Michael L. McNulty

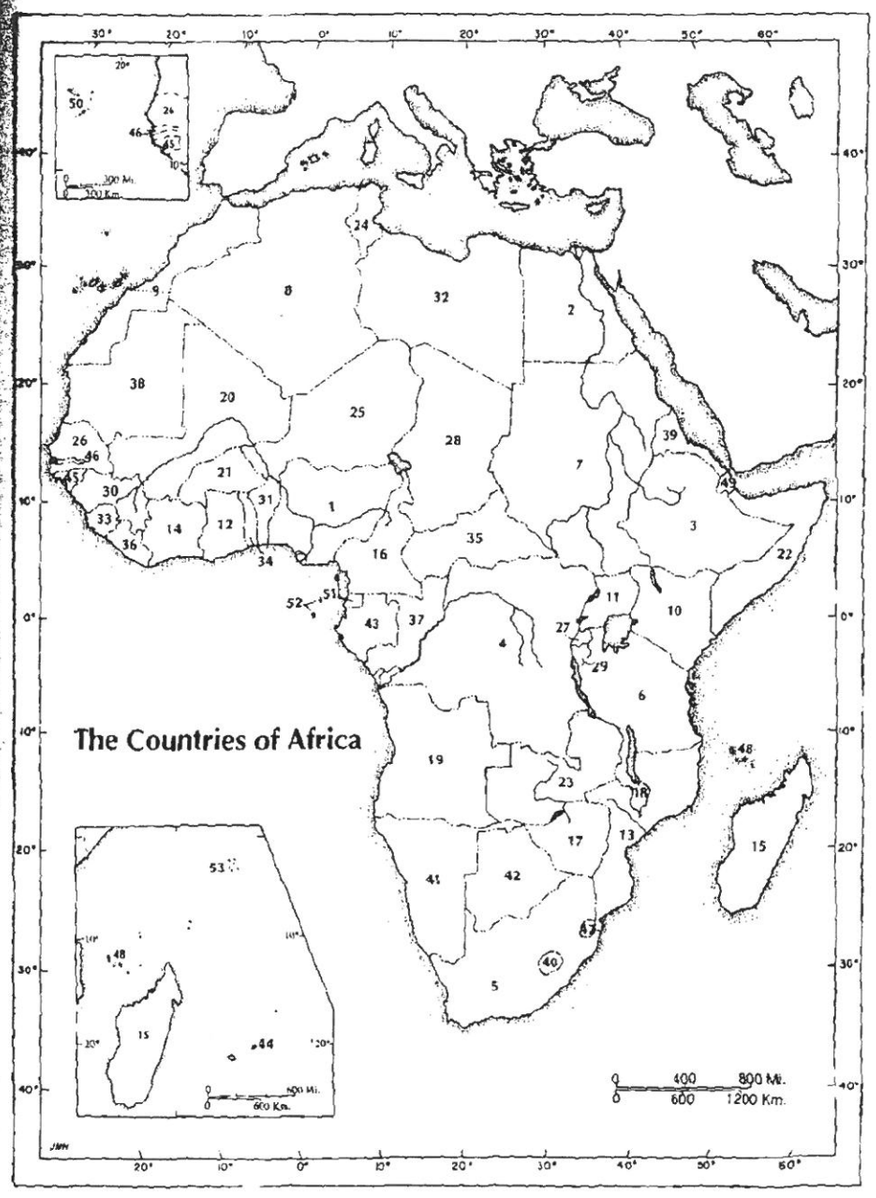
The Contemporary Map of Africa

2

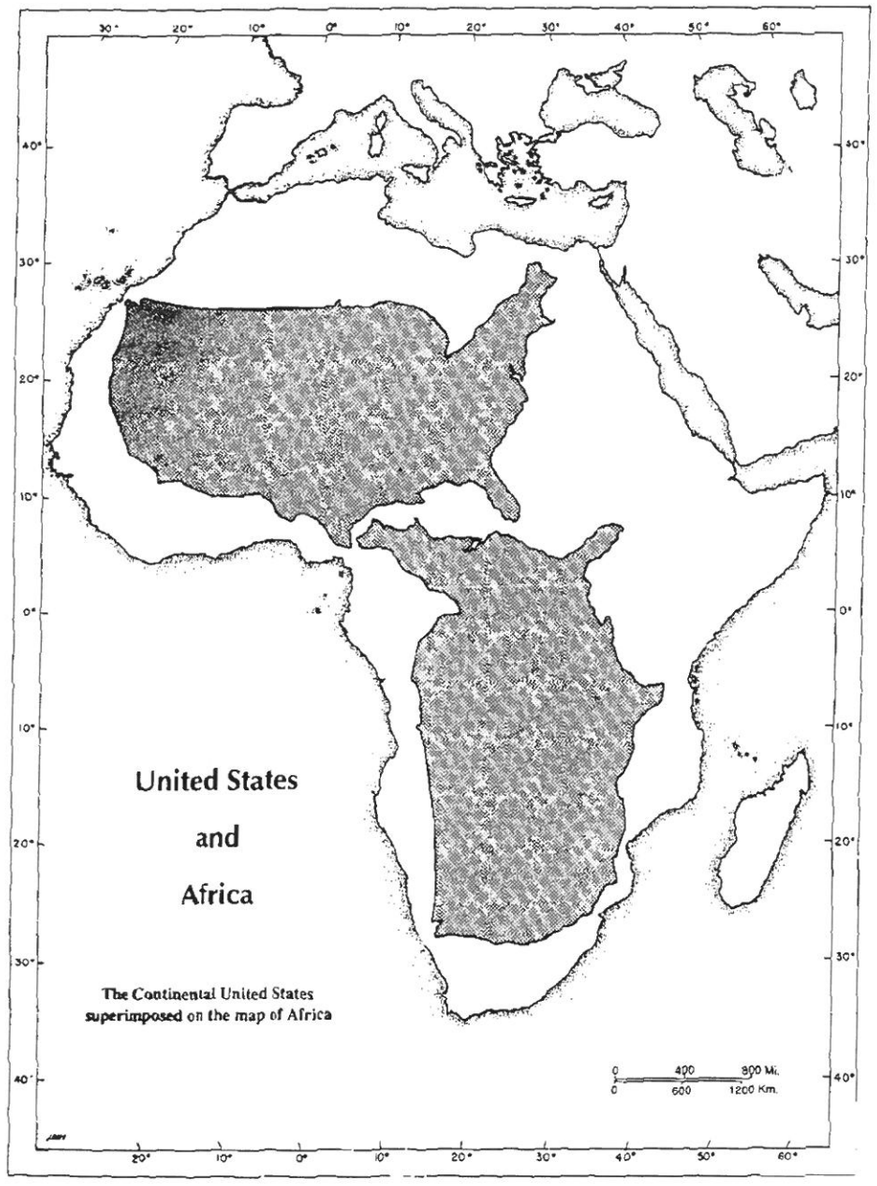
Few students or faculty in American universities would be able to name more than a handful of the African countries in map 3 (identified by number in table 2). The ability to accurately identify and locate such a large number of countries is not particularly important in itself. However, the inability to do so often reflects a more profound ignorance of the important events and processes affecting contemporary Africa. Ignorance of Africa is not a new phenomenon. A general lack of knowledge and frequent misunderstanding of the continent characterized European thought for centuries. In many of the early accounts and accompanying maps, scholars employed an ingenious cartographic device in an attempt to cover up gaps in their knowledge (see plate 5). This practice is characterized in a rhyme by Swift written in the early eighteenth century:

> So geographers in Afric maps
> With savage pictures fill the gaps
> And o'r unhabitable downs
> Placed elephants for want of towns.

In the 1960s and 1970s, the first decades of independence, there was a growing interest in studying Africa at the university and secondary school levels in the United States, although the popular image of Africa was still based on exotic pictures and concepts. The images of Africa presented in newspapers and television coverage emphasized the exotic, the "savage," and the romantic. This period was marked by a great deal of optimism and the promise of a bright new future for the emerging nations of Africa. More recently, environmental, political, and economic crises have shattered the early promise of African development; the popular image now is one of famine, natural and societal disasters, and political collapse. Headlines and cartoons reflect the continuing tradition of "filling the gaps" in our knowledge with familiar but often inaccurate or incomplete images. Students of contemporary Africa who are interested in moving beyond these stereotypes must seek out additional sources of information (see the extensive bibliography at the end of this book).



MAP 3



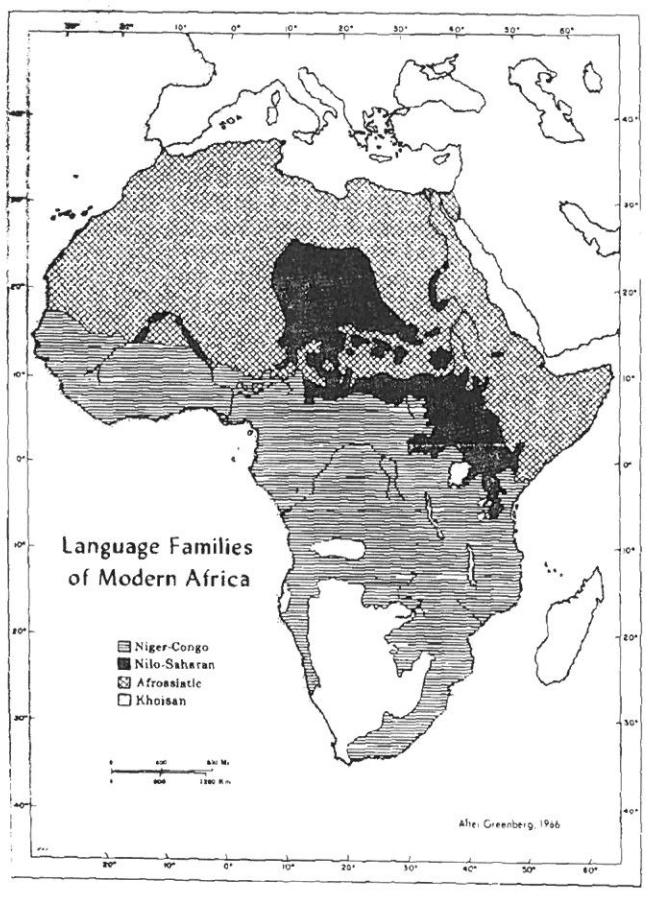
MAP 4

The Contemporary Map of Africa

Africa is a continent of great contrast and diversity. Its vast size, more than thr times the land area of the continental United States (see map 4), and its diversity ma it difficult and at times misleading to generalize. Africa's diversity is reflected in t regional distribution of human and natural resources, in the nature of urban and rur environments, and in the contrasting lifestyles of a small but growing urban elite ar the mass of small-scale farmers. It is also seen in the wide spectrum of social ar political institutions. The languages spoken on the African continent can be groupe into four large linguistic families (see map 5); however, on a more particular lev there are perhaps as many as a thousand languages, which are as distinct as Englis is from German. Contemporary Africa is influenced by indigenous, colonial, ar national ideas. Despite this tremendous diversity, there are strong elements c commonality among and between the diverse peoples that make up the countries c Africa. This chapter attempts to identify and discuss the significance of thes similarities and to provide a broad framework within which the problems of contem porary African development may be understood.

