetation. Four, increased reflexivity of the land surface may lead to fewer thunderstorms forming on humid afternoon and finally, since much of the incident rain water is stored in restricted or confined spatial features such as rivers or lakes and not in the vegetation – which may facilitate evapotranspiration over wider spatial area – large scale vegetation destruction may reduce the quantum of precipitation in varying degrees.

The impact of these processes acting individually or in concert has accounted for the problem of land degradation confronting man in Africa, and

it does not yet appear that African countries have a thorough grasp of the underlying socio-political economy of these problems.

In this respect, Westoby (1988) has shown that the wrong agricultural development policy of the colonialists, which emphasized the identification and utilisation of the premium quality lands for the propagation of export-economy crops, was crucial to the exacerbation of land degradation in many countries. Many post-independence African governments have not in any way realized the need for agricultural policy re-orientation. The fact is that many of the export based crops were exotic crops of which the local farmers had little or no knowledge, in terms of their long term impact on the land, and how their cultivation can be regulated so as not to disturb the biotic ecological balance. Secondly, some of the export crops either use up soil fertility intensively or they may occupy the land on a more or less permanent basis, thereby driving many farmers to the land with low or marginal fertility on which the traditional staples are cultivated. In many instances, such lowly fertile soils had been the range lands for the nomadic population, thus introducing another element of ethnic tension between the nomadic populations and the displaced farmers; besides the large scale reduction in the quantum of traditional staples produced, as a result of the displacement of farmers to the marginal-quality lands.

#### BIBLIOGRAPHY

1. **Adegbola, O.** (1998): 'Land degradation in Africa and the Population Factor' (Forthcoming).
2. **Church, Harrison, R.J. et al** (1967): *Africa and the Islands*, 2nd edition, London.
3. **Goliber, T.J.** (1997): 'Population and Reproductive Health in Sub-Saharan Africa' *Population Bulletin*, Vol.52, No.4.
4. **Grove, A.T.** (1967) *Africa South of the Sahara*, O.U.P.
5. **Jarret, H.R.** (1966): *Africa*, 2nd Edition, London, Macdonald.
6. **Mountjoy, A.B. & Embleton, C.** (1965): *Africa: A Geographic Study* Hutchinson (London)
7. **Sillery, A.** (1972): *Africa: A Social Geography*, London, G. Duckworth.
8. **Westoby, J.C.** (1988): *Introduction to World Forestry*, Basil Blackwell, Oxford





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