The Geographical Pattern of Development in Africa

At independence the countries of Africa constituted a significant part of what ha been called the "commonwealth of poverty," made up of those countries of Africa an Asia that were just emerging from long years of colonial rule and economi exploitation. Today, the countries of Africa remain among the poorest and leas developed in the world. Africa is the only continent to record negative growth in th past two decades, and many African countries are actually worse off today than the were twenty years ago. Yet, within this general pattern of underdevelopment there ar conspicuous differences (see table 2). This is evident at the national level, but it i even more pronounced at the regional level and within specific countries. Th distribution of population presented in map 6 reflects the high degree of regiona diversity. Large areas of the continent are virtually uninhabited, while others particularly urban centers, exhibit a high degree of concentration. Some of th highest population densities occur along the coast, most notably in West Africa, wit occasional clusters further inland, as on the shores of Lake Victoria in East Africa Comparison of population (map 6) with centers of major commercial productio (represented in map 7) indicates the close relationship between the distribution o economic and human resources. While there are exceptions, it is clear that th distribution of population and the areas of major commercial production are ver similar. A map of the distribution of railways in Africa (map 8) illustrates how th transportation networks focus on these same areas of population concentration an commercial production. Indeed, if individual elements of African development wer superimposed on the map as though they were a series of transparencies, a growin and intensifying geographical pattern of inequality would be evident. This series o maps would highlight several prominent "development islands" surrounded by a large "sea" of underdevelopment (map 9). As has been noted:



MAP 5

TABLE 2
Countries and Resources

No. (see map 3)	*Country*	*Population est.(1992) (thousands)*[1]	*Area (square miles)*[2]	*GNP (1992 current $) (billions)*[3]	*GNP ($) per capita (1992)*[4]
1	Nigeria	115,660	356,669	32.94	320
2	Egypt	55,163	385,229	34.51	630
3	Ethiopia	53,110	436,349	6.20	110
4	~~Zaire~~ DRC	39,880	905,365	8.84	260
5	South Africa	39,820	471,445	106.01	2670
6	Tanzania	27,830	364,900	2.56	110
7	Sudan	26,660	967,500	10.10	400
8	Algeria	26,350	919,595	48.32	1830
9	Morocco*	26,320	274,461	27.21	1030
10	Kenya	25,700	224,081	8.45	330
11	Uganda	18,670	93,104	2.94	170
12	Ghana	15,960	92,100	7.06	450
13	Mozambique	15,730	308,641	1.03	60
14	Côte d'Ivoire	12,910	124,503	8.65	670
15	Madagascar	12,830	226,658	2.80	230
16	Cameroon	12,200	183,569	10.00	820
17	Zimbabwe	10,580	150,873	5.89	570
18	Malawi	10,360	45,747	1.89	210
19	Angola	10,020	481,354	6.01	620
20	Mali	9,820	478,841	2.73	300
21	Burkina Faso	9,490	105,870	2.90	290
22	Somalia	9,200	246,201	1.03	170
23	Zambia	8,640	290,586	2.58	290
24	Tunisia	8,400	63,170	14.61	1740
25	Niger	8,250	489,191	2.46	300
26	Senegal	7,740	75,955	6.12	780
27	Rwanda	7,530	10,169	1.81	250
28	Chad	5,960	495,800	1.26	220
29	Burundi	5,780	10,747	1.19	210
30	Guinea	5,600	94,926	3.10	510
31	Benin	5,050	43,484	2.05	410
32	Libya	4,870	679,359	22.97	5310
33	Sierra Leone	4,380	27,699	.72	170
34	Togo	3,760	21,925	1.57	400
35	Central African Republic	3,170	240,535	1.30	410
36	Liberia	2,580	37,743	1.05	450
37	Congo	2,370	132,047	2.50	1030
38	Mauritania	2,140	397,950	1.10	530
39	Eritrea	2,000	46,774	NA	NA
40	Lesotho	1,840	11,720	1.09	590

TABLE 2 (continued)

No. (see map 3)	Country	Population est.(1992) (thousands)[1]	Area (square miles)[2]	GNP (1992 current $) (billions)[3]	GNP ($) per capita (1992)[4]
41	Namibia	1,530	318,261	2.50	1610
42	Botswana	1,370	224,711	3.79	2790
43	Gabon	1,240	103,347	5.34	4450
44	Mauritius	1,080	788	2.96	2700
45	Guinea-Bissau	943	13,948	.21	210
46	The Gambia	880	4,361	.36	390
47	Swaziland	820	6,704	.93	1080
48	The Comoros	580	863	.26	510
49	Djibouti	470	8,958	.15	480
50	Cape Verde	380	1,557	.33	850
51	Equatorial Guinea	370	10,830	.14	330
52	São Tomé and Principe	116	372	.04	370
53	Seychelles	70	175	.37	5480

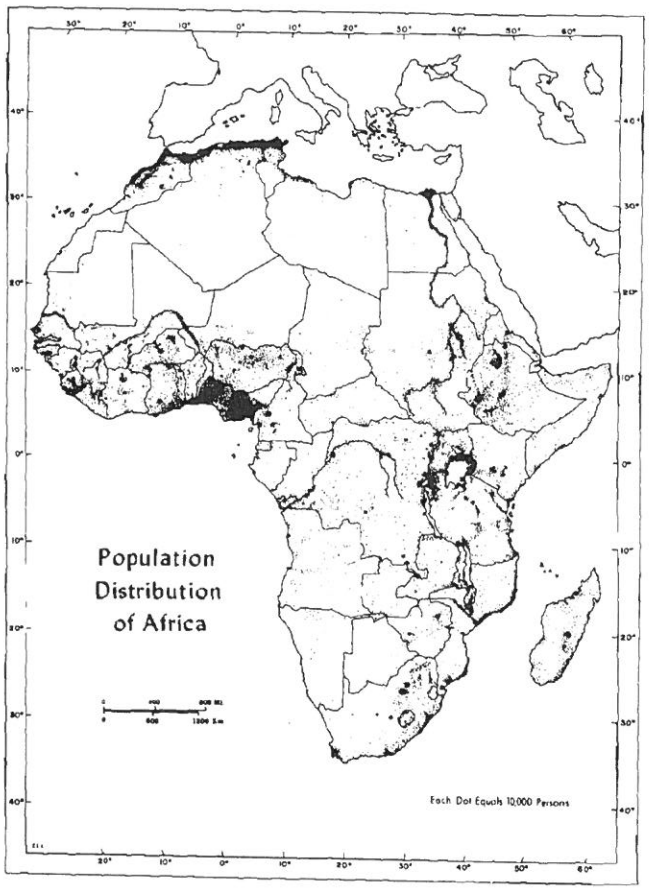
Figures underlined are for years other than those specified.

* International statistics for Morocco include the disputed territory of Western Sahara.

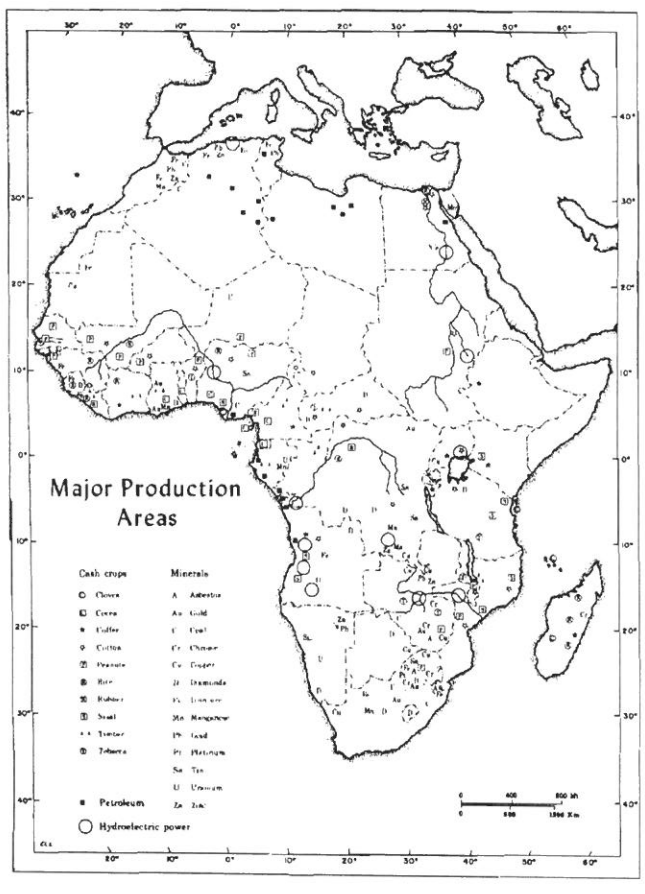
1. Sources: International Monetary Fund, *International Financial Statistics: July 1994* (Washington, D.C., 1994); *Africa South of the Sahara. 1994*, 23rd ed. (London: Europa Publications, 1994).
2. Source: *Africa South of the Sahara. 1994*.
3. Sources: *The World Bank Atlas, 1994* (Washington, D.C.: The World Bank, 1993) *Africa at a Glance, 1992: Facts and Figures* (Pretoria: Africa Institute of South Africa, 1992); *Africa South of the Sahara, 1994*.
4. Sources: *The World Bank Atlas, 1994*; *Africa at a Glance, 1992: Facts and Figures*; *Africa South of the Sahara, 1994*.

Development has so far taken place, and in all probability will continue to take place, within a framework of social and economic islands and their growing tributary areas which have already left an indelible imprint on the African continent. It is this common factor, this established pattern of advance, which is the key to the analysis so urgently needed. That pattern is, and in the foreseeable future will remain, essentially nodal; with social and economic growth focusing on a number of dominant centers and their expanding territorial spheres of influence.[1]

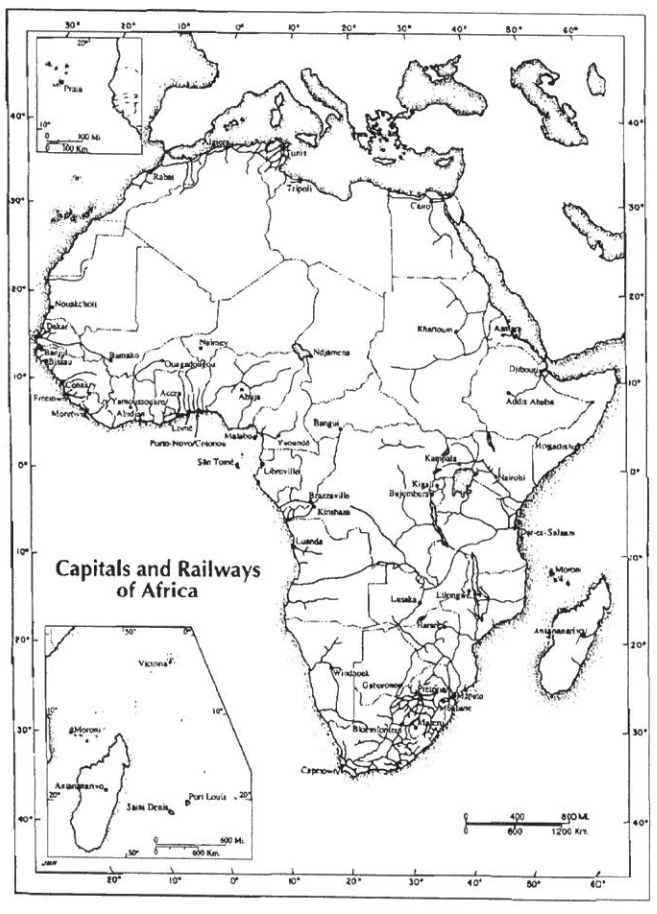
There has been remarkable stability in the geographical pattern of African development since at least the turn of the century. Areas which stand out today as major "development islands" would have appeared on a similar map drawn eighty years ago, although at the beginning of the twentieth century, commercial production



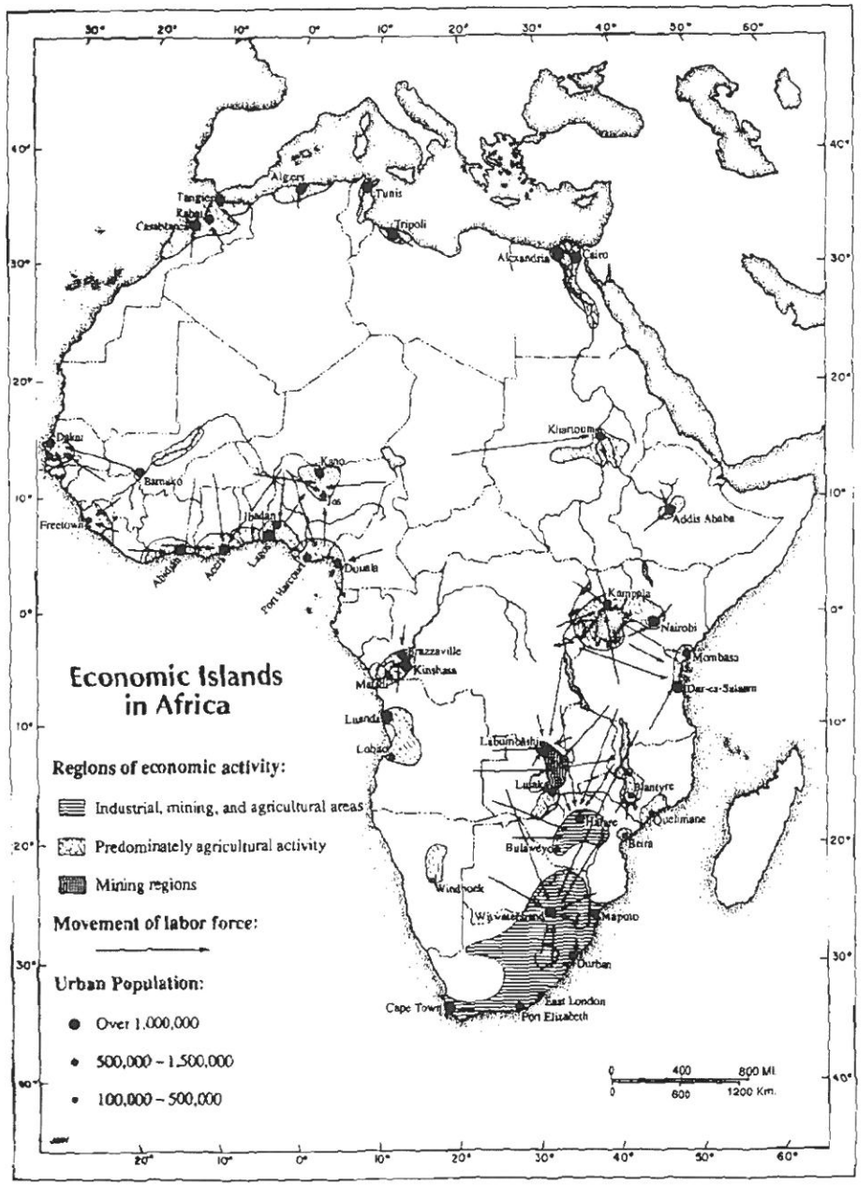
MAP 6


Major Production Areas
Cash crops
Minerals
Petroleum
Hydroelectric power

MAP 7


Capitals and Railways of Africa

MAP 8



MAP 9

was even more highly concentrated. Essentially it was limited to a few areas along the coast, to some interior centers of mining, and to isolated patches of commercial agriculture, most notably in the highland regions of East Africa. Areas of major commercial production account for only about 4 percent of the total area of Africa, yet they include nearly all the urban population and more than three-quarters of the value of African products sold on world markets. Thus, much of Africa's wealth is concentrated in a relatively small part of the continent.

The influence of these "development islands," however, extends far beyond that limited area which they occupy. They have an important impact on surrounding regions, and by attracting migrant labor they provide linkages to rural areas often far removed from the actual sites of commercial production. Through commercial linkages and migration streams, these "islands" have a profound influence on local economies, social institutions, and cultures in even the most rural areas. Thus, although relatively few in number, the major areas of urban concentration and commercial production play an important role in articulating the overall pattern of African development. This phenomenon has remained relatively unchanged over the past eighty years, and the dominance of these centers in economic and political terms has been accelerating. What accounts for this highly unbalanced pattern of development? What processes have brought about an increasing concentration within relatively few areas? Why do these few "islands" contain most of the wealth, the highest standards of living, the greatest concentration of educated and skilled people? Why do these centers dominate the flow of goods, people, and ideas?

To understand the origin of these "development islands" and the reasons for their continued growth, we need to consider a number of important processes which have contributed to their continued existence. These include the initial distribution of natural resources and the elements of the natural environment; the historical pattern of development in precolonial Africa; the impact of colonial domination; and the efforts of the independent African countries to achieve higher levels of development.

The contemporary map may be characterized in terms of physical and activity patterns. Physical elements include those features such as towns, highways, dams, agricultural regions, and other features of the landscape which are physically present at particular locations. Activity patterns refer to the flow of goods, people, and information between and among the elements of the physical pattern. Together the physical and activity patterns define the geographic structure of contemporary Africa.

Elements of the Natural Environment

The unevenness of African development is often thought to result from the nature of the physical environment and the distribution of natural resources. Until recently, textbooks often overemphasized the importance of the physical environment. For example, climate and soil were presented as "obstacles" which made development difficult or impossible in certain areas of the continent. Although the physical

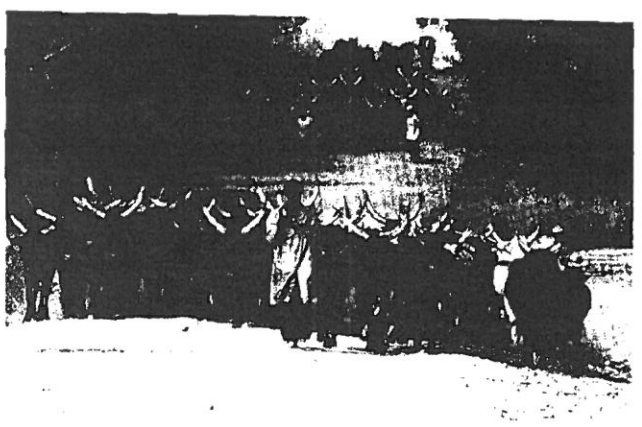
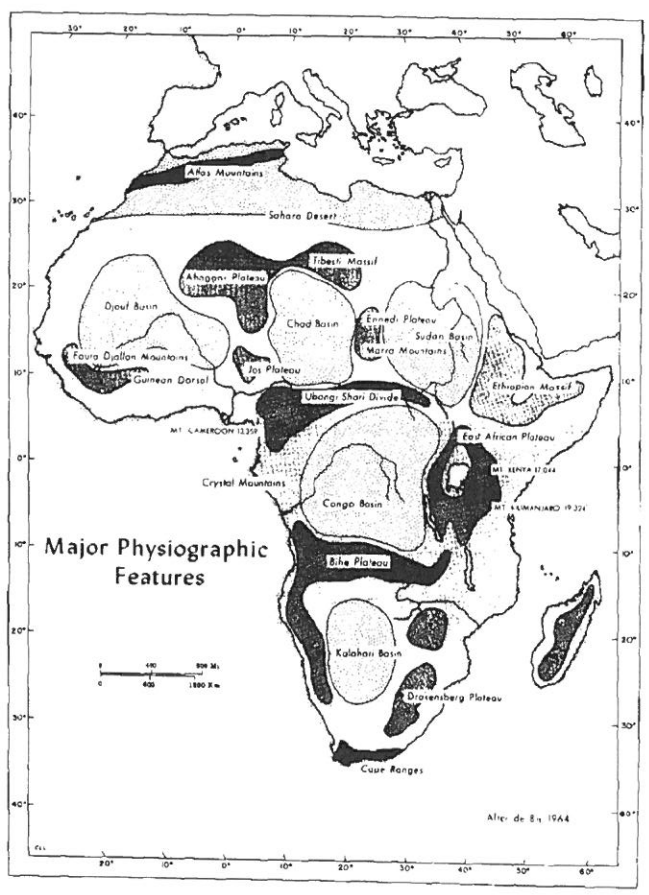


Plate 1. Farmers taking their cattle for grazing, Mokolo, Cameroon Republic.
Photo courtesy United Nations/Sean McCutcheon.

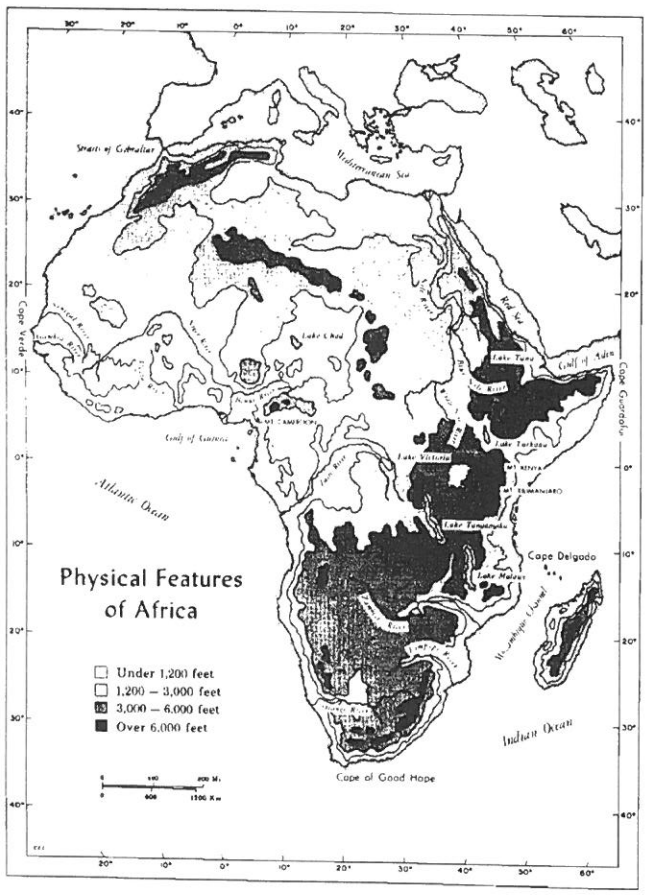
environment is important, it cannot be viewed as the only, or even the most important, reason for Africa's underdevelopment at the present time. Elements of the natural environment must be viewed within the context of particular periods of history and corresponding levels of technology. An assortment of isolated facts regarding the natural environment, the landscape, and the climate cannot give the reader a clear understanding of why or how such elements are significant. Nothing could be more tedious than learning that the mean annual temperature in Navrongo, Ghana, is 83 degrees and that the total precipitation is 43.1 inches per year. Such information is important only in relation to other factors.

Physiographic Features, Climatic Patterns, and Development

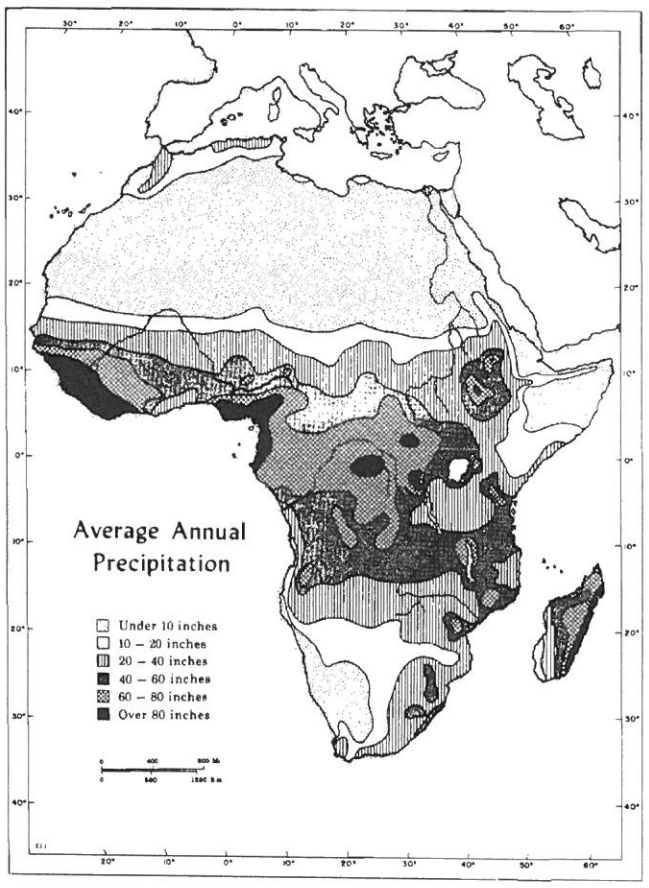
Africa is a large but rather compact continent. Its shoreline has few natural inlets or harbors. There is a notable absence of extensive coastal plains, and the land often rises to a plateau within a few miles of the shore. Indeed, Africa may be viewed as a large plateau area, broken up by a series of basins (map 10). While the consequences of this physiographic structure are numerous, two aspects have been discussed frequently by authors concerned with development in Africa. First, the smooth coastline (map 11) afforded little opportunity for gaining access to the interior for those Europeans who wanted to tap inland resources. In addition to lacking natural harbors, the coast was often inhospitable because of desert-like conditions or the



MAP 10


Physical Features of Africa
Under 1,200 feet
1,200 – 3,000 feet
3,000 – 6,000 feet
Over 6,000 feet
Atlantic Ocean
Indian Ocean
Cape of Good Hope
Cape Delgado
Cape Verde
Cape Guardafui
Mediterranean Sea
Red Sea
Gulf of Aden
Gulf of Guinea
Lake Chad
Lake Victoria
Lake Tanganyika
Lake Malawi
Lake Turkana
Lake Tana
MT. KILIMANJARO

MAP 11


Average Annual Precipitation
Under 10 inches
10 – 20 inches
20 – 40 inches
40 – 60 inches
60 – 80 inches
Over 80 inches

MAP 12

presence of lagoons and swamps at the mouths of major rivers. Secondly, the plateau-like structure also meant that rivers draining from the interior generally have a series of rapids which rendered navigation difficult or impossible and reduced the use of such rivers as avenues into the interior. Initially, these features limited contacts between peoples of the interior and European merchants, soldiers, and other agents who were attempting to penetrate Africa from the coast. Access from the north was also difficult, although never impossible, because of the vast expanse of the Sahara. Furthermore, the Nile, the only river connecting the Mediterranean coast with areas to the south, was a poor communication channel. It flowed through the Sudan basin, which was marked by extensive areas of floating vegetation, called sudd, that made early navigation difficult.

Another important feature of this physiographic structure is its effect upon precipitation. Particularly along the west coast, the prevailing onshore wind, carrying moist maritime air, rises over the plateau, resulting in a high level of precipitation (map 12). This heavy annual rainfall produces dense tropical forests, which further impede transport development from the coast. Rainfall is indeed a key factor in understanding the climatic conditions that contribute to Africa's development. It must be viewed in both seasonal and annual contexts. Seasonally, rainfall is distributed into wet and dry seasons, which correspond roughly with the temperate seasons of summer and winter. This means that in many parts of the continent virtually all rain, certainly all useful rain, falls during the five or six months of the wet season, while none or almost none falls during the dry season. This severely limits agricultural production, animal pasturing, and general human activity. It is this seasonal characteristic which makes the African climate so markedly different from that of

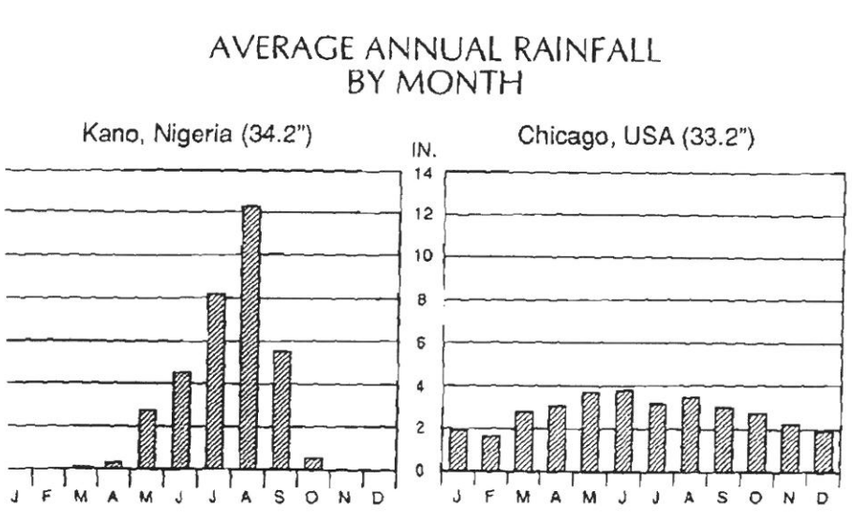


Figure 1. Average Annual Rainfall by Month

Plate 2. Tropical rain forest in the Cameroon Republic.
Photo courtesy United Nations/jt.

more temperate continents. For example, the city of Chicago has slightly less rainfall annually than does the West African city of Kano, but the Chicago rainfall is distributed relatively evenly throughout the year, while the Kano rainfall occurs in only six months (see figure 1). The contrast is remarkable: Kano looks like near-desert in comparison to Chicago. But the difference goes beyond mere appearances, for northern Illinois has much more productive farmland than does northern Nigeria.

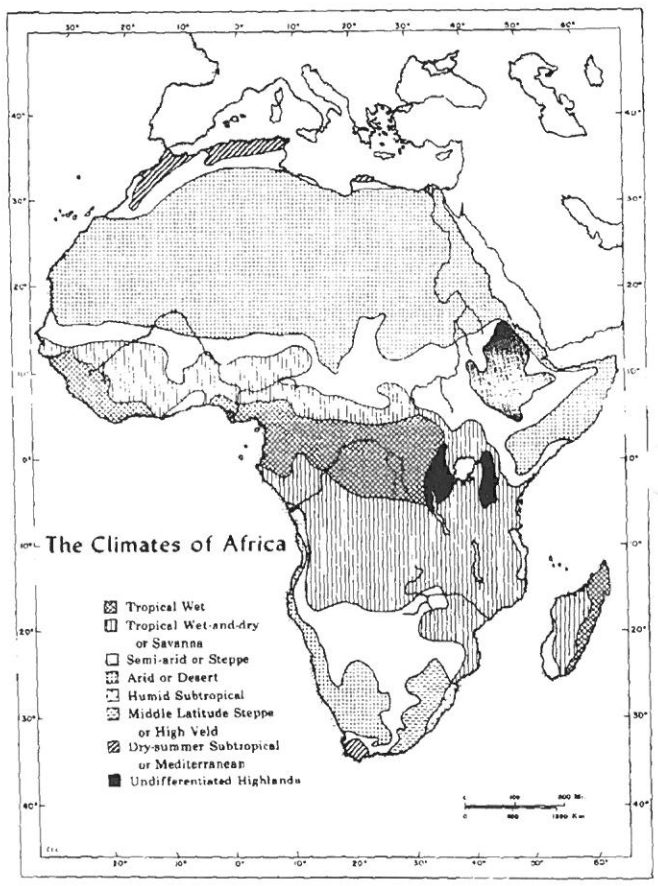
Africa, because of its shape and location astride the equator, exhibits a classic climatic pattern which ranges from tropical climates near the equator to more temperate ones to the north and south. Of the total land area of some 11.7 million square miles, more than 9 million lie in the tropics, defined as between 23° 30′ north and 23° 30′ south latitudes. Despite its having been characterized as the most tropical of continents, Africa has relatively few areas of tropical rain forest; savannas constitute approximately one-third of tropical Africa; and approximately three-fifths of the continent, or two-fifths of tropical Africa, is desert or step ee map 13). The

Plate 3. Women planting vegetables, The Gambia.
Photo courtesy United Nations/A. Holbrook.

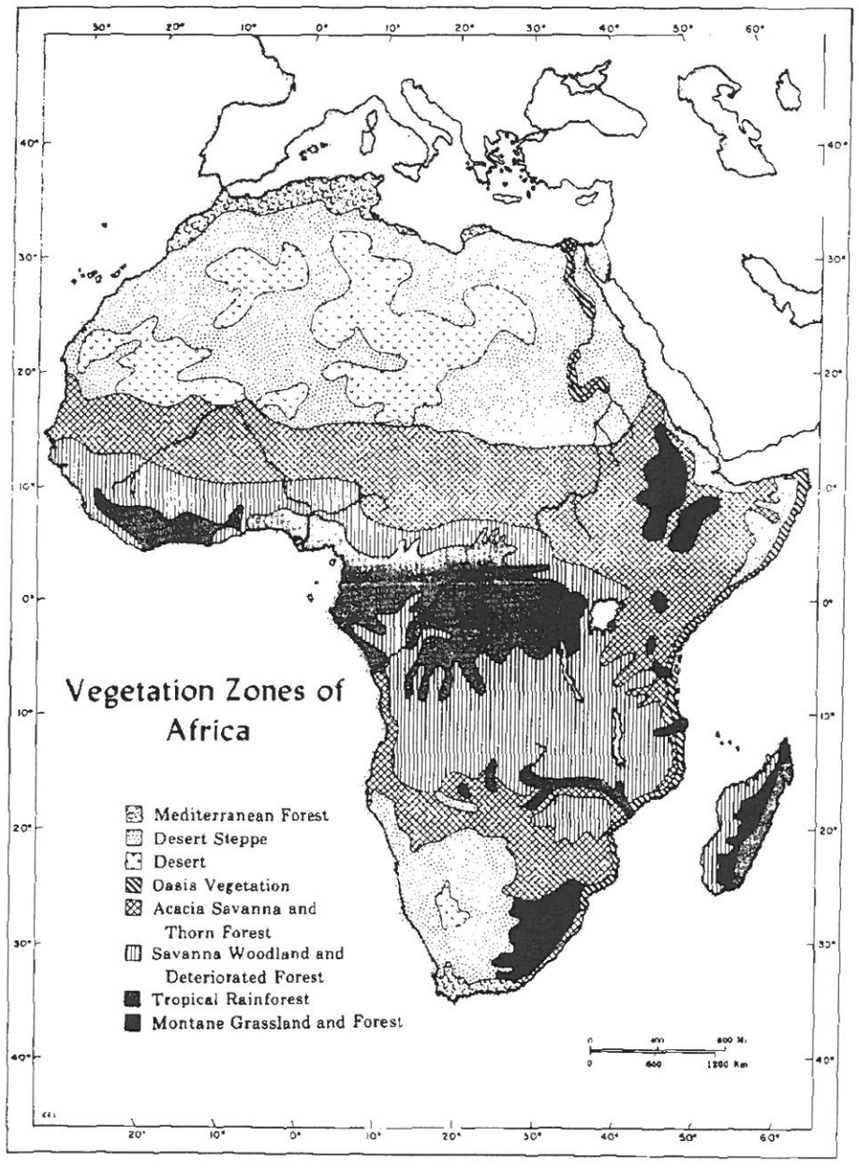
transition from one climatic type to another is usually gradual. In moving from the coast in West Africa toward the north, one encounters a series of ecological zones; the rain forest of the coast gives way to a mixed environment of savanna, trees, and grasses; gradually the trees become more scattered and grasslands predominate; finally, the grasslands merge into areas of steppe. The boundaries between these zones tend to shift as changes occur either in the amount and timing of rainfall or through the action of farmers as they remove trees from agricultural land and burn off the grasses to prepare their fields or to graze livestock. People play an important role in the ecology of Africa and have been a prime agent in changing the nature of the ecological zones.

Vegetational zones (see map 14) which reflect environmental conditions have cultural consequences as well, for different crops are suited to different environments. Societies located in savanna regions grow cereals as staples, principally sorghum, millet, and eleusine, and, since the fifteenth century, corn and manioc introduced from the New World, while societies in the forest area rely upon tuberous crops such as yams and taro. The choice of crops in itself may have deeper social implications, as in the division of labor among farmers along social class and gender lines.

The distribution of large domesticated animals is also related to water in the environment. The tsetse fly, which is a vector of parasitic infection in both humans and cattle, requires a very humid habitat and is generally limited to areas with more than forty inches of rainfall annually, though its seasonal distribution may vary. Areas



MAP 13



MAP 14

Plate 4. Planting millet, Chad.
Photo courtesy United Nations/Carl Purcell.

inhabited by the tsetse are thus not suited for livestock such as horses and cattle. Consequently, in these areas there is no milk (except for goat's milk), there are no draft animals, and there is a limited supply of natural fertilizer. The fly does not affect smaller domestic animals such as chickens, sheep, and goats, or a rare dwarf breed of cow.

In some areas people have developed ingenious methods of agriculture to make the best use of the tropical soils and meager rainfall and to protect against deterioration of the land. In other areas, however, the increasing human and animal populations have had deleterious effects upon the landscape and have contributed to soil erosion and accelerated the pace of desertification.

The combined effects of inadequate rainfall and poor conservation methods have been dramatically evident in recent decades. During the early 1970s, the Sahelian region of West Africa, including parts of Chad, Niger, Mali, Burkina Faso, and Senegal, was brought to the world's attention when reports of widespread crop failure and prospects of massive starvation resulted in an international effort to provide some degree of relief to the people in the region. In late 1984, the world was shocked once again when the effects of the Ethiopian drought were brought into comfortable homes in the Western world by television crews transmitting dramatic and horrifying images of starvation and death. More recently, in the first years of this decade, drought and famine in the Horn of Africa took a terrible human toll as hundreds of thousands were affected. In each case it was said that the starvation and suffering were the results of a drought which had destroyed crops and upset the delicate ecological balance

characteristic of daily life along the southern margins of the Sahara. This was true, but these events are only the most recent in a series of droughts affecting the area over a long period. Some scientists suggest that these events are evidence of a gradual climatic change which is causing the Sahara to extend southward. The Sahara is described as "creeping" inexorably, as if it were a malevolent creature.

But the problems of the Sahel and the Horn of Africa are not a matter of climate alone. The physical environment is not perverse enough to have conjured up these recent calamities. People and governments must bear a fair share of the burden of responsibility, through ill-advised agricultural policies, inappropriate farming and animal-husbandry practices, overgrazing, and increased soil erosion and destruction of indigenous agricultural systems that had achieved a delicate ecological balance through generations. Development policies of African governments, often designed, funded, and staffed by international donor agencies, all too frequently have exacerbated the problem through ill-advised action. For example, in response to drought conditions which were forcing local pastoralists to extend their search for pasture further south than normal, encroaching upon lands cultivated by sedentary communities, the government of one Sahelian state undertook a project to employ modern technology to sink boreholes to provide water to the pastoralists' herds. A carefully designed plan called for an optimal number of boreholes, strategically located and subject to specific rules governing access to the water. The sites of the boreholes quickly became overcrowded as formerly nomadic pastoralists converged on the newly opened sources of water. The numbers of livestock concentrated in the area surrounding the boreholes quickly surpassed maximum carrying capacity, local officials were ineffective in maintaining control over the pastoralists, and clashes between local people and those drawn from further afield escalated into interethnic conflict. The impact of the drought was thus much more severe than might otherwise have been the case. In Somalia, political strife and regional conflict in the last several years have also exacerbated the worsening climatic conditions and magnified the dimensions of the problem. Here is evidence of the way in which climatic fluctuation in relation to social and economic institutions can result in severe problems which contribute to the underdevelopment of a region.

Presently, the countries of the Sahel are among the poorest of the poor in Africa. They lie at the periphery of the area dominated by the major commercial center along the west coast. It is tempting to interpret this pattern of development and underdevelopment solely as a result of climatic differences. However, this has not always been the case in West Africa. For centuries, some of these same Sahelian areas were centers for African kingdoms and urban centers which dominated politics and commerce in West Africa (see chapters 3, 4, and 5). These kingdoms were at that time focal points of economic and political activity, while the southern coastal areas were at the periphery.

Thus the contemporary development pattern represents a complete and dramatic reversal of the spatial structure of West Africa. This cannot be explained solely by climatic change, but must be understood in terms of changing economic and political conditions as well. There is indeed some evidence that the climate in this area has

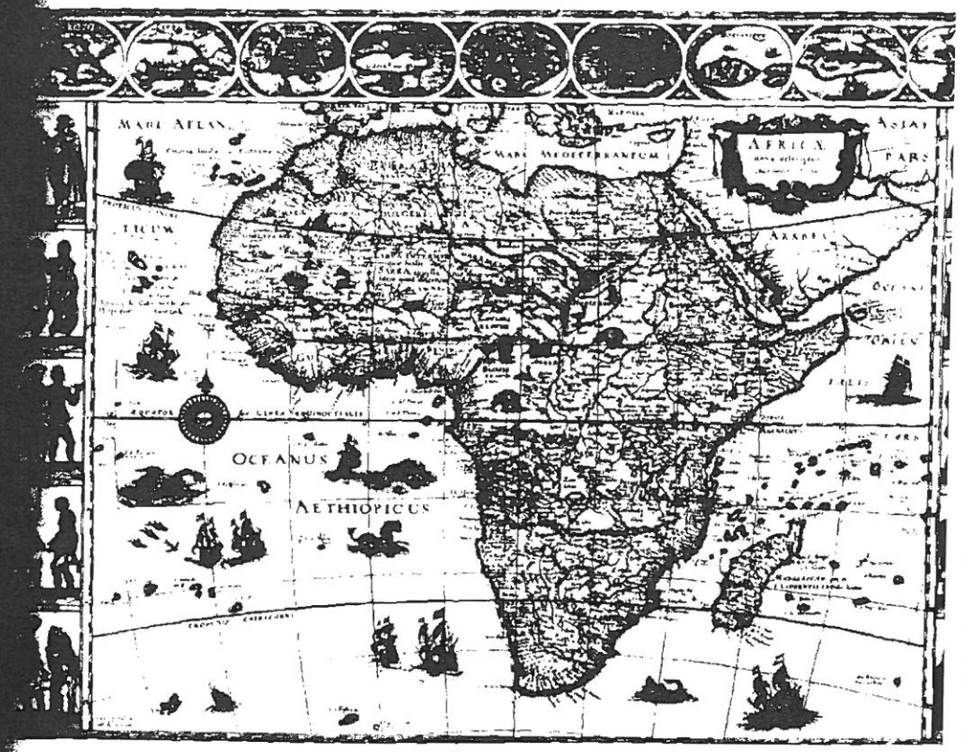
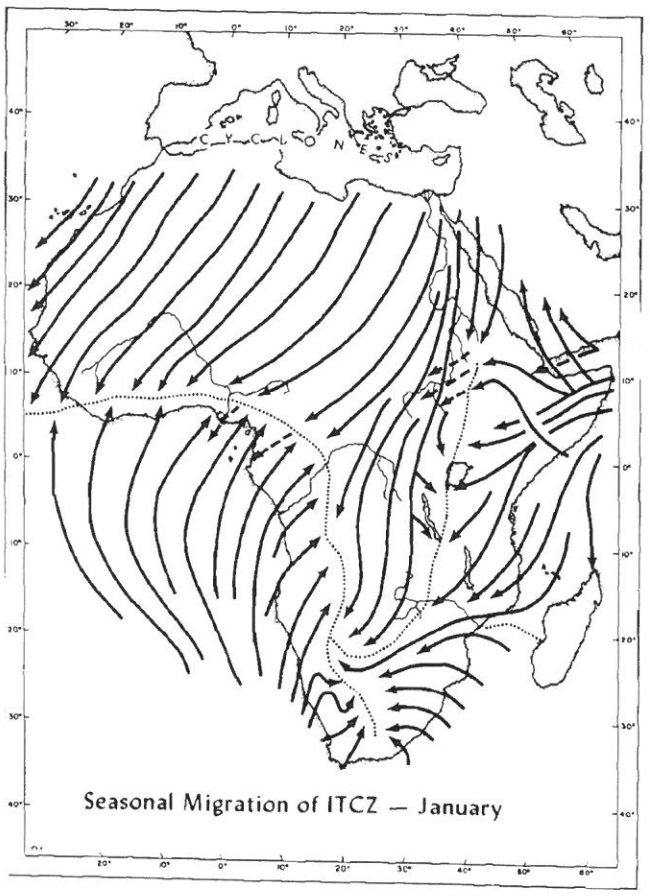


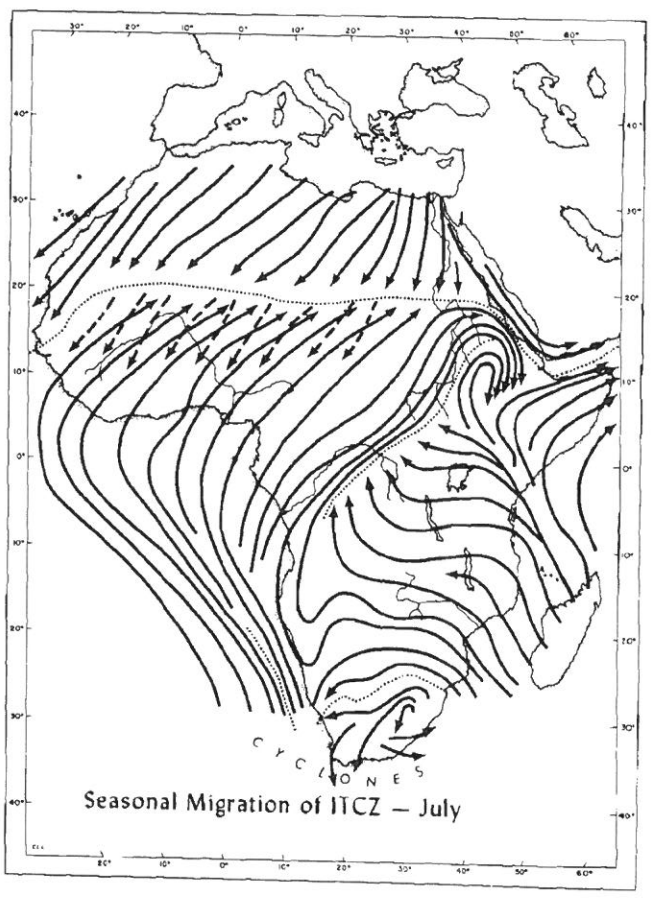
Plate 5. Seventeenth-century map of Africa from G. and I. Blaeu, *Atlas*, 1648.
Photo courtesy Lilly Library of Rare Books and Manuscripts, Indiana University.

been changing, and that conditions were less severe during the period when trans-Saharan trade was flourishing. But what dramatically altered the situation was the decline of the ancient kingdoms occasioned by political strife related to control of the trans-Saharan trade and to the impact of colonial penetration along the coast.

Understanding the nature of climatic variations together with the nature of social and economic institutions aids in interpreting many features in this West African region. The climatic differences between the northern and southern areas directly contribute to one of the most significant features of West African seasonal migration. Rainfall decreases as one moves from south to north in West Africa, with eighty inches or more annually along some parts of the coast and less than thirty-five inches in areas just a few hundred miles further inland. Aside from being drier, the northern areas of West Africa also have marked seasonality in the distribution of rainfall. West Africa is affected by the movement of the Intertropical Convergence Zone (ITCZ), which marks the boundary between a moist, maritime airmass and a drier, continental airmass (see maps 15 and 16). As the ITCZ moves north and south it results in the


CYCLONES
Seasonal Migration of ITCZ — January

MAP 15


CYCLONES
Seasonal Migration of ITCZ — July

MAP 16

highly seasonal distribution of rainfall, alternately characterized as the "rainy season" and the "dry season." Agricultural practices are related to the distribution of rainfall, and in the north, where the distinction between the seasons is most marked, little can be grown during the dry season. Because of the lack of adequate storage facilities, the dry season, referred to in some areas as the "hungry season," is a period of food shortage. During this time many northerners migrate to the south, where employment is sought on farms. Just before the rains return to the north, many of these men go back to prepare their fields for planting. The periodic absences of migrant labor also have significant implications for the division of labor between men and women. For extended periods of time the women in the northern villages have primary responsibility for the household. This seasonal pattern of migration is an important feature of West African life and has had a significant effect upon social and economic conditions in both the north and the south. The difference in climate, then, strongly affects the organization of economic and social life. Many other examples of this interrelationship between the natural environment and social and economic institutions could be provided to help explain certain important features of development in other parts of the continent (see chapters 10, 19, and 20).

Population, Politics, and the Environment

In seeking explanations for the continuing state of underdevelopment of Africa, we have argued that the environment cannot be seen as the sole, or even the most important, element. At the 1994 International Conference on Population and Development held in Cairo, Egypt, many experts argued that population, rather than environment, is the most serious cause of continuing poverty. This argument suggests that as long as population growth outstrips the growth of the economy, especially in countries so overly dependent on primary production, they will never escape from poverty. In fact, the continuing pressure of population growth on the resource base leads to environmental degradation and the reduction of the carrying capacity of the land. This suggests that African countries will never escape the poverty trap until they control the rate of population growth. Although Africa, owing to its vast size, has a relatively low population density, its population is growing at a faster rate than that of any other continent. Much of the population of the continent is clustered around the relatively few development islands discussed above (see map 6). Population migration, both voluntary and involuntary, is putting additional pressure on the areas with the most productive agricultural land and other natural resources. This is contributing to deforestation and desertification in the countryside and to the accelerating growth of Africa's cities (see table 3), which are fast becoming overburdened and incapable of providing even the most rudimentary of urban services. Few African governments have addressed this situation, and many continue to have pronatalist policies. Health conditions across the continent are uniformly poor, and rates of infant mortality and morbidity remain among the world's highest. Nonetheless, children under the age of fifteen constitute an estimated 45 percent of total population. Those who survive will

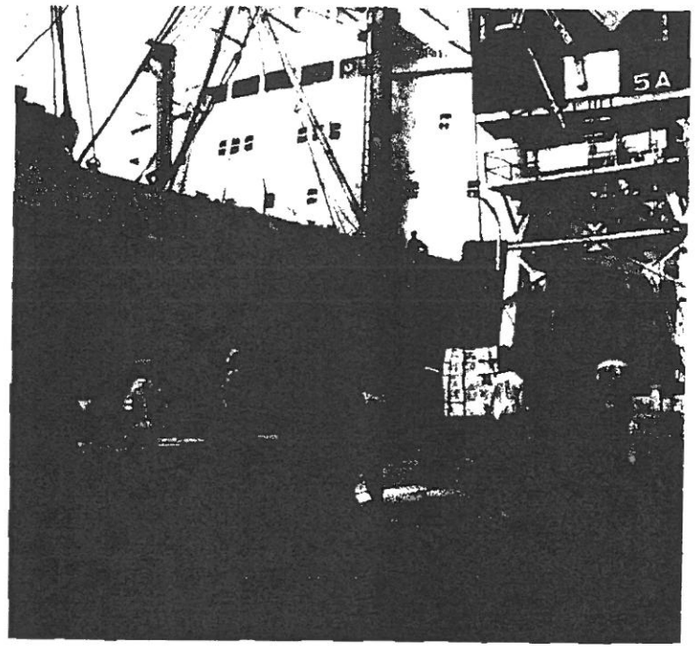


Plate 6. Goods being unloaded at Tema Harbor, Ghana.
Photo courtesy United Nations/PR/mh.

live out their most productive years in economies which are woefully unprepared to provide opportunities for education or employment. The consequences will have important political and social ramifications, such as local struggles over access to resources among increasingly desperate people, unrest among unemployed urban youth, and rising dissatisfaction with governments that appear unable or unwilling to provide basic security and services. In many countries the combined effect of prolonged drought, inappropriate and unsustainable agricultural practices, and civil strife has created in Africa one of the world's largest refugee populations. This vast tide of humanity moving across boundaries and crowding into camps and settlements has become an almost chronic condition in some regions of Africa. The combination of population, environmental degradation, and politics has recently contributed to civil unrest and bloody conflicts in several countries, including Somalia and Rwanda.

Environmental Elements and Health

The impact of environment is particularly evident in terms of health. The conditions of tropical Africa contribute to a host of health-related problems, which are aggravated by a lack of research, insufficient health facilities, and inadequate

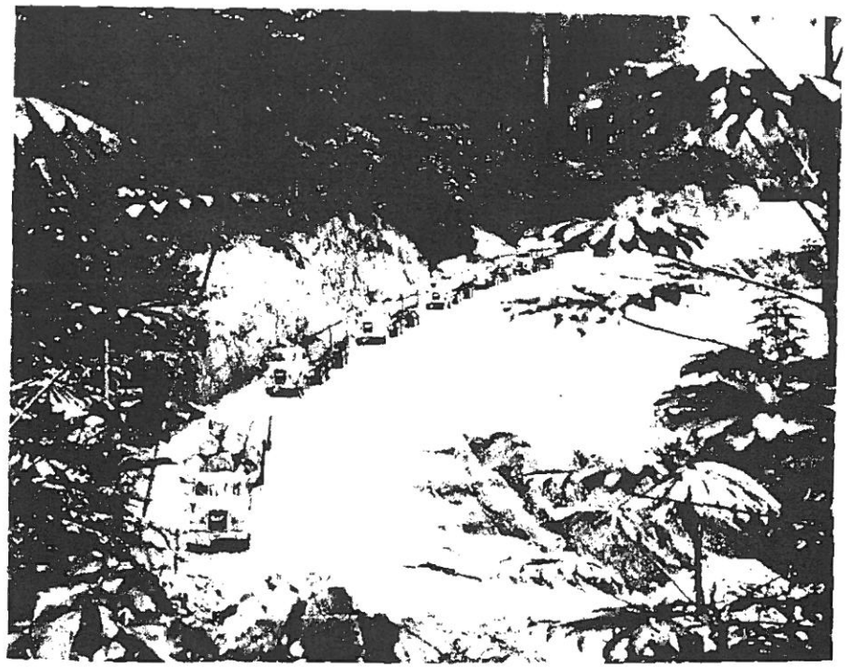


Plate 7. Valuable tropical hardwoods being transported to the coast for export.
Photo courtesy United Nations/PJ/db.

esources to control or eradicate certain endemic diseases. Large areas of the ontinent are still affected by the tsetse fly, which carries trypanosomiasis. Comnonly called sleeping sickness on account of the dramatic symptoms which precede leath, this disease impairs the health of both humans and animals, for whom it is isually fatal. Malaria, despite current levels of medical technology, still adversely ffects large segments of the population and results in a waste of human resources. hese and a number of other environmentally related health factors seriously limit the ull use of Africa's human and natural resources and affect the pattern of their evelopment.

At the regional and local levels, this relationship between health and development ay be seen in the occurrence of a disease known as river blindness or onchocerciasis. he disease formerly resulted in an incalculable loss of human resources every year; s victims suffer serious physical debilitation and eventual blindness. Twenty years go in West Africa, one of the areas most affected, an estimated 1 million people ffered from the disease in the Volta basin alone. Onchocerciasis, which is spread by e small blackfly, was a major contributing factor in underpopulation of fertile areas the river basins of West Africa. The blackfly survives in areas close to rivers and ost seriously affects populations living near or on the riverbanks. The effects of this

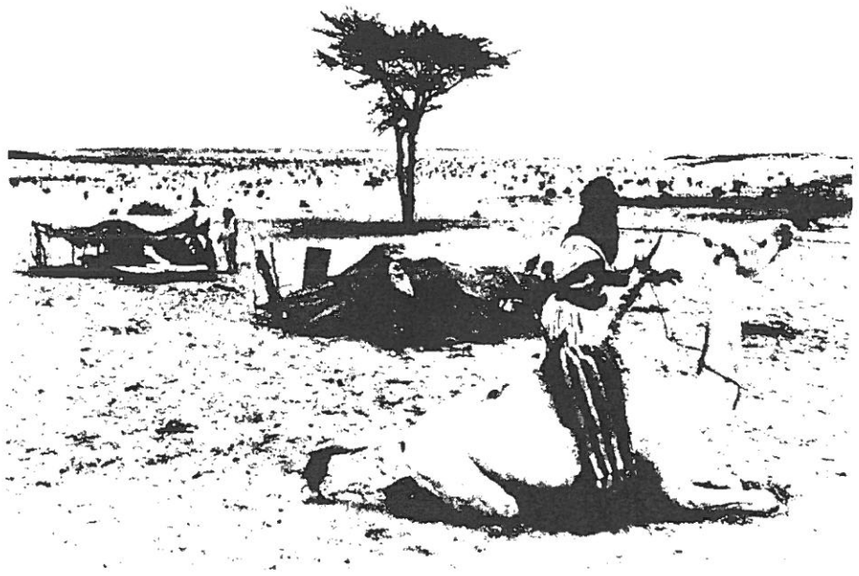


Plate 8. Toureg and his family in the Sahel of West Africa.
Photo courtesy United Nations/Cida/w.

disease were clearly evident in the settlement pattern in affected regions. "Stemming the River of Darkness," a pamphlet describing the joint efforts of the United Nations, the World Bank, and seven West African countries to eradicate or control the disease, describes its effects:

> On the ground, the disease spreads in zones. The blackfly seeks the nearest source of blood. The closer a village is to a river where the blackfly breeds, the heavier the likely degree of infection. In addition, a small village runs a much greater risk than a town in a similar position. If there are only a few people, they are bitten more often. The human tragedy is coupled with an economic one. If you fly over the worst onchocerciasis regions, you see green, well-watered land that looks ideal for agriculture and animal raising. But you see little sign of man. When you do, it will be a deserted village, grass-roofing collapsed and mud walls crumbling. Along the White Volta alone, some 50 villages are abandoned.
>
> Having been forced to surrender their fertile land to the blackfly, people crowd on to the plateau, where uncertain rains and thin soils produce violent fluctuations in crop yields. Much of the plateau land should not be farmed at all, but retained as forest reserve. Soil exhaustion, and then erosion, often follow. These less-favored areas often lack roads, clinics, or even markets. Listless and undernourished communities drift along, vulnerable to disease and to the vagaries of weather. This the Governments are determined must end.[2]

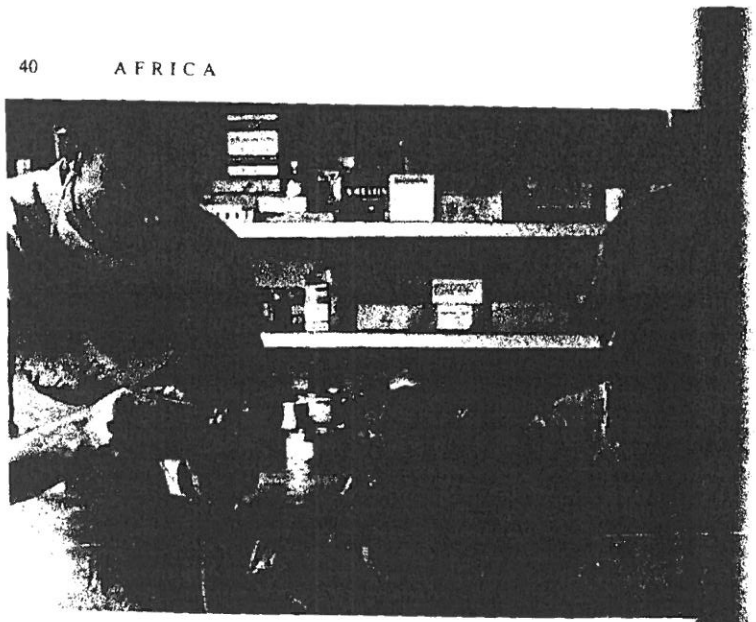


Plate 9. Testing for malaria in a health clinic.
Photo courtesy United Nations/BZ/ara.

In 1974 a massive effort by African governments and international donors was launched to control the blackfly. It was anticipated that this would reduce human suffering and aid in reclaiming vast areas of potentially fertile agricultural land, which would contribute to regional development. Twenty years later, the control program has been judged a success by most observers. River blindness is no longer the major health problem it was, and resettlement of river basins has indeed occurred. However, the anticipated economic impacts have not materialized as readily as predicted. Agricultural infrastructure in most resettled areas is inadequate, and lack of appropriate settlement and land-use policies has led to overpopulation and increased pressure on the land, leading to grave concerns about the sustainability of the economic activities initiated in the river basins.[3]

Problems of health and development are economic and political problems as well. How much of the national budget will be spent on health care? Where will resources be spent? On whose health problems will medical research concentrate? Where will the medical facilities be located? Should the government build a large urban hospital capable of "state-of-the-art" coronary surgery, or ten rural health clinics emphasizing primary health care and preventive medicine? Although the nature of the African

TABLE 3
Urbanization[1]

No. (see map 3)	Country	Urban population as % of total population		Population in capital city (thousands)		Population in capital city as % of	
		1970	1992[2]	1960	1990[3]	Urban 1990	Total 1990[4]
1	Nigeria	20	37	364.000	5.000[5]	23	8
2	Egypt	42	44	4.460	8.640	39	17
3	Ethiopia	9	13	470.000	1.880	30	4
4	Zaire	26	40	500.000	3.300	24	9
5	South Africa	48	50	425.000	1.008[6]	12	6
6	Tanzania	7	22	160.000	1.800	33	7
7	Sudan	16	23	350.000	1.800[7]	34	8
8	Algeria	40	54	870.000	3.380	23	12
9	Morocco	35	47	280.000	1.150	9	4
10	Kenya	10	25	230.000	1.700	26	6
11	Uganda	8	12	130.000	730.000	38	4
12	Ghana	29	35	400.000	1.630	22	7
13	Mozambique	6	30	180.000	1.470	38	10
14	Côte d'Ivoire	27	42	178.000	1.930[8]	45	18
15	Madagascar	14	25	250.000	770.000	24	6
16	Cameroon	20	42	80.000	880.000	17	7
17	Zimbabwe	17	30	170.000	1.060	31	9
18	Malawi	6	12	20.000	450.000	31	4
19	Angola	13	28	220.000	1.900	61	17
20	Mali	14	25	160.000	680.000	33	8
21	Burkina Faso	6	17	60.000	410.000	30	5
22	Somalia	20	25	90.000	760.000	38	9
23	Zambia	30	42	80.000	1.030	30	13
24	Tunisia	44	57	600.000	1.630	36	20
25	Niger	9	21	70.000	520.000	39	8
26	Senegal	33	41	360.000	1.480	51	20
27	Rwanda	3	6	30.000	290.000	77	4
28	Chad	12	34	80.000	760.000	41	13
29	Burundi	2	6	60.000	400.000	85	4
30	Guinea	14	27	130.000	1.470	87	23
31	Benin	18	40	70.000	250.000[9]	12	4
32	Libya	22	70	170.000	1.720	NA	64
33	Sierra Leone	18	34	120.000	610.000	52	17
34	Togo	13	29	80.000	510.000	50	14
35	Central African Republic	30	48	140.000	630.000	52	24
36	Liberia	22	45	100.000	520.000	57	26
37	Congo	33	42	120.000	600.000	68	28
38	Mauritania	14	50	30.000	600.000	83	39
39	Eritrea	NA	NA	NA	275.000[10]	NA	NA

TABLE 3 (continued)

No. (see map 3)	*Country*	*Urban population as % of total population*		*Population in capital city (thousands)*		*Population in capital city as % of*	
		1970	*1992*[2]	*1960*	*1990*[3]	*Urban 1990*	*Total 1990*[4]
40	Lesotho	9	21	8.000	109.000	18	4
41	Namibia	19	29	36.000	115.000	36	10
42	Botswana	8	27	3.000	111.000	41	10
43	Gabon	26	47	27.000	350.000	57	26
44	Mauritius	42	41	107.000	140.000	36	15
45	Guinea-Bissau	15	21	26.000	109.000	36	7

Figures underlined are for years other than those specified.

1. Figures for countries with populations of more than 1 million.
2. Source: *World Development Report*, published for the World Bank (Oxford University Press, 1990-94).
3. Sources: *Africa at a Glance, 1992: Facts and Figures* (Pretoria: Africa Institute of South Africa, 1992); *Africa South of the Sahara, 1994*, 23rd ed. (London: Europa Publications, 1994).
4. Source: *World Development Report*, 1990-94.
5. Refers to former capital, Lagos.
6. Refers to administrative capital, Pretoria.
7. Refers to Khartoum and Omdurman.
8. Refers to Abidjan.
9. Refers to Porto Novo.
10. 1984 Ethiopian estimate for Asmara.

climate presents severe challenges to good health, many of the problems are exacerbated by inappropriate human action on account of inadequate education. A significant part of infant mortality rates in Africa, which are among the highest in the world, is related to poor sanitation and use of contaminated water. Inadequate attention to public health, an emphasis on curative rather than preventive medicine, and a distinct urban bias in the distribution of health facilities have characterized the policies of African governments. It will take enormous political will to reverse these patterns.

In the past decade, the world has become aware of a frighteningly fatal disease, AIDS, which threatens millions of lives and for which there is no known cure. The number of people infected by the HIV virus responsible for AIDS (Acquired Immune Deficiency Syndrome), according to the World Health Organization (WHO), has grown from an estimated 8 million worldwide in 1990 to an estimated 12 million only two years later. Of these 12 million, 62.5 percent are African—some 7.5 million people (including 1 million children). WHO estimates predict that the numbers will double or triple in just five years, and that as many as 30 million people worldwide, and nearly 25 million Africans, will be infected by the year 2000. Information and reporting on the incidence of AIDS in Africa is sparse, but available studies characterize it as an u[illegible] disease, occurring among sexually active heterosexual partners,

and spreading rapidly. It is difficult to imagine how this serious health threat can be adequately addressed in countries where medical services are largely absent or, at best, unable to cope even with widespread malaria and water-borne diseases, which claim millions of lives annually. The response of African governments has been varied. Some governments, such as those of Botswana and Zimbabwe, have taken the disease seriously, while others have been slower to recognize the magnitude of the threat. Many local populations do not understand the nature of AIDS or its means of transmission. Lack of adequate public health information has hampered efforts to inform the public and deal effectively with the disease.

The Impact of Colonialism and Postcolonial Policies

The continued uneven pattern of development in Africa cannot be attributed to the physical environment alone. To fully understand contemporary patterns of development, it is necessary to examine the economic and political institutions which have determined how natural resources have been used. Why have some areas continued to be underdeveloped while others have experienced development? Why is development found on relatively few areas of the map while large areas continue to be neglected? It is important to recognize that the contemporary map of Africa reflects elements of physical and activity patterns of the past which still affect the present to some degree.

In many ways the contemporary map of Africa remains a colonial map. This is reflected in existing national boundaries, which bear little relation to natural divisions (mountains, rivers, etc.) or to indigenous concepts of space (ethnic areas, traditional kingdoms, etc.). Most of the present-day urban centers and transportation systems were designed with colonial objectives in mind. They were built to facilitate effective colonial administration and efficient economic exploitation. As part of an export-oriented, primary producing economy, they connected coastal areas and ports to important sources of raw materials and agricultural production but afforded little opportunity for internal circulation of goods or people. Until recently it was difficult at best, indeed nearly impossible, to travel overland along the coast in West Africa between neighboring countries. This colonial pattern of transportation has important implications for interregional economic exchange and severely hampers the realization of the often stated goals of closer African ties embodied in such organizations as the Organization of African Unity (OAU) and the Economic Community of West African States (ECOWAS).

Immediately following independence, African governments rushed to implement programs and projects aimed at increasing production, expanding basic services, and building essential physical infrastructure. Import-substitution strategies and promotion of exports were the central features of postcolonial development policy. Often encouraged by donor agencies and international financial institutions, ambitious programs were launched. The record of the past thirty years is generally considered to have been a failure. Many features of colonial institutions and practices persist, and

basic elements in the postcolonial situation remain unchanged. Major exports are essentially the same as in 1960, heavily dependent on one or two primary products. Agriculture, minerals, and forest products still account for nearly 90 percent of Africa's foreign exchange earnings. Most countries are still overly specialized and dependent upon one or a few products. The map of physical infrastructure remains essentially the same in most countries, reproducing the colonial spatial structure. Can such spatial configurations, designed for essentially colonial ends, serve the purposes of now-independent African nations? As in so many other areas of economic and social life, there is a clear need for the decolonization of the map of Africa. But many African governments have failed in their attempts to develop their economies (see chapters 19 and 20). The map of Africa remains a physical manifestation of social, economic, and political policies and actions. In the future, new patterns of social order, political institutions, and economic institutions more consistent with the objectives of independence must be developed. Political, economic, and social reforms must be carried out, and the map of Africa must be redrawn; these are the challenges which now face the African people.

An African Challenge

Africa presents a challenge not only to Africans but to all who are concerned with economic and social development. The problems of Africa have been described in graphic detail by scholars, planners, journalists, novelists, and travelers. But how are these problems to be addressed? The level of material well-being on the continent has fallen in the past twenty years. Agricultural production has actually declined in recent years, and Africa, an overwhelmingly agricultural continent, now imports much of its food. Expert opinion differs as to the causes of and the potential cures for the African crisis. Just over a decade ago, two reports emphasized these differences. In 1980, the OAU published the Lagos Plan of Action, a statement by the African heads of governments. In 1981, the World Bank issued its report *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*. These reports gave different emphasis to the factors contributing to the economic crisis on the continent, and offered contrasting prescriptions for the most desirable courses of action. Many of the debates contained in these documents continue today, but owing to political instability, many African countries have been unable to sustain any consistent policy of economic recovery. In the past decade, much attention has turned to the twin needs for political reform and economic restructuring. Although it may be too early to assess the ultimate impact of recent policies of structural adjustment and political reform, most observers agree that Africa has enormous potential. If the natural and human resources of the continent can be fully mobilized, its future development is assured. That mobilization, political, economic, and social, remains the greatest African challenge.

NOTES

I wish to acknowledge the assistance of Charles Abbott, Ph.D. candidate at the University of Iowa, in revising this chapter.

1. L. P. Green and T. J. D. Fair, *Development in Africa* (Johannesburg: Witwatersrand University Press, 1962), p. 11.
2. United Nations, Development Programme, *Stemming the River of Darkness: The International Campaign against River Blindness* (New York, 1974?), 20 pp.
3. Della McMillan, "Diversification and Successful Settlement in the River Blindness Control Zone of West Africa," *Human Organization* 52, no. 3 (1993).

SUGGESTIONS FOR FURTHER READING

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